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**15450 Woodbine Avenue**

**Scoped Environmental  
Impact Study**

**Town of Whitchurch-Stouffville, ON**

**File #: PRE22.088**

*Palmer Project #*

2108402

*Prepared For*

Galatia Lane Estates Inc.

May 3, 2023

# Table of Contents

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<b>1.</b>	<b>Introduction .....</b>	<b>3</b>
<b>2.</b>	<b>Policy Framework.....</b>	<b>5</b>
2.1	Provincial Policy Statement.....	5
2.2	Oak Ridges Moraine Conservation Plan .....	6
2.3	Greenbelt Plan.....	6
2.4	York Region Official Plan .....	8
2.5	Town of Whitchurch-Stouffville Official Plan .....	10
2.6	Vandorf-Preston Lake Secondary Plan .....	12
2.7	Lake Simcoe Protection Plan .....	13
2.8	Lake Simcoe Region Conservation Authority .....	14
2.9	Endangered Species Act.....	15
<b>3.</b>	<b>Study Approach.....</b>	<b>16</b>
3.1	Background Review .....	16
3.2	Agency Consultation .....	16
3.3	Ecological Surveys.....	17
3.3.1	Vegetation and Flora.....	17
3.3.2	Wildlife.....	18
3.3.3	Species at Risk .....	18
3.3.4	Significant Wildlife Habitat .....	18
<b>4.</b>	<b>Existing Conditions.....</b>	<b>20</b>
4.1	Aquatic Assessment and Fish Habitat.....	20
4.2	Vegetation and Flora.....	20
4.2.1	Vegetation Communities .....	20
4.2.2	Flora .....	27
4.2.3	Wetland Delineation .....	27
4.3	Wildlife .....	27
4.3.1	Breeding Birds.....	27
4.3.2	Breeding Amphibians .....	27
4.3.3	Incidental Wildlife .....	27
<b>5.</b>	<b>Significant Natural Heritage Features .....</b>	<b>29</b>
5.1	Aquatic Features and Fish Habitat .....	29
5.2	Key Natural Heritage and Hydrological Features.....	29
5.3	Species at Risk .....	29
5.4	Significant Wildlife Habitat.....	30
<b>6.</b>	<b>Proposed Development .....</b>	<b>32</b>
<b>7.</b>	<b>Impact Assessment.....</b>	<b>34</b>

7.1	Natural Heritage Features - Wetlands .....	34
7.2	Species at Risk - Roosting Bats .....	34
7.3	Significant Wildlife Habitat - Barn Swallow .....	34
7.4	Other Vegetation Communities .....	35
<b>8.</b>	<b>Mitigation .....</b>	<b>36</b>
8.1	Natural Heritage Features - Wetlands .....	36
8.2	Species at Risk - Roosting Bats .....	36
8.3	Significant Wildlife Habitat – Barn Swallow .....	36
8.4	Wildlife Disturbance .....	37
8.5	Other Items .....	37
<b>9.</b>	<b>Policy Conformity.....</b>	<b>38</b>
<b>10.</b>	<b>Conclusion .....</b>	<b>40</b>
<b>11.</b>	<b>References .....</b>	<b>41</b>

## List of Figures

---

Figure 1.	Site Location .....	4
Figure 2.	Existing Ecological Conditions.....	26
Figure 3.	Proposed Development .....	33

## List of Tables

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Table 1.	Summary of Ecological Surveys Completed in 2022 and 2023 .....	17
Table 2.	Ecological Land Classification Vegetation Communities .....	20
Table 3.	Policy Conformity .....	38

## List of Appendices

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Appendix A.	Agency Correspondence
Appendix B.	LSRCA Meadow Memo
Appendix C.	Flora List
Appendix D.	Species at Risk Assessment
Appendix E.	Significant Wildlife Habitat Assessment

# 1. Introduction

Palmer was retained by Galatia Lane Estates Inc. to complete this EIS for the proposed development of a single-storey industrial building, with an accessory outdoor storage yard and associated parking, at 15450 Woodbine Avenue in the Town of Whitchurch-Stouffville, Region of York (the Subject Property – **Figure 1**). The completion of this EIS has been prepared per the Zoning By-law Amendment application requirements of the Town of Whitchurch-Stouffville and Lake Simcoe Region Conservation Authority (LSRCA). The design of the proposed development must consider and limit potential effects on onsite natural features and on natural features on adjacent lands, providing the most feasible development envelope possible.

The Subject Property is approximately 16.6 hectares (ha) and is comprised primarily of agricultural lands, but also semi-natural communities and a wetland. The Subject Property is almost completely within the Greenbelt Land Use designation; however, a very small portion does fall within the Oak Ridges Moraine (ORM) Countryside Area Land Use designation (approximately 8 m<sup>2</sup> in the southwest corner).

The southeastern portion of the Subject Property is part of the Bogart Creek Wetland Complex, which is classified as a Provincially Significant Wetland (PSW). A tributary of Weslie Creek, a watercourse within this wetland complex, was also mapped as transecting the southeast corner of the Subject Property. The lands associated with the PSW and the mapped watercourse in this portion of the Subject Property (as well as a small section in the north) are regulated by the LSRCA.

The objective of this study is to complete a background review, field surveys, and desktop analysis to assess the Subject Property's natural heritage features and their functions, assess potential impacts from the proposed development, and provide mitigation measures where appropriate.





- LEGEND
- Watercourse <sup>1</sup>
  - Wetland <sup>2</sup>
    - Unevaluated
    - Evaluated-Provincial (Bogart Creek Wetland Complex)
  - Subject Property (16.6 ha)

1 - Ontario Hydro Network (OHN)  
2 - Land Information Ontario (LIO)

0 100 200 300 400 500  
METRE SCALE

North American Datum 1983  
Universal Transverse Mercator Projection Zone 17

Scale: 1:8,000  
Page Size: Tabloid (11 x 17 inches)

Drawn: SM  
Checked: ED  
Date: May 3, 2023

Source Notes:  
Base Imagery (2021) provided by York region open GIS services.

NORTH

CLIENT Vistaview Mgmt (Treasure Hill)

PROJECT 15450 Woodbine Ave EIS

TITLE Site Location

Palmer™

REF. NO. 2108402-1-1

Figure 1



## 2. Policy Framework

Relevant planning policies, legislation, and regulatory requirements pertinent to the assessment area are summarized in the following sections. The general relevance of these policies to the Subject Property is also noted. More detailed analysis of policy implications is provided in subsequent sections of this report, where relevant.

### 2.1 Provincial Policy Statement

The *Provincial Policy Statement, 2020* (PPS) provides direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features and resources (Ontario Ministry of Municipal Affairs and Housing, 2020). The PPS defines eight types of Natural Heritage Features (NHF) and adjacent areas and provides planning policies for each. Of these NHF, development is not permitted in:

- Significant Coastal Wetlands;
- Significant Wetlands in Ecoregions 5E, 6E and 7E;
- Fish Habitat, except in accordance with provincial and federal requirements; or
- Habitat of species designated as Endangered and Threatened, except in accordance with provincial and federal requirements.

Additionally, unless it can be demonstrated through an Environmental Impact Study (EIS or NHE) that there will be no negative impacts on the natural features or their ecological functions, development and site alteration are also not permitted in:

- Significant Wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
- Significant Woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);
- Significant Valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);
- Significant Wildlife Habitat;
- Significant Areas of Natural and Scientific Interest (ANSI);
- Other Coastal Wetlands in Ecoregions 5E, 6E and 7E; and
- Lands defined as *Adjacent Lands* to all the above natural heritage features.

Each of these natural heritage features is afforded varying levels of protection subject to guidelines, and in some cases, regulations.

The Subject Property is located in Ecoregion 6E (Crins, Gray, Uhlig, & Wester, 2009). As depicted on the Ministry of Natural Resources and Forestry (MNRF) Natural Heritage Information Centre (NHIC) mapping (**Map A**), there are unevaluated wetland features and a Provincially Significant Wetland (PSW) within and adjacent to the Subject Property (Ministry of Natural Resources and Forestry, 2023). This PSW is part of the Bogart Creek Wetland Complex and is thus afforded protection through the PPS.



*Map A. NHIC mapping depicts unevaluated wetlands (transparent blue patterned layer), a PSW (solid blue patterned layer), and the Oak Ridges Moraine boundary (brown line in the southwest corner) within and adjacent to the Subject Property (boundaries in red).*

## 2.2 Oak Ridges Moraine Conservation Plan

A small portion of Subject Property's southwest corner (approximately 8 m<sup>2</sup>) falls within the Oak Ridges Moraine (ORM) boundary (**Map A**). For the purposes of this report, Palmer has considered the Subject Property outside of this plan area.

## 2.3 Greenbelt Plan

The Greenbelt Plan builds on the PPS to identify limits to urbanization and to provide permanent protection to the agricultural land base and the ecological and hydrological feature areas and their functions occurring on the landscape of the Greater Golden Horseshoe (Ontario Ministry of Municipal Affairs and Housing, 2017). Under the Greenbelt Plan, almost all of the Subject Property falls within the Protected Countryside. The Protected Countryside is mapped as light green on **Map B**.

Within the Protected Countryside a Natural Heritage System (NHS) is present; however, no NHS is mapped on the Subject Property. Proposed development within the Protected Countryside must demonstrate that there will be no negative impacts to key natural heritage features (KNHF) and key hydrological features (KHF) or their function, as well as no negative impacts on biodiversity or connectivity within of the NHS.

KNHFs include the habitat of endangered and threatened species, fish habitat, wetlands, life science areas of natural and scientific interest (ANSIs), significant valleylands, significant woodlands, significant wildlife habitat (including habitat of special concern species, sand barrens, savannahs, tallgrass prairies, and alvars). KHFs include permanent and intermittent streams, lakes (and their littoral zones), seepage areas and springs, and wetlands.

Under the Section 3.2.5 of the Greenbelt Plan:

2. *Beyond the Natural Heritage System within the Protected Countryside, key hydrologic features are defined by and subject to the policies of section 3.2.5.*

3. *Beyond the Natural Heritage System within the Protected Countryside, key natural heritage features are not subject to the policies of section 3.2.5, but are to be defined pursuant to, and subject to the policies of the PPS.*
4. *In the case of wetlands, seepage areas and springs, fish habitat, permanent and intermittent streams, lakes and significant woodlands, the minimum vegetation protection zone shall be a minimum of 30 metres measured from the outside boundary of the key natural heritage feature or key hydrologic feature.*
5. *A proposal for new development or site alteration within 120 metres of a key natural heritage feature within the Natural Heritage System or a key hydrologic feature anywhere within the Protected Countryside requires a natural heritage evaluation or a hydrological evaluation which identifies a vegetation protection zone which:*
  - a) *Is of sufficient width to protect the key natural heritage feature or key hydrologic feature and its functions from the impacts of the proposed change and associated activities that may occur before, during and after construction and, where possible, restore or enhance the feature and/or its function; and*
  - b) *Is established to achieve and be maintained as natural self-sustaining vegetation.*

Natural Heritage System mapping can be found in Schedule 4 of the Greenbelt Plan (**Map B**).



**Map B. Greenbelt Plan Schedule 4: Natural Heritage System - Subject Property (approximate boundaries in red) located within the Protected Countryside (light green layer) with the NHS (dark green layer) to the north and the Oak Ridges Moraine Area (pale green layer) immediately to the south.**

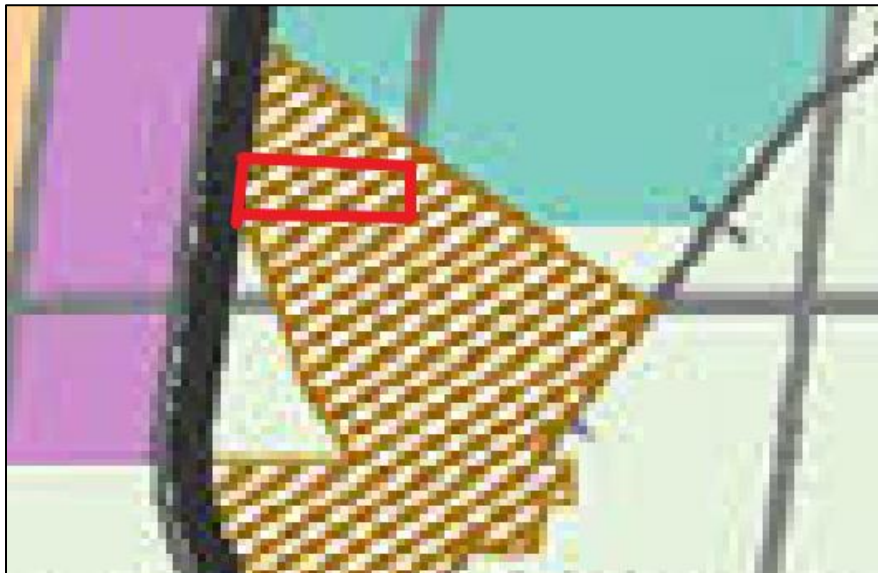
Under the Greenbelt Plan the Subject Property is designated as “Protected Countryside” (**Map B**); however as mentioned previously, the Subject Property sits outside the identified NHS. As such, KNHFs within the Subject Property are not subject to policies in Section 3.2.5 of the Greenbelt Plan, but instead are subject

to policies of the PPS. KHF, on the other hand, are subject to policies outlined in Section 3.2.5 of the Greenbelt Plan. The NHS to the north is also greater than 120 m away from the Subject Property and, as a result, KNHFs do not require a natural heritage evaluation to identify a vegetation protection zone. KHF within 120 m of the proposed development; however, do require a natural heritage of hydrological evaluation to determine a vegetation protection zone.

A wetland, specifically a PSW, was identified on and adjacent to the Subject Property. This feature, as per Section 3.2.5.4 of the Greenbelt Plan, require a minimum vegetation protection zone of 30 m.

## 2.4 York Region Official Plan

York Region Council adopted the current *2022 Regional Official Plan* (YROP) in June 2022 and the Minister of Municipal Affairs and Housing approved the Plan in November 2022 (Region of York, 2022). The policies of the Official Plan guide new planning and development in York Region. The *2022 Regional Official Plan* is not subject to appeal. As per Map 1A – Land Use Designation (**Map C** below), the Subject Property is within a Hamlet. Thus, rural settlement policies apply to the Subject Property.



*Map C. York Region's OP Map 1A depicts the Subject Property (approximate boundaries in red) within the Hamlet land use designation (orange dashed layer).*

The Region recognizes the value of its Natural Systems, which include the Regional Greenlands and water resource system. This system consists of cores, corridors, and linkages including: *Oak Ridges Moraine Conservation Plan's Natural Core Area and Natural Linkage Area designations, the Natural Heritage System within the Protected Countryside of the Greenbelt Plan, the Natural Heritage System for the Growth Plan, approved local natural heritage systems, key natural heritage features [KNHF], key hydrologic features [KHF] and functions, and associated lands*. The function of the Regional Greenlands and water resource system is to protect the features listed below, including their adjacent lands. Features considered as KNHFs/KHFs in the Region include the following, as defined in YROP Section 3.4.1:

- Habitat of endangered and threatened species;
- Fish habitat;

- Wetlands;
- Life Science Areas and Earth Science Areas of Natural and Scientific Interest (ANSI's);
- Significant valleylands;
- Significant woodlands;
- Significant wildlife habitat (including habitat of special concern species);
- Sand barrens, savannahs and tallgrass prairies;
- Lakes and their littoral zones;
- Permanent and intermittent streams;
- Kettle lakes;
- Seepage areas and springs; and
- Lake Simcoe Shoreline.

As per Section 3.4.5 of the YROP, development and site alteration are prohibited within key natural heritage features, key hydrologic features, vegetation protection zones, and adjacent lands unless:

- a) The use is permitted by the Plan, the applicable Provincial Plan and it is demonstrated through an environmental impact study that the development or site alteration will not result in a negative impact on the natural feature or its ecological functions.*

Additionally, Section 3.4.13 states:

*The vegetation protection zone and adjacent land to key natural heritage features and key hydrologic features shall be determined through an environmental impact study and meet the minimum widths identified in Table 3.*

Section 3.4.17 also states:

*That within the Lake Simcoe watershed, an application for development or site alteration within settlement and rural settlement areas, as defined by the Lake Simcoe Protection Plan, where applicable, shall:*

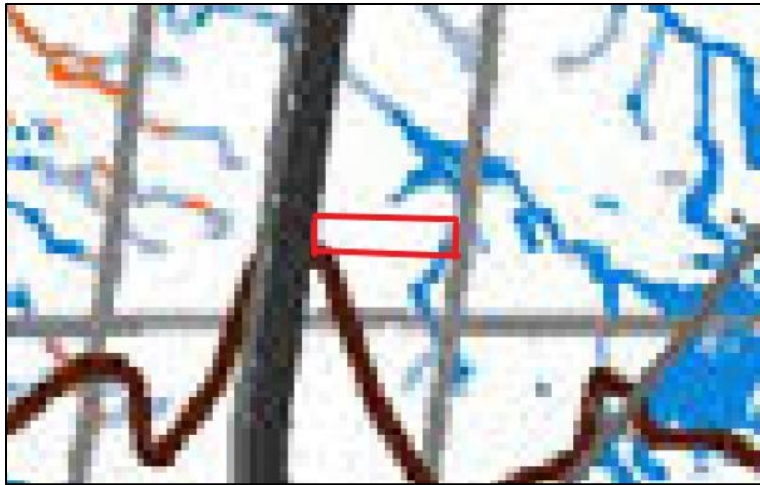
- a. Increase or improve fish habitat in streams, lakes and wetlands, and any adjacent riparian areas;*
- b. Include landscaping and habitat restoration that increases the ability of native plants and animals to use valleylands or riparian areas as wildlife habitat and movement corridors; and,*
- c. Seek to avoid, minimize and/or mitigate impacts associated with the quality and quantity of urban run-off into receiving streams, lakes, and wetlands.*

Lastly, in respect to wetlands, the YROP Section 3.4.20 notes that:

*To permit development and site alteration within 120 metres of wetlands identified on Map 4, but not within the vegetation protection zone, subject to an approved environmental impact study that demonstrates no negative impacts to the wetland feature or its ecological functions. Notwithstanding the aforementioned, within the vegetation protection zone, development and site alteration may be permitted in accordance with policies 3.2.5.c and 3.2.5.d of the Plan.*

According to Table 3 of the YROP (for Hamlets outside of the Oak Ridges Moraine Conservation Plan area), vegetation protection zones for PSWs are to be protected with a 30 m vegetation protection zone. As per

Map 4 – Key Hydrological Features (**Map D** below) a PSW, the Bogart Creek Wetland Complex, is within the Subject Property boundaries and therefore requires a 30 m buffer.

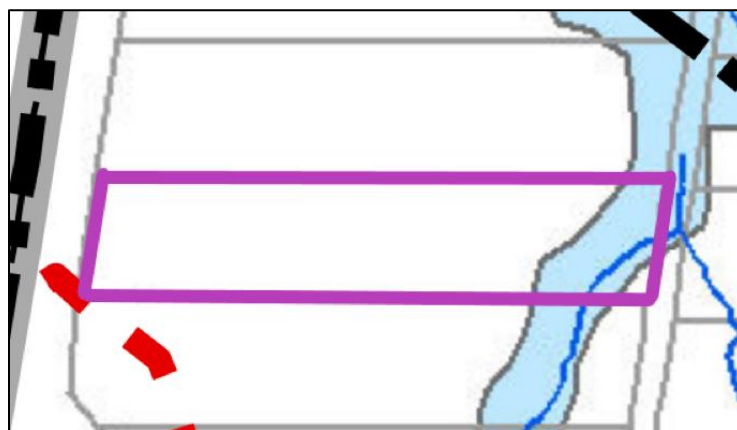


*Map D. York Region's OP Map 4 depicts a PSW (blue layer) in the southeast corner of the Subject Property (approximate boundaries in red).*

## 2.5 Town of Whitchurch-Stouffville Official Plan

The *Town of Whitchurch-Stouffville Official Plan* (OP) was adopted by the Town on September 5, 2000, and approved by the Region on March 20, 2001 (Town of Whitchurch-Stouffville, 2020). Since then, it has undergone multiple consolidations, the latest being in December 2020.

According to the Town's Schedule A – Greenlands System, a portion of the Subject Property is within a Significant Environmental Area (**Map E**). This Significant Environmental Area is associated with both the Bogart Creek Wetland Complex PSW and the mapped tributary of Weslie Creek.



*Map E. The Town's OP Schedule A depicts the Subject Property (boundaries in purple) containing a Significant Environmental Area (light blue layer) and a watercourse (blue line) on the east portion of the property.*



As per Sections 7.3 (iv) of the Town's OP, if a site is located within the Greenbelt, but outside of the Oak Ridges Moraine, proposals/applications shall be evaluated with respect to the information submission requirements of the Greenbelt Plan and Section 3 of the Town's OP. Furthermore, as per Sections 7.3 (v) of the Town's OP if the site includes or directly abuts the lands designated on Schedule "A" as part of the Greenlands System, proposals shall be evaluated in accordance with the information submission requirements of Section 3 of this Official Plan.

Under Section 3.4.2.1, it states that Significant Environmental Area designations within the OP's Greenlands System recognizes:

- i) *A variety of features possessing significant attributes or environmental functions, which in many instances have been deemed to be of Provincial Regional or Local Significance, including: Areas of Natural and Scientific Interest (ANSI's), locally and Provincially Significant Wetlands, significant portions of the habitat of threatened and endangered species, Environmentally Significant Areas (ESA's), and significant wildlife habitat. In some cases, these areas consist of a complex unit containing a variety of wetlands that may be separated by forest conditions or relatively open areas; and,*
- ii) *All valley and stream corridors as defined in Section 9.5 of the Plan that contain streams which flow for most if not all of the year. They are fed by groundwater discharges and are generally considered to support coldwater fish species, particularly in their upper reaches.*

Section 3.4.2.2 also states that:

- i. *The permitted uses of land within the areas designated Significant Environmental Area on Schedules "A" and "B" shall be conservation, enhancement and preservation of the natural environment, and passive recreational uses such as nature viewing and pedestrian trails which will have no negative impact on the natural environmental features and ecological functions of the area, including no net loss of fish habitat, where applicable.*
- ii. *The only exceptions to the provisions of Section 3.4.2.2 i) are the following uses and facilities:*
  - b) *existing roads and related utilities or modifications to such facilities which shall be permitted to cross the Significant Environmental Area designation in the general area of the road designations on Schedule "B".*

This exception (highlighted in Section 3.4.2.2.ii.b) can be permitted by the Town, in consultation with the LSRCA, provided that prior to approving the location/construction, that an Environmental Impact Study (EIS) be carried out by qualified consultants, which demonstrates the need for such a facility and that shows that there is no negative impact on the functions and features of the Significant Environmental Area during both the construction and post-development phases.

Lastly, as outlined in Section 3.4.2.4 of the Town's OP:

- i) *The areas included in the Significant Environmental Area designation were identified based on a general background analysis. Site specific studies shall be required to define the significance of such natural features and their importance within the Town's Greenlands System, as well as to better define the exact preservation requirements, buffer widths and boundaries where development is proposed in or abutting such lands. In addition, where development is proposed*



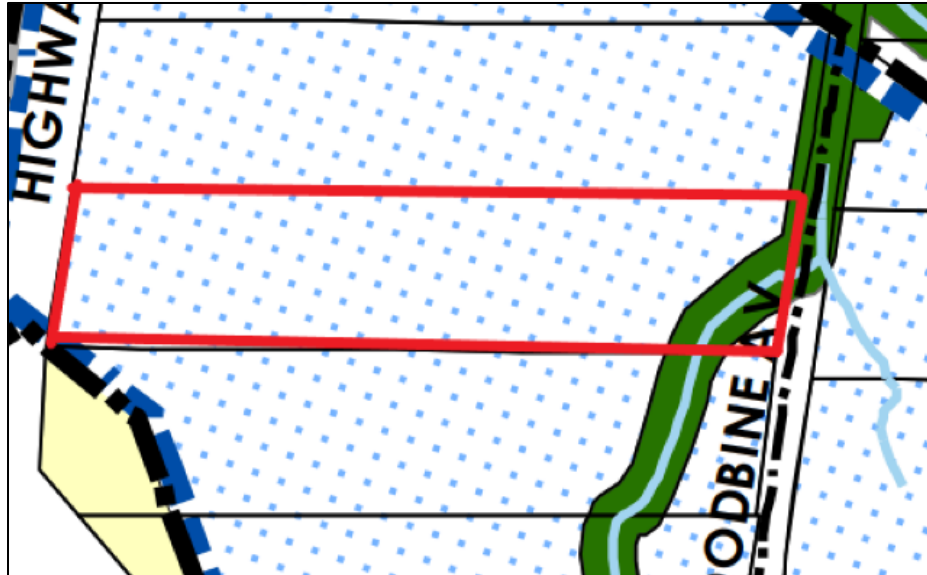
*abutting a stream for which floodplain mapping is not available, such mapping shall be required to be submitted as part of any development application.*

- ii) The boundaries of the lands in this designation can be refined without further amendment to this Plan subject to approval by the Town, in consultation with the appropriate Conservation Authority, of an Environmental Impact Study and/or other detailed information required by the Town. However, the Town must be satisfied through a peer review of the EIS or other information, carried out at the cost of the applicant, that the criteria in Section 3.4.2.4 iii) a) and b) can be satisfied.*
- iii) a) any environmental and/or physical hazards can be mitigated in a manner which is consistent with accepted engineering and resource management practices; and,*
  - b) proposed development and related works:*
    - i) recognizes natural ecological systems and processes and ensures that they are maintained and enhanced;*
    - ii) does not result in any significant disruption of existing landforms and landscape features including vegetation, steep slopes and groundwater recharge or discharge areas;*
    - iii) will result in no changes to the natural quality and hydrological characteristics of any watercourses;*
    - iv) will result in no negative impacts on the wetland area or on its ecological functions, and/or on significant portions of the habitat of threatened or endangered species;*
    - v) will result in no loss of fish habitat on all streams; and,*
    - vi) will result in no loss of significant wildlife habitat.*

## **2.6 Vandorf-Preston Lake Secondary Plan**

The Vandorf-Preston Lake Secondary Plan (2020) is an extension of the Town's OP which establishes the principles, objectives, and general policies, as well as specific strategies with respect to community structure, community improvement, servicing, land use and transportation to guide the planning of the Vandorf and Preston Lake communities and their adjacent lands. The Plan provides a planning framework for all levels of government, as well as existing and future residents, landowners, and other interested groups.

Schedule G – "Land Use and Transportation Plan" of this Secondary Plan (**Map F**) illustrates land use designations on the Subject Property. Applicable policies associated with these land use designations are described below.



*Map F. The Vandorf-Preston Lake Secondary Plan Schedule G depicts the Subject Property (boundaries in red) within the Potential Employment Area (blue dotted layer) and containing a Significant Environmental Area (dark green layer) and associated watercourse (light blue line) on the southeast portion of the property.*

According to Schedule G – Land Use and Transportation Plan, a majority of the Subject Property has a Potential Employment Area land use designation while a small portion of the Subject Property has a Significant Environmental Area land use designation (**Map F**). Section 13.7.3.3, which pertains to Potential Employment Areas, permits the proposed use (i.e., industrial development) of the Subject Property and notes that open storage areas shall be screened. Section 13.7.3.8, which pertains to Significant Environmental Areas, notes that these lands are subject to the policies of Section 3.4.2 of the Town's OP and Section 3.2 of the Greenbelt Plan. Consequently, the identified PSW will have a minimum vegetated buffer of 30 m.

## 2.7 Lake Simcoe Protection Plan

The Lake Simcoe Protection Act, which was passed in December 2008, provides a legislative framework for protecting the Lake Simcoe watershed. Among other items, the Act includes the requirement for a Protection Plan with legally binding policies. The Subject Property is located within an existing settlement area.

The Lake Simcoe Protection Plan (LSPP) has separate requirements depending on whether the proposed development is located within or outside of an existing settlement area. Requirements for proposed developments within settlement areas are as follows:

*6.32-DP Policies 6.32 - 6.34 apply to existing settlement areas and areas of Lake Simcoe adjacent to these lands, including the littoral zone, and these areas are not subject to policies 6.1 – 6.3, 6.5, 6.11 and policies 6.20 - 6.29.*

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

*a. increase or improve fish habitat in streams, lakes and wetlands, and any adjacent riparian areas;*

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

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

## 2.8 Lake Simcoe Region Conservation Authority

The Lake Simcoe Region Conservation Authority (LSRCA) administers the *Ontario Regulation 179/06 - Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation* (Lake Simcoe Region Conservation Authority, 2015). Portions of the Subject Property fall within LSRCA regulated limit, primarily associated with the Bogart Creek Wetland Complex PSW and watercourse (**Map G**).

It should be noted that the provincial Bill 23, *More Homes Built Faster Act* was passed on November 28, 2022. This bill is expected to bring changes to conservation authorities' role in permitting, planning and development. It is Palmer's understanding that until Regulations are written and implemented by the Ministry of Natural Resources and Forestry, that current conservation authorities' roles will continue as normal. Contact with the conservation authority regarding this Bill is recommended at each relevant stage of the development process in order to determine their role at that point in time. As such, development within Regulated Area would have, and may still, require a permit under O. Reg. 179/06. The guidelines for implementation of O. Reg. 179/06 (Lake Simcoe Region Conservation Authority, 2015) contain guidance on development regarding wetlands and other areas.



*Map G. LSRCA Regulated Area Map depicts the Subject Property (boundaries in black) partially within regulated lands (yellow layer).*

## 2.9 Endangered Species Act

Species designated as Endangered or Threatened by the Committee on the Status of Species at Risk in Ontario (COSSARO) are listed as Species at Risk (SAR) in Ontario (Government of Ontario, 2007). These SAR and their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation, and migration) are afforded legal protection under the *Endangered Species Act, 2007* (ESA). This *Act* is administered by the Ministry of Environment, Conservation and Parks (MECP).

The protection provisions for species and their habitat within the ESA apply only to those species listed as Endangered or Threatened on the SARO list, being *Ontario Regulation 230/08* of the ESA. Species listed as Special Concern may be afforded protection through policy instruments respecting significant wildlife habitat (e.g., the PPS) as defined by the Province, other relevant authority, or other protections contained in Official Plans.

## **3. Study Approach**

The approach to the study has been scoped in consideration of existing site conditions, applicable policy, and feedback received through ongoing agency liaison.

### **3.1 Background Review**

Palmer has reviewed relevant background material to provide a focus to field investigations and ensure compliance with applicable regulations and policy. Background information collection is guided by the Natural Heritage Information Request Guide (Ministry of Natural Resources and Forestry, 2022). Current direction from the Ministry of Natural Resources and Forestry (MNRF) and Ministry of Environment, Conservation and Parks (MECP) is to gather natural heritage information and species occurrence records from available sources; the NHIC Make-a-Map application being the main source of information and records from the Ministry itself (Ministry of Natural Resources and Forestry, 2023). Information gathered is recommended to be balanced and supplemented by professional ecological review of potential habitats and characteristics of a project site.

Background review for the Subject Property included the collection of relevant mapping and reports, including regulations and policies, Official Plans, and zoning by-laws; and the NHIC Make-a-Map application for species occurrences and designated area mapping. In addition to these sources, the following data sources were reviewed for the project:

- Land Information Ontario (LIO) database (2023);
- Department of Fisheries and Oceans (DFO) Aquatic Habitat and Species at Risk mapping (2023);
- Ontario Breeding Bird Atlas (2023);
- Ontario Butterfly Atlas (2023);
- Ontario Reptile and Amphibian Atlas (2023); and,
- LSRCA mapping (2023).

Other sources of information, such as aerial photography and topographic maps, were also consulted prior to commencing field assessments. Following the Information Request Guide, MECP advice and direction should be solicited if Species at Risk (SAR) interactions or potential interactions are identified via field investigation and analysis.

### **3.2 Agency Consultation**

As part of the natural environment review and assessment, agency consultation has included discussion regarding a Site Visit (Staking), the Terms of Reference (TOR), and a Meadow Memo.

On November 1, 2022, a Palmer ecologist and a representative from the LSRCA (Jessica Chan, Natural Heritage Ecologist), conducted a preliminary staking of wetland features on the Subject Property. This included staking the west boundary of a PSW identified in the southeast corner of the Subject Property, and the staking of a small community in the southwest corner of the Subject Property that at the time was thought to be a wetland. As staking occurred within the late fall season, wetland boundaries will need to be refined during the spring growing season (2023). Our understanding is that this will be undertaken only by Palmer and not with LSRCA due to changes from Bill 23.

Following the staking exercise, Palmer's ecologist conducted soil analysis on soils within the southwest area. These soils were not representative of typical wetland soils and instead mirrored those found in upland communities. Thus, this area is not considered to be a wetland (see later discussion).

Following the November 2022 site visit a Terms of Reference (TOR) was submitted to the LSCRA (on January 13, 2023) and the Town of Whitchurch-Stouffville (on January 24, 2023). An additional memorandum document entitled *West Meadow Assessment Memo – 15450 Woodbine Ave – Palmer* was submitted to the LSRCA on January 13, 2023, outlining a detailed description of the ELC community believed to be in the southwest corner of the Subject Property (i.e., that it was thought to be an upland community and not a wetland). The TOR and associated agency correspondence can be found in **Appendix A**. The memorandum can be found in **Appendix B**.

Palmer spoke with a representative from the LSRCA, Jessica Chan on the phone on February 7, 2023. During this call Palmer was informed that the LSRCA can no longer comment on the TOR or the submitted ecological memo, and that TOR review responsibilities now belongs to the Municipality.

Palmer followed up with the Municipality regarding the TOR on February 8, 2023, receiving a response on February 9, 2023, in which the representative from the Municipality, Hena Kabir, indicated that the TOR was accepted pending sign off from the LSRCA. As a result of Bill 23, uncertainty remains around the new responsibilities of the municipalities versus the conservation authorities. These agencies are currently working to resolve these inconsistencies. Thus, it was presumed that the TOR and ecological memo are acceptable.

### 3.3 Ecological Surveys

Field investigations were conducted to collect existing conditions data on flora, fauna, features, and ecological functions. Palmer conducted field investigations in October and November of 2022, and in April of 2023, as summarized in **Table 1**. Additional field studies are planned for spring and summer of 2023, as noted below. During site visits Palmer did, and will continue to note the conditions of the mapped Weslie Creek tributary.

**Table 1. Summary of Ecological Surveys Completed in 2022 and 2023**

Palmer's Field Investigations	Dates
ELC and Botanical Surveys, SAR and SWH Habitat Screenings, Incidental Wildlife Observations	October 13, 2022
Soil Sampling, Feature Staking with the Conservation Authority, Incidental Wildlife Observations, ELC and Botanical Surveys	November 1, 2022
Headwater Drainage Feature Initial Assessment and Amphibian Survey (Round 1)	April 13, 2023

#### 3.3.1 Vegetation and Flora

Ecological field investigations were undertaken on October 13 and November 1 of 2022. Vegetation communities were mapped and described following the Ecological Land Classification (ELC) System for Southern Ontario (Lee, et al., 1998). Vegetation community boundaries were delineated through the

interpretation of recent aerial imagery and refined in the field. Botanical surveys were completed by traversing the site and recording species observed in each vegetation community. Any additional flora recorded in 2023 will be provided as part of an Addendum.

### **3.3.2 Wildlife**

#### **Breeding Bird Surveys**

Two standard breeding bird surveys will be completed in the early summer of 2023, as per accepted Bird Studies Canada protocols (Bird Studies Canada, 2001). Findings from these surveys will be provided as part of an Addendum.

#### **Breeding Amphibian Surveys**

Amphibian breeding survey will be completed in the Spring of 2023, following the Environment Canada's *Marsh Monitoring Program* protocol for surveying amphibians (Bird Studies Canada, 2009). The goal of the survey(s) is to help inform overall wetland quality. The survey method provides an indication of amphibian abundance during the breeding season. Species will be identified by call and by visual observation. An abundance code for each species heard calling will be assessed by the following the Amphibian Monitoring protocol:

- Code 0: No calls heard.
- Code 1: Calls not overlapping or simultaneous, number of individual frogs can be counted.
- Code 2: Calls overlapping or simultaneous, number of individuals can still be distinguished, number of individual frogs cannot be counted, but a reliable estimate of numbers can be made based on location and call voices.
- Code 3: Full chorus, calls simultaneous and overlapping, numbers of calling males cannot be reasonably counted or estimated.

#### **Incidental Wildlife Observations**

Incidental observations of wildlife were recorded during field investigations. Incidental observations included direct sightings and indirect evidence such as nests, tracks, scat, and browse. Any additional wildlife recorded in 2023 will be provided as part of an Addendum.

### **3.3.3 Species at Risk**

Prior to conducting field work, existing SAR records were queried with the NHIC database and other online resources. Habitat opportunities for SAR on the site were then assessed by comparing habitat preferences of species deemed to have potential to occur against current site conditions. The species noted during the NHIC search and others known through professional experience to have potential to occur were considered in the assessment.

### **3.3.4 Significant Wildlife Habitat**

Palmer has developed a screening tool for Significant Wildlife Habitat (SWH) for Ecoregion 6E, following the relevant criteria established by the Province (Ontario Ministry of Natural Resources, 2015). Upon completion of surveys, the screening is reviewed based on observed site characteristics. This is

supplemented by additional analysis, field observations, and mapping to determine if candidate SWH types exist and/or can be confirmed for the Subject Property.



## 4. Existing Conditions

### 4.1 Aquatic Assessment and Fish Habitat

No defined watercourse or observable water flow was noted on the Subject Property during the October and November 2022 field investigations. During the April 2023 site visit; however, observable water flow was noted in the approximate location of the mapped Weslie Creek tributary/watercourse (within the PSW). Thus, this feature was deemed as ephemeral/intermittent in nature. Due to the small catchment size of the feature (less than the 50 hectares benchmark that conservation authority's use for watercourses) and the lack of a defined channel, this feature could be classified as a Headwater Drainage Feature (HDF).

Additional information was gathered from historical air photos from York Region. This indicates that no watercourse was present in the 1950s, and that sometime within the 1980s a curving ditch was dug within the wetland. Thus, it seems likely that the current apparent lack of a defined watercourse/HDF is due to the ditch/drainage channel filling in since the 1980s.

This feature was approximately 1.0 m to 1.5 m in width and roughly 0.05 m deep. Substrate consisted of mud and silt and there was abundant Reed Canary Grass (*Phalaris arundinacea*) within and adjacent to the feature. A slow flow was noted northeastwards. No seepage or groundwater flora have been observed to date on the Subject Property. Although the HDF was not observed flowing off property, downstream data from Land Information Ontario (2023) indicate that this mapped watercourse may feed into an undefined cold-water system.

Summer conditions will be recorded in the summer of 2023 and results will be provided as part of an Addendum.

MNRF Aquatic Resource Area (ARA) point data were also examined and did not indicate fish species sampling results within the reach of the Weslie Creek tributary that is mapped on and adjacent to the Subject Property (Land Information Ontario, 2023). Based on this and our observations, it is likely that fish habitat is not present on or immediately adjacent to the Subject Property.

### 4.2 Vegetation and Flora

#### 4.2.1 Vegetation Communities

Vegetation communities were mapped and described according to the Ecological Land Classification (ELC) system for southern Ontario (Lee, et al., 1998). Existing environmental conditions are shown on **Figure 2**, with a general summary of communities provided below in **Table 2**.

**Table 2. Ecological Land Classification Vegetation Communities**

ELC Code	Description
<i>Anthropogenic and Cultural</i>	
Agricultural (AGR)	At the time of the October site visit the agricultural lands were not plowed and supported soybean ( <i>Glycine max</i> )

	crops ( <b>Photo 1</b> ). During the November site visit the agricultural fields were plowed.
Anthropogenic (ANTH)	An anthropogenic area was found in the northeast portion of the Subject Property. This area consisted of a vacant residence, a barn structure, and a gravel driveway. Planted trees lined the driveway and consisted of Norway Maples ( <i>Acer platanoides</i> ), White Spruce ( <i>Picea glauca</i> ), and Eastern White Pine ( <i>Pinus strobus</i> ), with diameters at breast height (DBH) ranging from 25 to 40 cm ( <b>Photo 2</b> ).
Hedgerow (HR)	A hedgerow community was identified along the southwest boundary of the Subject Property. This hedgerow consisted of Staghorn Sumac ( <i>Rhus typhina</i> ), Black Locust ( <i>Robinia pseudoacacia</i> ), Riverbank Grape ( <i>Vitis riparia</i> ), and Manitoba Maple. These trees were young.
Dry-Moist Old Field Meadow (CUM1-1)	<p>An old field meadow community was identified in the northeast corner of the Subject Property, surrounding the anthropogenic area (<b>Photo 3</b>). A small band of old field meadow was also delineated along the west boundary of the MAM wetland community. This community was comprised of a mixture of common meadow species including the following:</p> <ul style="list-style-type: none"> <li>• Wild Carrot (<i>Daucus carota</i>)</li> <li>• Tall Goldenrod (<i>Solidago altissima</i>)</li> <li>• Smooth Brome grass (<i>Bromus inermis</i>)</li> <li>• Reed Canary Grass</li> <li>• Common Tansy (<i>Tanacetum vulgare</i>)</li> <li>• Common Burdock (<i>Arctium minus</i>)</li> <li>• New England Aster (<i>Symphyotrichum novae-angliae</i>)</li> <li>• White Heath Aster (<i>Symphyotrichum ericoides</i>)</li> </ul> <p>Scattered trees were present including Manitoba Maples (<i>Acer negundo</i>). A patch of highly invasive Japanese Knotweed (<i>Reynoutria japonica</i>) was also noted east of the old house.</p>
Dry-Moist Old Field Meadow/Cultural Thicket (CUM1-1/CUT1)	<p>Two old field meadow/cultural thicket communities were observed within the Subject Property.</p> <p>One of these communities was located on the north-central portion of the Subject Property (Error! Reference source not found.) and was dominated by patches of Common Burdock. Manitoba Maple, Tall Goldenrod,</p>

	<p>willow (<i>Salix sp.</i>), and Common Reed (<i>Phragmites australis</i>) were also observed.</p> <p>The second community was located in the southwest corner of the Subject Property (Error! Reference source not found.). Documented tree/shrub species included Manitoba Maple, Basswood (<i>Tilia americana</i>), European Buckthorn (<i>Rhamnus cathartica</i>), willow, and Red-osier Dogwood (<i>Cornus sericea</i>). Meadow species included Smooth Brome grass, Wild Carrot, aster (<i>Aster sp.</i>), cattail (<i>Typha sp.</i>), and Reed Canary Grass. See further discussion below this table and <b>Appendix B</b>.</p>
<b>Wetland</b>	
Mineral Meadow Marsh (MAM)	<p>A mineral marsh community was identified in the southeast corner of the Subject Property (<b>Photo 6</b>). During Palmer's November 1, 2022 site visit, the west boundary of this community was staked with the LRSCA. Reed Canary grass was noted as the dominant species, with scattered willow shrubs in the east edge.</p> <p>Two soil samples were dug in this wetland on November 1, 2022 at locations west of (i.e. outside of) the LIO mapped wetland and slightly east of the mapped watercourse location. Together the pore pattern was 4 or 5 (clay loam or clays), with distinct mottles at 25 to 30 cm. No water table was reached with soil samples dug to about 45 or 55 cm. All horizons were dark brown soils. The resulting moisture regimes were concluded to be either 5 or possibly 6 (i.e., wetland). Thus, in combination with vegetation observations, this information was used to extend the wetland boundary westward.</p>

As noted earlier under Agency Correspondence (Section 3.2), a portion of the west CUM1/CUT1 was thought to be a wetland. However, after further study of the soils it was considered to be an upland meadow. Additionally, in April 2023 there was no standing water in this area. **Appendix B** explains the reasoning and further details this area.





*Photo 1. Agricultural field with soybean crop on the Subject Property (October 13, 2022).*



*Photo 2. Anthropogenic area in the northeast portion of the Subject Property (November 1, 2022).*





*Photo 3. Old Field Meadow community along the laneway in the east portion of the Subject Property (October 13, 2022).*



*Photo 4. Dry-Moist Old Field Meadow/Cultural Thicket community located on the north-central portion of the Subject Property (October 13, 2022).*



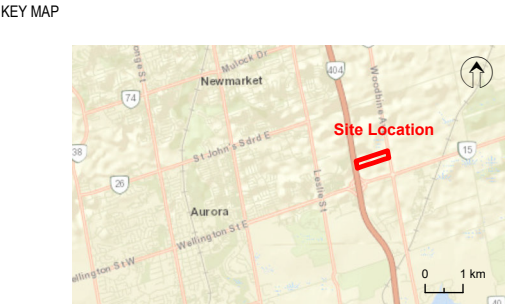
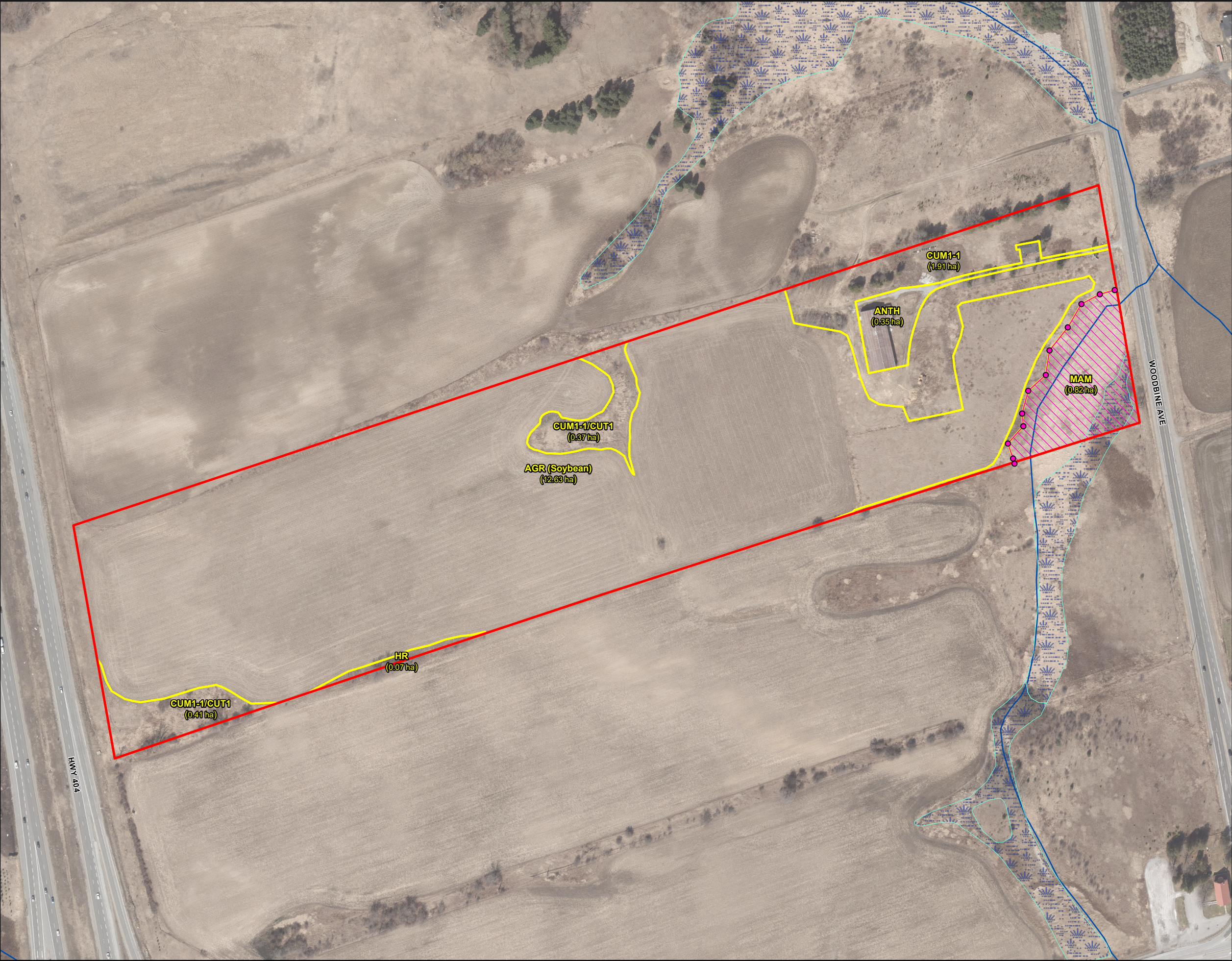


*Photo 5. Dry-Moist Old Field Meadow/Cultural Thicket community located in the southwest corner of the Subject Property (October 13, 2022).*



*Photo 6. Mineral Meadow Marsh community located in the southeast corner of the Subject Property (October 13, 2022).*



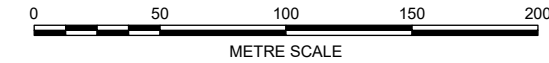


- LEGEND
- Watercourse <sup>1</sup>
  - Preliminary Staked Wetland (Nov 1 2022 LSRCA/Palmer)
  - Wetland Evaluated-Provincial (Bogart Creek Wetland Complex) <sup>2</sup>
  - Ecological Land Classification (ELC)
  - Subject Property (16.6 ha)

ELC LEGEND:

ANTH: Anthropogenic  
AGR: Agricultural  
HR: Hedgerow  
CUM1-1: Dry-Moist Old Field Meadow Type  
CUM1-1/CUT1: Dry-Moist Old Field Meadow Type /Cultural Thicket  
MAM: Mineral Meadow Marsh

1 - Ontario Hydro Network (OHN)  
2 - Land Information Ontario (LIO)



North American Datum 1983  
Universal Transverse Mercator Projection Zone 17

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Date: May 3, 2023

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Base Imagery (2021) provided by York region open GIS services.



CLIENT	Vistaview Mgmt (Treasure Hill)	
PROJECT	5450 Woodbine Ave EIS	
TITLE	Existing Environmental Conditions	
Palmer™	REF. NO.	2108402-2-1
	Figure 2	



#### **4.2.2 Flora**

A total of 26 species of vascular plants were recorded within the Subject Property during the 2022 field surveys, including 13 (50%) native species, nine (35%) species which are non-native to Ontario, and four species were identified to the genus only due to the limited representation of key characteristics (**Appendix C**). The high recorded presence of non-native species is indicative of past disturbance on the Subject Property, typical of developed areas (Morton & Venn, 1984). Oldham *et al.* (1995) indicate that in southern Ontario plant communities, non-native flora presence averages between 20 and 30%. No listed SAR or locally rare vegetation species were observed (Ministry of Natural Resources and Forestry, 2021; Oldham & Brinker, 2009; Varga, et al., 2000).

All native plants identified as S4 or S5 ranking, indicating that they are common within Ontario (Ministry of Natural Resources and Forestry, 2021). One species, White Spruce, was ranked as L3 by the TRCA. L3 ranked species indicate a plant “able to withstand minor disturbance; generally secure in natural matrix; considered to be of regional concern,” (Toronto and Region Conservation Authority, 2019). This ranking; however, refers to naturally occurring individuals and not planted individuals as present here. No species were noted as locally significant to York Region. Additionally, no Species at Risk plants were observed during the 2022 field investigations.

#### **4.2.3 Wetland Delineation**

Wetland delineation was conducted on November 1, 2022, with a Palmer ecologist and a representative of the LSRCA (Jessica Chan). Community boundaries were staked for identified wetlands on the Subject Property. These boundaries will require refinement during the spring growing season (2023), as the original staking exercise occurred outside the growing season.

### **4.3 Wildlife**

#### **4.3.1 Breeding Birds**

Breeding bird surveys have yet to be conducted on the Subject Property and will be completed in the early summer of 2023, during the appropriate timing window. Results will be included as part of an Addendum.

#### **4.3.2 Breeding Amphibians**

The first round of breeding amphibian surveys were conducted on April 13, 2023. No calls were heard on the Subject Property; however, Spring Peepers (*Pseudacris crucifer*) were noted offsite, to the east (indicating that weather conditions were appropriate). The second and third round of amphibian breeding surveys will be completed throughout the spring of 2023, during the appropriate timing window. Results will be included as part of an Addendum.

#### **4.3.3 Incidental Wildlife**

Wildlife expected to be present primarily consist of common, generalist and urban-adapted species such as Raccoon (*Procyon lotor*), Skunk (*Mephitis mephitis*), and Eastern Grey Squirrel (*Sciurus carolinensis*). 2022 and 2023 field investigations confirmed the following species:



- Barn Swallow (*Hirundo rustica*) – approximately 10 nests observed within the east side of the barn (**Photo 8**).
- American Crow (*Corvus brachyrhynchos*) – observed entering and exiting the vacant barn structure.
- Coyote (*Canis latrans*) – scat documented on site.
- Mallard (*Anas platyrhynchos*) – two individuals observed within the area of pooled water west of the barn (Amphibian Station 2) during the April 13, 2023 site visit.
- Spring Peeper – calls heard offsite to the east during the April 13, 2023 site visit.



*Photo 8. Barn Swallow nests located within the barn on the Subject Property outside of the breeding season (November 1, 2022).*

## 5. Significant Natural Heritage Features

No ANSIs, valleylands, or Significant Woodlands are present on the Subject Property. Further discussion of aquatic features, SAR, and SWH is given below. The PSW in the southeast corner of the Subject Property is the feature driving the Significant Environmental Area designation and therefore the Significant Environmental Area boundaries should align with the PSWs and its associated protective buffer. In accordance with Section 7.3 (iv) of the Town's OP, and subsequently Section 3.2.5.4 of the Greenbelt Plan, this PSW requires a minimum vegetation protection zone of 30 m.

Note that to date, a floodplain for the site has not been shown in this EIS. Thus, it is possible that floodplain constraints could supersede natural heritage constraints. Based on our experience; however, in this location it is unlikely that this will be the case. Palmer understands that LSRCA will supply floodplain delineation mapping to SCS Consulting.

### 5.1 Aquatic Features and Fish Habitat

As noted previously, no watercourse was observed in the fall of 2022. A feature was noted during the spring of 2023; however, this feature was deemed to be an HDF. Further observations of the HDF will be made in the summer of 2023.

### 5.2 Key Natural Heritage and Hydrological Features

As identified in Section 2 above, the Greenbelt Plan identifies KNHFs and KHF that are afforded protection. These are consistent with the KNHF/KHFs listed within York Region's and the Town of Whitchurch-Stouffville's Official Plan documents. Such features have been evaluated within the Subject Property, as follows:

- Wetlands:
  - A portion of the Bogart Creek Wetland Complex PSW, which is comprised of a Mineral Meadow Marsh (MAM) community, is located in the southeast corner of the Subject Property. Due to the wetland's provincial significance, it is considered both a KNHF and a KHF. Staking of this wetland was completed by the LSRCA and Palmer on November 1, 2022. The staked boundary is outlined on **Figure 2**; however, confirmation of this boundary will occur during the spring growing season (2023) when wetland vegetation is alive and growing.

### 5.3 Species at Risk

Prior to field investigations, a background review was completed for potential SAR habitat opportunities. The NHIC database, the Ontario Breeding Bird Atlas (OBBA), the Ontario Reptile and Amphibian Atlas (ORAA), and the Ontario Butterfly Atlas (OBA) were screened for SAR records.

Based on available background information and the 2022 field investigations, the Subject Property was screened for potential SAR habitat opportunities. The assessment was conducted by comparing habitat preferences of species deemed to have potential to occur against current site conditions. This SAR habitat assessment can be found in **Appendix D** and provides a detailed description of each species' habitat (including those deemed to not have potential habitat), as well as a discussion of habitat suitability within

the Subject Property, potential impacts, and mitigation, where applicable. The following five SAR have been identified as having potential habitat within the Subject Property:

### **Birds**

- Barn Swallow – Special Concern

### **Mammals**

- Eastern Small-footed Myotis (*Myotis leibii*) – Endangered
- Little Brown Myotis (*Myotis lucifugus*) – Endangered
- Northern Myotis (*Myotis septentrionalis*) – Endangered
- Tri-colored Bat (*Perimyotis subflavus*) – Endangered

Based on professional experience, it is thought that the old house (but not the barn) may present habitat opportunities for SAR bat species.

Barn Swallow is further discussed under SWH.

Discussions of these impacts and potential mitigation measures are discussed in Sections 7 and 8 of this report respectively.

## **5.4 Significant Wildlife Habitat**

Significant Wildlife Habitat (SWH) can be difficult to appropriately determine at the site-specific level, as the assessment must incorporate information from a wide geographic area and consider other factors such as regional resource patterns and landscape effects. To help with site level assessments, the MNRF has developed the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (Ontario Ministry of Natural Resources, 2015). With the exception of wintering deer yards, which could be, and often are, considered SWH, the detailed identification and designation of SWH has not been completed in York Region or the Town of Whitchurch-Stouffville.

SWH is defined by the MNRF in the Significant Wildlife Habitat Technical Guide (Ontario Ministry of Natural Resources, 2000) and Natural Heritage Reference Manual (Ontario Ministry of Natural Resources, 2010) and includes the following categories:

- Seasonal Concentration Areas of Animals;
- Rare Vegetation Communities or Specialized Habitats for Wildlife;
- Habitats of Species of Conservation Concern; and
- Animal Movement Corridors.

Criteria for the identification of these features are also provided in the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E*. These criteria were used to provide a screening for potential SWH within and immediately adjacent to the proposed development, as detailed in **Appendix E**.

A small number of SWH have the potential to be found on the Subject Property. One Habitat of Species of Conservation Concern (i.e., Special Concern Barn Swallow Habitat) was identified as having potential to occur on the Subject Property, due to the presence of approximately 10 Barn Swallow nests in the barn in

the non-breeding season. Breeding season surveys will determine how many of these nests are active and whether the barn should be considered SWH or not. The proposed development plan would impact this potential SWH. The impacts and potential mitigation measures are discussed in Sections 7 and 8 of this report respectively. The presence or absence of the other potential SWH will be determined through 2023 field investigations.

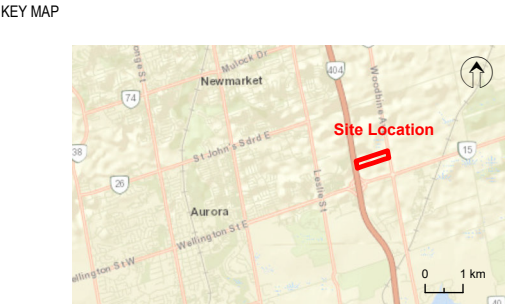
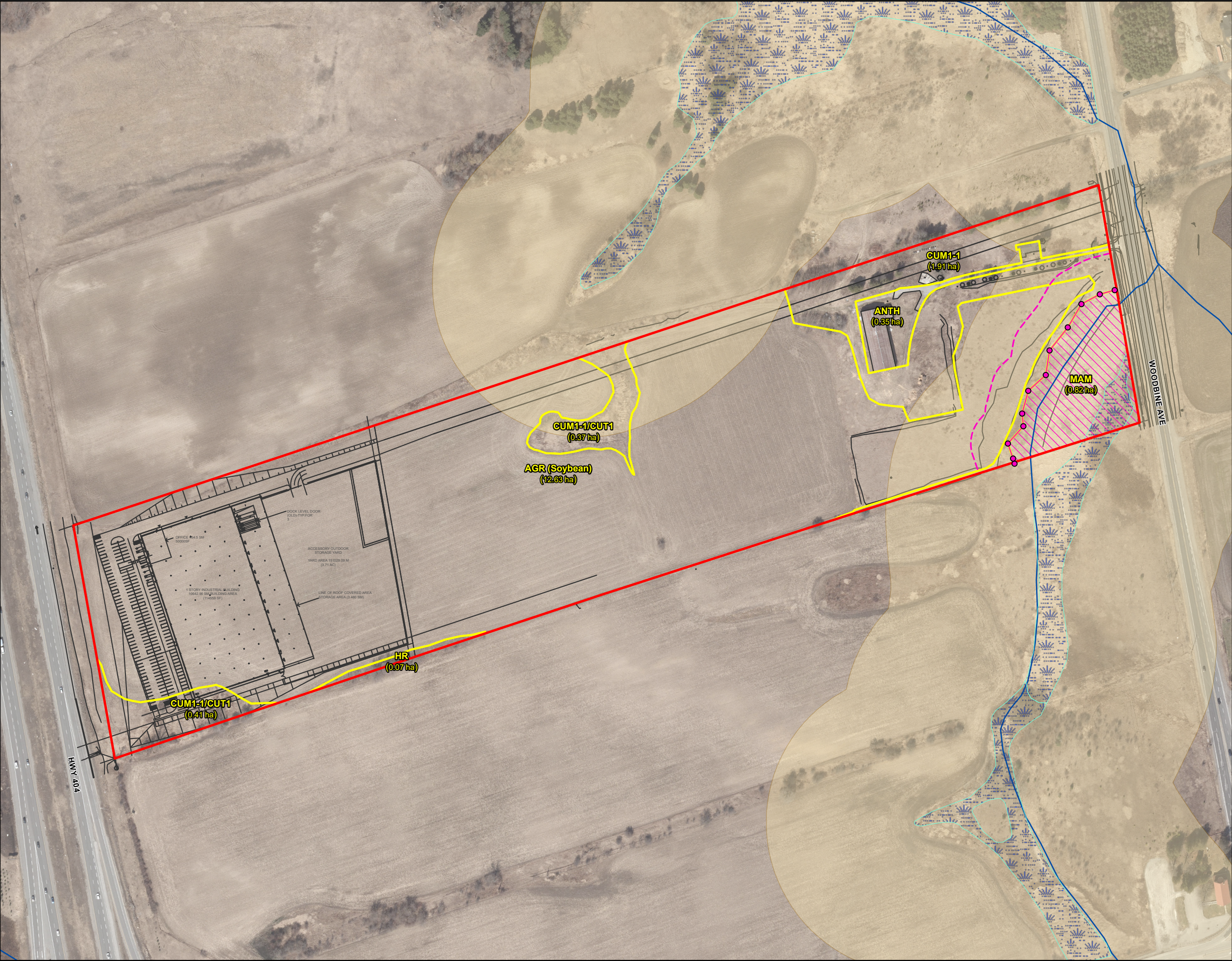
## 6. Proposed Development

The proposed development is a 16,670 m<sup>2</sup> (180,403 sq. ft.) single-storey industrial building, with an accessory outdoor storage yard and associated parking. Generally, the industrial building is to be situated in the northwest quadrant of the Subject Property, adjacent to Highway 404 right-of-way. There is a proposed access road south of the north property boundary leading from Woodbine Avenue to the proposed development (**Figure 3**). The outdoor storage yard is located to the east of the industrial building and parking is located to the north and the west. The industrial building, the outdoor storage yard, and the associated parking occur within the existing agricultural (AGR) community. The existing old house and associated barn structure will be demolished as part of the development plan.

As shown on **Figure 3**, the proposed development envelope is to be setback from the Bogart Creek Wetland Complex PSW and its associated vegetation protection zone.

Grading and stormwater management have been determined by SCS Consulting Group Ltd., which has been outlined in the report entitled *Servicing and Stormwater Management Report, 15450 Woodbine Avenue, Town of Whitchurch-Stouffville*. Surface water inputs to the PSW will be similar to that which is occurring currently and therefore will not have an impact on the PSW and its ecological and hydrological functions. Proposed grading for the Subject Property also mimics the existing drainage patterns, while minimizing cut and fill differentials.



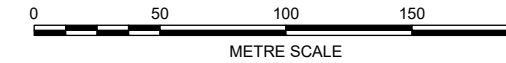


- LEGEND
- Watercourse <sup>1</sup>
  - Development Plan
  - Preliminary Staked Wetland (Nov 1 2022 LSRCA/Palmer)
  - Wetland Buffer/Development Limit (30m)
  - Wetland Evaluated-Provincial (Bogart Creek Wetland Complex) <sup>2</sup>
  - Ecological Land Classification (ELC)
  - LSRCA Regulation Limit (4.12 ha)
  - Subject Property (16.6 ha)

ELC LEGEND:

ANTH: Anthropogenic  
AGR: Agricultural  
HR: Hedgerow  
CUM1-1: Dry-Moist Old Field Meadow Type  
CUM1-1/CUT1: Dry-Moist Old Field Meadow Type /Cultural Thicket  
MAM: Mineral Meadow Marsh

1 - Ontario Hydro Network (OHN)  
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North American Datum 1983  
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Base Imagery (2021) provided by York region open GIS services.



CLIENT	Vistaview Mgmt (Treasure Hill)
PROJECT	5450 Woodbine Ave EIS
TITLE	<b>Proposed Development</b>
REF. NO.	2108402-3-2
	<b>Figure 3</b>



## **7. Impact Assessment**

Natural heritage features associated with the Subject Property are primarily linked to the Bogart Creek Wetland Complex PSW. This PSW provides significant ecological and hydrological functions. An assessment of the proposed development on the PSW is provided in Section 7.1 below, with mitigation measures outlined in Section 8.1.

Additionally, following an assessment of the vacant structures on the Subject Property, these buildings were determined to be potential habitat for avian and bat SAR. An assessment of the proposed development on these vacant structures is provided in Sections 7.2 and 7.3 below, with mitigation measures outlined in Sections 8.2 and 8.3. No other natural heritage/hydrological features (i.e., woodlands, lakes, etc.) were identified on or adjacent to the Subject Property.

During construction, there is the potential to affect natural features through the erosion of sediments or other materials into the wetland and/or the mapped watercourse or through disturbances to wildlife. Mitigation is discussed in Section 8.

### **7.1 Natural Heritage Features - Wetlands**

The Bogart Creek Wetland Complex PSW is located in the southeast corner of the Subject Property and is associated with a mapped tributary of Weslie Creek. In determining the extent of the PSW, Palmer conducted a staking exercise with the LSRCA on November 1, 2022. Staked boundaries are documented within **Figure 2**, with the PSW being comprised of a Mineral Meadow Marsh (MAM) community. Confirmation of these boundaries will be required during the spring 2023 growing season.

Development of the proposed industrial building is not expected to impact the PSW on the Subject Property. The design avoids the PSW and its 30 m vegetation buffer. The proposed access road is approximately 30 m from the wetland buffer.

### **7.2 Species at Risk - Roosting Bats**

Based on professional experience, Palmer biologists determined that the old house on the Subject Property could provide roosting habitat for SAR bats. Mitigation measures are discussed in Section 8.2.

### **7.3 Significant Wildlife Habitat - Barn Swallow**

Approximately ten Barn Swallow nests were observed in the old barn, outside of the breeding bird season. Consequently, Palmer biologists were unable to conclude if Barn Swallow had recently bred on the Subject Property, and if so, how many nests were being used. This species is listed as Special Concern on a provincial level. The presence of several active nests could mean that the barn is considered Candidate SWH, rather than Confirmed SWH, due to two factors:

- a) a lack of understanding of how common the species is regionally and the number of active nests which at a given site which should be considered significant; and,
- b) whether artificial structures should be considered SWH in any circumstance.

In Palmer's experience human-created structures have not been considered SWH. As the proposed development will remove this Candidate SWH; however, a conservative approach was taken. Mitigation measures proposed for these impacts are discussed in Section 8.3.

## **7.4 Other Vegetation Communities**

Less than 1 ha of cultural meadow, cultural meadow/cultural thicket, and hedgerow habitat is to be removed as part of development. This may impact common species that forage, breed, and live within these communities.



## 8. Mitigation

Mitigation measures for the proposed development are outlined below.

### 8.1 Natural Heritage Features - Wetlands

Potential effects to the wetlands are largely avoided by the project design and overall placement of the proposed industrial building, storage area, and parking. It is recommended that an Erosion and Sediment Control (ESC) Plan be implemented throughout the phases of this project to avoid the addition of excess sediment into the PSW. The ESC Plan will be developed by SCS Consulting Group.

The 30 m vegetative buffer surrounding the PSW will also provide additional protection to this natural feature, ensuring that the ecological and hydrological functions are maintained.

As per Section 3.4.17 of the YROP and Section 6.33 of the LSPP, development proposals should include landscaping and habitat restoration that increase the ability of native plants and animals to use riparian areas. Thus, to be in accordance with the YROP and LSPP, native species planting within the wetland buffer is recommended, to enhance the riparian area. Restoration of buffers must use native species that achieve natural, self-sustaining vegetation covers. Woody species that might be suitable for the sloped buffer to the wetland include White Pine (*Pinus strobus*), Eastern White Cedar (*Thuja occidentalis*), Red or Silver Maple (*Acer rubrum* and *saccharinum*), Red Oak (*Quercus rubra*) Trembling Aspen (*Populus tremuloides*), Basswood (*Tilia americana*), Paper Birch (*Betula papyrifera*), regionally present Serviceberry (*Amelanchier spp.*), Red-osier or Gray Dogwood (*Cornus sericea* or *racemosa*), Canada Fly Honeysuckle (*Lonicera canadensis*), or Pin Cherry (*Prunus pensylvanica*), but numerous other species are possible.

### 8.2 Species at Risk - Roosting Bats

A demolition timing window between October 1<sup>st</sup> and March 30<sup>th</sup> is recommended. Should this building be used by the most likely species, Little Brown Myotis, (or Tri-coloured Bat and Northern Myotis) this should avoid the active-use time.

### 8.3 Significant Wildlife Habitat – Barn Swallow

Surveys in 2023 will determine the number of active Barn Swallow nests and therefore determine whether this habitat (i.e., the barn) is considered Candidate SWH. If the barn is deemed Candidate SWH, habitat compensation in the form of a new nesting structure may be recommended.

Regardless of SWH status, nests cannot be removed when active. Thus, to avoid interaction with potentially breeding Barn Swallow, an approximate species-specific demolition timing window between early August and mid April is recommended (based upon professional experience). Development timing; however, may require the demolition of the old house and the barn within the breeding bird window. Should demolition occur within this window, a qualified biologist should complete a nesting bird survey within the structures, to ensure that there are no conflicts with the *Migratory Birds Convention Act* (MBCA). These surveys should be completed no earlier than 48 hours prior to planned demolition activities. If activity is detected, demolition activities would be delayed until it can be established that the birds have fledged and left the nest.

## 8.4 Wildlife Disturbance

The anticipated removal of vegetation communities will only impact agricultural lands or 'cultural' vegetation communities (i.e., meadows, thickets, and hedgerows). No significant natural or hydrological features on the Subject Property are proposed to be altered or removed.

The *Migratory Birds Convention Act, 1994* (MBCA) and Migratory Birds regulations, 2022 (MBR), together with the provincial *Fish and Wildlife Conservation Act* (Government of Ontario, 1997), protect most species of migratory birds and their nests and eggs anywhere they are found in Canada (Government of Canada, 1994). General prohibitions under the MBCA and MBR protect migratory birds, their nests, and their eggs and prohibit the deposit of harmful substances in waters / areas frequented by them. The MBR includes an additional prohibition against incidental take, which is the inadvertent harming or destruction of birds, nests, or eggs. Compliance with the MBCA and MBR is best achieved through a due diligence approach, which identifies potential risk, based on a site-specific analysis in consideration of the Avoidance Guidelines and Best Management Practices information on the Environment Canada website (Government of Canada, 2018).

Due to the need for vegetation clearing, it is recommended that the required vegetation clearing (meadows, thickets, or trees) within these communities occur outside the breeding bird nesting window, which is from April 1<sup>st</sup> to August 31<sup>st</sup>. This will prevent the potential destruction of active nests and their potential eggs, ultimately complying with the *Migratory Birds Convention Act* (1994). The winter season, during frozen ground conditions, is the ideal period for tree and vegetation removal. However, in the event that tree or vegetation removal must occur within the breeding bird window, a qualified biologist must screen the area for active nests. Clearing in identified nesting areas would be prohibited until such time that it has been confirmed that the young have fledged.

## 8.5 Other Items

One patch of Japanese Knotweed was observed east of the old house. This was the only location of this highly invasive species observed on the Subject Property. It is recommended that this species is fully removed from the Subject Property, in order to stop its spread on-site or elsewhere, as it is potentially damaging to ecosystems and infrastructure. To do this, *Japanese Knotweed, Best Management Practice Technical Document for Land Managers* (2017) and other documents can be referred to. All roots and plant parts need to be removed from the Subject Property responsibly or possibly burned on site. Since the patch is close to the driveway and not close to other natural features, it may be possible to use an excavator to remove the plant and its roots as a first step.

## 9. Policy Conformity

A summary of applicable natural heritage policies and the manner in which the proposed development plan meets their requirements is provided in **Table 3**. With the implementation of the abovementioned mitigation measures, there are no predicted negative impacts to the limited Key Natural Heritage Features observed adjacent to the Subject Property or their ecological functions.

**Table 3. Policy Conformity**

<b>Policy Document</b>	<b>Policy Intent/Objective</b>	<b>Implications and Policy Conformity</b>
Provincial Policy Statement	Direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features.	Development or site alteration is not to occur within a Significant Wetlands in Ecoregion 6E. A portion of a PSW (i.e., the Bogart Creek Wetland Complex) is documented on and immediately adjacent to the Subject Property. The PSW will be protected.
Greenbelt Plan (2017)	Provides permanent protection to the agricultural land base and the ecological and hydrological feature areas and their functions occurring on the landscape of the Greater Golden Horseshoe. Development or site alteration within the Protected Countryside land use designation must demonstrate that there will be no negative impacts to KNHFs and KHF.	The PSW on and adjacent to the Subject Property is classified as a KNHF and a KHF and is found outside the NHS. As such, a 30 m vegetated buffer is required for the PSW as per Section 3.2.5.4 of the Greenbelt Plan.
York Region Official Plan (2022)	Provides policies guiding new planning and development in York Region. The Regional Greenlands and Water Resource System protects KNHFs and KHF within York Region.	Of the OP-recognized KNHFs and KHF, a wetland (i.e., The Bogart-Creek Wetland Complex) was identified. As per Table 3 of the YROP, this wetland requires a 30 m vegetated buffer.
Town of Whitchurch-Stouffville Official Plan (2020)	Contains policies and implementation approaches to guide decision making by the Town with respect to the natural environment, land use, community services, social and cultural matters, and development review.	The east side of the Subject Property contains a Significant Environmental Area as per the Town's Greenlands System. In accordance with Sections 7.3 (iv) and 7.3 (v) of the Town's OP, natural and hydrological features are to adhere to environmental policies outlined in the Greenbelt Plan and Section 3 of the Town's OP. Consequently, to be in accordance with these policies, the PSW requires a 30 m vegetated buffer.
Vandorf-Preston Lake Secondary Plan (2001)	Establishes the principles, objectives, and general policies to guide the planning of the	The Subject Property contains both a Potential Employment Area and a Significant Environmental Area land use designation. The

	Vandorf and Preston Lake communities and their adjacent lands.	portion of the Subject Property designated as Potential Employment Area allows for the development of an industrial building. The portion of the Subject Property designated as a Significant Environmental Area is subject to the policies of Section 3.4.2 of the Town's OP and to Section 3.2 of the Greenbelt Plan. Consequently, to be in accordance with these policies, the PSW requires a 30 m vegetated buffer.
Lake Simcoe Protection Plan (2008)	Provides a legislative framework for protecting the Lake Simcoe watershed.	The Subject Property is located within the boundaries of the LSPP and is also located within a rural settlement area. Per the LSPP, the submitted proposal application should contain plans to minimize urban run-off into the PSW, as well as landscaping/habitat restoration plans to improve riparian areas on the Subject Property.
Lake Simcoe Regional Conservation Authority (O. Reg. 179/06)	LSRCA regulates activities in wetlands, valleylands, and watercourses	The Subject Property contains Regulated Area on the north and east sides (as identified by LSRCA mapping) and therefore consultation and a permit will be (or may be re Bill 23) required for the proposed development.
Endangered Species Act (2007)	Species and the habitat of species designated as Endangered or Threatened are afforded legal protection.	No Endangered or Threatened species observed to date.
Migratory Bird Act (1994)	Protect most species of migratory birds and their nests and eggs anywhere they are found in Canada.	Tree clearing and vegetation removal is anticipated as part of the proposed development. Currently vacant structures on the Subject Property, which may be utilized by avian species, will also be removed. It is recommended that vegetation clearing and the demolition of structures should be conducted outside of April 1 – August 31 to ensure no nesting birds are present/impacted. For Barn Swallow this window can be shifted slightly (from mid-April to early August).

## 10. Conclusion

The findings of our study are the result of a background review, field investigations, and an analysis of data using the current scientific understanding of the ecology of the area, as well as the current natural heritage policy requirements. We have evaluated the environmental sensitivities and the natural heritage constraints of the Subject Property, which are described in this report and illustrated on **Figure 3**.

Based on the findings and recommendations of this EIS, it is our professional opinion that the proposed development of the Site Plan is environmentally feasible. It is our expert opinion that the proposed development would not result in negative impacts to the identified natural heritage features (i.e., the PSW), provided the recommended mitigation and enhancement measures set out in this report are implemented. Mitigation is given for potential SAR and Candidate SWH. These conclusions are subject to the results of seasonal field investigations in 2023.

Yours truly,

**Palmer**™

**Prepared By:**



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Jesse Snider, B.Sc., EPt  
Ecology Project Coordinator

**Reviewed By:**



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Rosalind Chaundy, M.Sc.F.  
Senior Ecologist

## 11. References

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# **Appendix A**

## **Agency Correspondence**

## 1. General Information:

Date: \_\_\_\_\_

Address: \_\_\_\_\_

Name of consulting firm: \_\_\_\_\_

Contact information: \_\_\_\_\_

## 2. Identify all potential natural heritage and hydrologic features in the study area (check all that apply):

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

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

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

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

- ☒ Consult with the appropriate Municipal and Conservation Authority staff, as required, to establish the required scope of study.
- ☒ Identify an appropriate study area - generally the area of anticipated disturbance plus 120 m.
- ☒ Collect and include applicable background information and current environmental mapping for natural heritage and hydrologic features, and the natural heritage system within and surrounding the study area.
- ☒ Identify and provide detailed descriptions of natural heritage and hydrologic features in the study area, their function, and the broader natural heritage system that they are within. Determine the significance of these natural heritage and hydrologic features under applicable policy.
- ☒ Evaluate existing vegetation communities using Ecological Land Classification (ELC) for Southern Ontario (Lee et al. 1998. Ecological Land Classification for Southern Ontario: first approximation and its applications. SCSS Field Guide FG-02). Provide a description of ELC communities in the study area and include completed ELC field sheets as an appendix.
- ☒ Conduct a \_\_\_\_\_-season vegetation inventory in the late spring/summer/fall. Include the inventory categorized by ELC community as an appendix and denote any Species at Risk and/or provincially/locally rare species.
- ☐ Conduct three (3) breeding amphibian surveys as per the Marsh Monitoring Program protocol (Bird Studies Canada). Observational salamander surveys may be required if potential habitat exists in the study area. Include completed field sheets as an appendix.

- ☐ Conduct two (2) dawn breeding bird surveys between May 24 and July 15, under appropriate conditions, with a minimum of 10 days between surveys, and record all occurrences and breeding behaviors. Point counts, wandering transects or a combination of the two must be used according to features present and site conditions. Include completed field sheets as an appendix. A third survey will be required if suitable grassland bird habitat is present.
- ☒ Record observations of all wildlife occurrences and behaviours and assess wildlife habitat function.
- ☒ Screen for Species at Risk (SAR), listed under the *Endangered Species Act, 2007*, based on existing or potential habitat. Additional species-specific surveys may be required if SAR habitat is present (e.g. butternut health assessments, snag surveys, bat acoustic monitoring surveys, evening whip-poor-will surveys, etc.), please contact the Ministry of Environment, Conservation and Parks (MECP) for further direction. Include any relevant correspondence with the MECP as an appendix
- ☒ Assess for Significant Wildlife Habitat (e.g. turtle nesting or wintering area, reptile hibernaculum, woodland raptor nesting habitat, seeps, springs, etc.) as per the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, January 2015).
- ☒ Identify any ecological linkages or movement corridors within the study area. Demonstrate how connectivity within and between natural heritage and hydrologic features will be maintained and, where possible, improved or restored to allow for the effective dispersal and movement of plants and animals.
- ☒ Provide a general description of the methodology, dates, timing, and locations of completed field surveys.
- ☐ Confirm the boundaries of any wetland and/or woodland features on the property through a staking exercise with the LSRCA. Boundary points must be surveyed with a high-accuracy GPS device (accurate to within 10 cm). A professional Ontario Land Surveyor (OLS) may be required to attend. Wetland staking exercises must be completed between June 15 and September 30 (exceptions may apply). Note that a site visit fee may apply.
- ☐ Complete an aquatic habitat assessment for all drainage features/watercourses in the study area, including characterization of hydrologic features (i.e. permanent, intermittent, ephemeral, headwater drainage feature) and suitability as fish habitat. Include a description of instream and riparian cover, bank stability, substrate composition, stream morphology, dimensions and gradient, thermal regime indicators, potential barriers, woody debris distribution, aquatic vegetation, groundwater seepage areas, etc.
- ☐ Complete a catchment-based water balance for the study area to assess how existing drainage conditions and moisture regimes that support sensitive hydrologic features (e.g. wetland, woodlands, watercourse) may be impacted by the proposed development. Demonstrate how current hydrologic inputs will be maintained post-development. Please note, the water balance assessment may also be a requirement under other provincial policies, therefore the NHE/EIS should coordinate with/summarize the water balance work undertaken by others.
- ☐ Recommend the dimensions of an appropriate vegetation protection zone (VPZ)/buffer to natural heritage and hydrologic features required to mitigate impacts from the proposed development. Recommendations for restoration/plantings should be provided for all buffers.
- ☒ Provide a detailed description of the proposed development.

- ☒ Map the following information separately on current high quality ortho-air photos:
  - 1) ELC vegetation communities, natural heritage and hydrologic features and their associated VPZs, and the proposed development and anticipated limit of disturbance (e.g. grading limits); and,
  - 2) ELC vegetation communities, survey locations, other environmental features (e.g. linkages, wildlife corridors, seeps, springs, stick nests, wildlife habitat, rare species, invasive species, etc.), and existing structures and/or trails.
- ☒ Assess the potential direct, indirect, and cumulative impacts of the proposed development on natural heritage and hydrologic features, the natural heritage system, and related ecological and hydrologic functions.
- ☒ Develop and provide an appropriate avoidance/mitigation/restoration strategy to address the potential impacts of the proposed development.
- ☒ Demonstrate how the proposed development is in conformity with all federal, provincial, regional, and municipal natural heritage policies applicable in the Lake Simcoe watershed.
- ☒ Complete one final report for circulation and approval, prepared by qualified professionals, in an electronic format as well as one (1) hard copy.

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

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

**5. Additional notes and/or requirements:**

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

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



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**Re: 2108402 - 15450 Woodbine Avenue Terms of Reference**

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**Jesse Snider** <jesse.snider@pecg.ca>  
To: Hena Kabir <hena.kabir@townofws.ca>  
Cc: Rosalind Chaundy <rosalind.chaundy@pecg.ca>

Thu, Feb 9, 2023 at 9:25 AM

Hi Hena,

I received a call from the LSRCA on February 7 and they told me that they can no longer officially comment on TORs. They said that this responsibility now falls to the Municipality.

Kind regards,  
Jesse

On Thu, Feb 9, 2023, 9:21 a.m. Hena Kabir <[hena.kabir@townofws.ca](mailto:hena.kabir@townofws.ca)> wrote:

Hi Jesse,

I have no questions. Has LSRCA signed off? All I need is a sign off email from them on the TOR.

Thank you,  
Hena Kabir

**Respecting Your Right To Disconnect** – If your normal working hours are not the same as mine, please feel free to wait until your core business hours to provide me with a response.

---

**From:** Jesse Snider <[jesse.snider@pecg.ca](mailto:jesse.snider@pecg.ca)>  
**Sent:** Wednesday, February 8, 2023 11:46 AM  
**To:** Hena Kabir <[hena.kabir@townofws.ca](mailto:hena.kabir@townofws.ca)>  
**Cc:** Rosalind Chaundy <[rosalind.chaundy@pecg.ca](mailto:rosalind.chaundy@pecg.ca)>  
**Subject:** Re: 2108402 - 15450 Woodbine Avenue Terms of Reference

Hi Hena,

Following up on this TOR to ensure that you and your team have received it and don't have any questions pertaining to it.

Thank you,

**Jesse Snider**



---

| c (905) 806 3571 | e [jesse.snider@pecg.ca](mailto:jesse.snider@pecg.ca)

Learn More:

[www.pecg.ca](http://www.pecg.ca)

On Tue, Jan 24, 2023 at 12:22 PM Jesse Snider <[jesse.snider@pecg.ca](mailto:jesse.snider@pecg.ca)> wrote:

Hi Hena,

Please find attached the Terms of Reference checklist for EIS work to be carried out at 15450 Woodbine Avenue in the Town of Whitchurch-Stouffville. This checklist was also submitted to the LSRCA on January 13, 2023. Please note that breeding bird survey results, amphibian breeding survey results, wetland staking results, and the spring/summer vegetation survey results will be incorporated as part of an EIS addendum, as Galatia Lane Estates Inc. c/o Treasure Hill plans to submit a zoning by-law amendment application prior to the completion of these surveys.

If you have any questions, please let me know.

Thank you,

**Jesse Snider**

Ecology Project Coordinator



---

| c (905) 806 3571 | e [jesse.snider@pecg.ca](mailto:jesse.snider@pecg.ca)

Learn More:

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# **Appendix B**

## **LSRCA Meadow Memo**



## Memorandum

Date: December 2, 2022

Project #: 2108402

To: Jessica Chan, Natural Heritage Ecologist, Lake Simcoe Region Conservation Authority

From: Rosalind Chaundy, Senior Ecologist, Palmer

cc: Hesham Mohamed, Project Manager, Treasure Hill

Re: Assessment of meadow situated on west side of 15450 Woodbine Ave, Gormley

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### 1. Introduction

Palmer is preparing an Environmental Impact Study on behalf of Treasure Hill for a proposed panel plant at 15450 Woodbine Ave., Gormley, York Region. Treasure Hill having recently acquired the property would like to determine as early as possible, the natural feature constraints present. Lake Simcoe Region Conservation Authority (LSRCA) met Treasure Hill and Palmer on site on November 1 2022 to discuss the preliminarily staked wetland features on site. It was agreed by all that final confirmation of wetland limits would have to occur in the late spring/early summer of 2023 owing to the late time of the year and partial senescence of vegetation.

One of the features examined was a moist meadow with scattered shrubs and trees in the southwestern corner of the property (**Figure 1**).

A central part of this area was thought to be a wetland and was staked as such with LSRCA on Nov. 1, 2022 (**Figure 2**). The uncultivated area including both the staked area and an area around this is shown in **Photo 1**.



*Photo 1. General area viewed from a field to the east.*

At the time of the feature staking, Palmer had not conducted soil sampling, due to time constraints. After the staking Palmer augered two soil samples in the centre west and centre east of the meadow. Palmer also recorded observations of plant species present on November, 1 2022. After the soil sampling, Palmer concluded that the staked area was in fact a moist terrestrial cultural meadow and not a wetland meadow marsh as originally thought. This memo explains those conclusions.

## 2. Observations

### 2.1 Vegetation

The area staked and surveyed is primarily composed of meadow herbaceous vegetation. At the east end there are a few individual willow (*Salix sp.*) and Red-Osier Dogwood (*Cornus sericea*) shrubs. Plants recorded were: Reed Canary Grass (*Phalaris arundinacea*), Goldenrod species (*Solidago*, presumed to be *altissima*); unidentified Aster sp. (*Symphyotrichum sp.*), and a very small number of cattail sp. (*Typha sp.*) individuals. Photos taken from the east end and centre of the staked area are provided in **Photos 2** through **4**.



## Memorandum

Page 3 | December 2, 2022

Assessment of meadow situated on west side of 15450 Woodbine Ave, Gormley



*Photo 2. Staked meadow from approximate east edge looking west.*





*Photo 3. Meadow from centre-west looking east.*



*Photo 3. Meadow from centre-east looking northeast.*

While cattail species are always considered a wetland species, and willow and Red-osier Dogwood are usually found in wetland situations, the latter two species will sometimes grow in moist conditions that are not wetlands. The consideration of the extent and abundance of wetland plant cover needs to be considered (e.g., using the OWES 50/50 rule). These three species were all found in very small numbers and none were dominant (i.e., greater than 50% representation of wetland plant cover does not occur). Wetlands under both the Ontario Wetland Evaluation System, Southern Manual (3rd edition, version 3.3, 2014) and Ecological Land Classification for Southern Ontario (Lee et al. 1998) state that the majority of the plants in a wetland shall be wetland plants (50% wetland vegetation). Thus, wetland plants can be found in uplands (or terrestrial systems) and vice-versa.

The dominant plants in the staked meadow were Reed Canary Grass and goldenrod. The Reed Canary Grass is more often found in wetland situations (such as along watercourses or low meadows) however it can fairly often be found in areas of uplands that have moist soil but are not wetlands. When this conclusion is made, it is generally based on a combination of and assessment of the accompanying plants and the soils. Soils are described in the next section.

A factor to consider is the Coefficient of Wetness (Floristic Assessment System for Southern Ontario Oldham et al, 1995). This is a number from 5 to -5 which indicates the moisture conditions that a species is found in. For example, at the dry end is 5 (almost always occurs in uplands), in the middle is 1 to -1

(found in uplands to wetland), and -5 (almost always found in wetlands). Some have described -3 as 'usually occurs in wetlands'. This scale does not show the range that a species can occur across. For instance, some species always require standing water and as such is likely to only be a -5, however some species occur across a range of conditions. An example is Eastern White Cedar which is given a -3 Coefficient of Wetness, however this species can be found in very dry conditions (perhaps in a dry field or alvar where species are usually a 4 or 5) through to wet organic swamps (perhaps -4), thus the single number does not show the breadth of moisture conditions a species is found within. Note that these Coefficient of Wetness numbers are a completely different system than the soil Moisture Regime system described below.

Reed Canary Grass has a Coefficient of Wetness number of -3, however as stated above, this species is fairly tolerant of a range of conditions and in our experience can be found in moist, but non-wetland conditions.

The most common plant in the meadow along with Reed Canary Grass was goldenrod. This was thought to be Tall Goldenrod (*S. altissima* or possibly the closely related *S. canadensis*). This species is usually an upland meadow species, although it can grow at the edges of meadow marshes. This species has a Coefficient of Wetness of 3 (i.e. is generally an upland plant). Asters were also present however they could not be identified to species. There are both upland and wetland species of aster, as well as species that can be found across the interface of wetlands and uplands.

## 2.2 Soils

The results of two soil samples (#3 and 4) that were taken with a standard auger are given in **Tables 1 and 2**. Soil samples #1 and #2 are from elsewhere on the property and were for a different community. Using *Soil Moisture Regime for Deep Soils (Chart B)* from Lee et.al 1998, both soil samples indicate that the soil moisture regime is that of an upland not wetland community.

**Table 1. Soil Sample #3 (Nov 1, 2022)**

Layer	Description and Comments
<b>Litter Layer</b>	Negligible
<b>Depth of Organics (Of, Om, Oh)</b>	None present
<b>A Layer</b> (top layer: depth, colour, texture, etc.)	Sandy/silt loam (Pore Pattern 3 or 4); 0 – 50 cm; mid brown,
<b>B Layer</b> (second layer: depth, colour, texture, etc.)	Similar pore pattern to A; 50 – 65 cm; paler grey-brown
<b>Depth to Distinct Mottles</b>	~65 cm
<b>Depth to Gley (cm)</b>	None observed
<b>Maximum Depth of Soil Sample</b>	~65 cm
<b>Water Table Reached (cm depth)</b>	Not reached
<b>Resultant Moisture Region &amp; Community*</b>	3 very fresh or possibly 4 moderately moist. Non-hydric soils. <b>Upland (= Terrestrial)</b>

\*Moisture Regime: Ø, 0-4 (Dry through Moderately Moist) considered upland;

5-9 (Moist through Very Wet considered wetland (ELC manual Lee et al. 1998).

*Table 2. Soil Sample #4 (Nov 1, 2022)*

Layer	Description and Comments
Litter Layer	Negligible
Depth of Organics (cm of Of, Om, Oh)	None present
A Layer (top layer: depth, colour, texture, etc.)	Loam (Pore Pattern 3, maybe 4); 0 – 75 cm; mid brown at 70 cm becoming much darker almost black at bottom of layer
B Layer (second layer: depth, colour, texture, etc.)	Pore Pattern slightly finer than above (4); 75-80 cm; pale beige
Depth to Distinct Mottles	75 cm (a few indistinct mottles above)
Depth to Gley (cm)	None observed
Maximum Depth of Soil Sample	~80 cm
Water Table Reached (cm depth)	Not reached
Resultant Moisture Region & Community*	3 very fresh. Non-hydric soils. Upland (= Terrestrial)

\* Moisture Regime: Ø, 0-4 (Dry through Moderately Moist) considered upland

5-9 (Moist through Very Wet considered wetland (ELC manual Lee et al. 1998)

### 3. Conclusions

Thus, based on the soil information, which is key, and on the vegetation present, it is Palmer's opinion that the meadow should be described as a moist upland (terrestrial) meadow (i.e. Cultural Meadow CUM1) and not a Reed Canary Grass Mineral Meadow Marsh (MAM2-2), and thus in our opinion, the staked line in the west part of the property does not delineate a feature.

Prepared By:




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Rosalind Chaundy, M.Sc.F  
Senior Ecologist

Reviewed By:




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Dirk Janas, B.Sc.  
Principal, Ecologist



## Memorandum

Page 7 | December 2, 2022

Assessment of meadow situated on west side of 15450 Woodbine Ave, Gormley



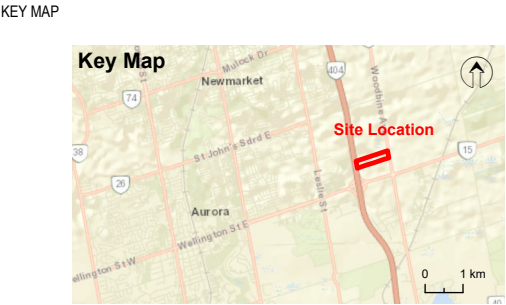
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## References

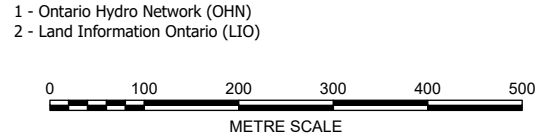
Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and Its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS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

Ontario Ministry of Natural Resources. 2014.  
Ontario Wetland Evaluation System. Southern Manual. 3<sup>rd</sup> Edition, Version 3.3.





- LEGEND
- Watercourse <sup>1</sup>
  - Wetland <sup>2</sup>
    - Unevaluated
    - Evaluated-Provincial (Bogart Creek Wetland Complex)
  - Subject Property (16.6 ha)



North American Datum 1983  
Universal Transverse Mercator Projection Zone 17

Scale: 1:8,000  
Page Size: Tabloid (11 x 17 inches)

Drawn: SM  
Checked: ED  
Date: Dec 1, 2022

Source Notes:  
Base Imagery (2021) provided by York region open GIS services.

**DRAFT**

**NORTH**

CLIENT Vistaview Mgmt (Treasure Hill)

PROJECT 15450 Woodbine Ave EIS

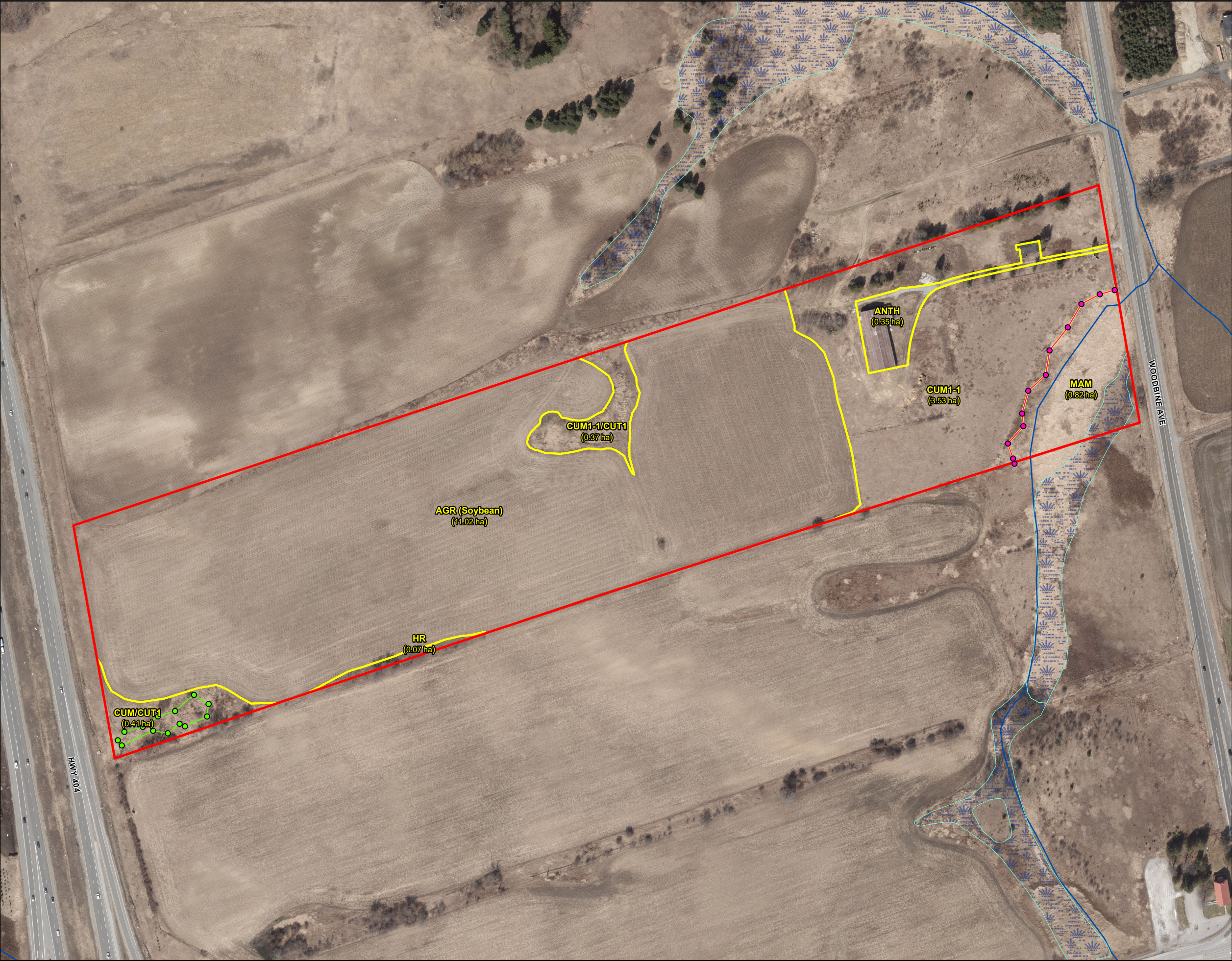
TITLE Site Location

Palmer

REF. NO. 2108402-1-1

Figure 1





**LEGEND**

- Watercourse <sup>1</sup>
- Preliminary Staked Feature (Nov 1 2022 LSRCA/Palmer)
- Staked Line - See memo for discussion (Nov 1 2022 LSRCA/Palmer)
- Wetland Evaluated-Provincial (Bogart Creek Wetland Complex) <sup>2</sup>
- Ecological Land Classification (ELC)
- Subject Property (16.6 ha)

**ELC LEGEND:**

- ANTH: Anthropogenic
- AGR: Agricultural
- CUM1-1: Dry-Moist Old Field Meadow Type
- CUM1-1/CUT1: Dry-Moist Old Field Meadow Type /Cultural Thicket
- MAM: Mineral Meadow Marsh

1 - Ontario Hydro Network (OHN)  
2 - Land Information Ontario (LIO)

0 50 100 150 200  
METRE SCALE

North American Datum 1983  
Universal Transverse Mercator Projection Zone 17

Scale: 1:3,000  
Page Size: Tabloid (11 x 17 inches)

Drawn: SM  
Checked: ED  
Date: Dec 2, 2022

Source Notes:  
Base Imagery (2021) provided by York region open GIS services.

**DRAFT**

**NORTH**

CLIENT	Vistaview Mgmt (Treasure Hill)	
PROJECT	5450 Woodbine Ave EIS	
TITLE	Existing Environmental Conditions	
Palmer™	REF. NO.	2108402-2-1
	Figure 2	



# **Appendix C**

## **Flora List**

Scientific Name	Common Name	Native/Exotic/ Unranked	S Rank	COSEWIC Status	SARO Status	Coefficient of Conservatism	Coefficient of Wetness
<i>Abies balsamea</i>	Balsam Fir	N	S5			5	-3
<i>Anemone</i> sp.	Anemone Species						
<i>Betula papyrifera</i>	Paper Birch	N	S5			2	3
<i>Bidens frondosa</i>	Devil's Beggarticks	N	S5			3	-3
<i>Carex cristatella</i>	Crested Sedge	N	S5			3	-3
<i>Carex lupulina</i>	Hop Sedge	N	S5			6	-5
<i>Carex</i> sp.	Sedge Species						
<i>Chamaenerion angustifolium</i>	Fireweed	N	S5			3	0
<i>Circaea alpina</i>	Small Enchanter's Nightshade	N	S5			6	-3
<i>Clinopodium vulgare</i>	Wild Basil	N	S5			4	5
<i>Cornus sericea</i>	Red-osier Dogwood	N	S5			2	-3
<i>Equisetum arvense</i>	Field Horsetail	N	S5			0	0
<i>Eupatorium perfoliatum</i>	Common Boneset	N	S5			2	-3
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	N	S5			2	0
<i>Fragaria vesca</i>	Woodland Strawberry	N	S5			4	3
<i>Fraxinus americana</i>	White Ash	N	S4			4	3
<i>Galium palustre</i>	Common Marsh Bedstraw	N	S5			5	-5
<i>Glyceria grandis</i>	Tall Mannagrass	N	S5			5	-5
<i>Impatiens capensis</i>	Spotted Jewelweed	N	S5			4	-3
<i>Juncus canadensis</i>	Canada Rush	N	S5			6	-5
<i>Lycopus americanus</i>	American Water-horehound	N	S5			4	-5
<i>Lythrum salicaria</i>	Purple Loosestrife	E	SNA				-5
<i>Nabalus albus</i>	White Rattlesnakeroot	N	S5			6	3
<i>Nasturtium officinale</i>	Watercress	E	SNA				-5
<i>Onoclea sensibilis</i>	Sensitive Fern	N	S5			4	-3
<i>Phalaris arundinacea</i>	Reed Canarygrass	N	S5			0	-3
<i>Picea glauca</i>	White Spruce	N	S5			6	3
<i>Poa</i> sp.	Bluegrass Species						
<i>Populus balsamifera</i>	Balsam Poplar	N	S5			4	-3
<i>Populus tremuloides</i>	Trembling Aspen	N	S5			2	0
<i>Prenanthes</i> sp.	Rattlesnake-root Species						
<i>Prunella vulgaris</i>	Common Self-heal	N	S5			0	0
<i>Rhamnus cathartica</i>	European Buckthorn	E	SNA				0
<i>Rumex</i> sp.	Dock Species						
<i>Salix bebbiana</i>	Bebb's Willow	N	S5			4	-3
<i>Salix discolor</i>	Pussy Willow	N	S5			3	-3
<i>Salix eriocephala</i>	Cottony Willow	N	S5			4	-3
<i>Schoenoplectus acutus</i>	Hard-stemmed Bulush	N	S5			5	-5
<i>Scirpus atrovirens</i>	Black-girdled Bulrush	N	S5			5	-5
<i>Solidago altissima</i>	Tall Goldenrod	N	S5			1	3
<i>Solidago gigantea</i>	Giant Goldenrod	N	S5			4	-3
<i>Symphyotrichum cordifolium</i>	Heart-leaved Aster	N	S5			5	5
<i>Symphyotrichum ericoides</i>	White Heath Aster	N	S5			4	3
<i>Tarenaya hassleriana</i>	Pink-queen	E	SNA				5
<i>Thuja occidentalis</i>	Eastern White Cedar	N	S5			4	-3
<i>Toxicodendron radicans</i>	Poison Ivy	N	S5			2	0
<i>Typha angustifolia</i>	Narrow-leaved Cattail	E	SNA				-5
<i>Typha latifolia</i>	Broad-leaved Cattail	N	S5			1	-5
<i>Ulmus rubra</i>	Slippery Elm	N	S5			6	0
<i>Viburnum opulus</i>	Cranberry Viburnum	N	S5			5	-3

<b>LEGEND</b>	
<b>SRANK</b>	<b>Provincial Status:</b> Provincial ranks are used by the NHIC to set protection priorities for rare species and natural communities. These ranks are not legal generally uncommon to common in the province. Species ranked S1-S3 are considered to be rare in Ontario. designations. S4 and S5 species are generally uncommon to common in the province. Species ranked S1-S3 are considered to be rare in Ontario.
S1 Critically Imperiled	Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
S2 Imperiled	Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
S3 Vulnerable	Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4 Apparently Secure	Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 Secure	Common, widespread, and abundant in the nation or state/province.
SU Unrankable	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
SNA Unranked	A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
SX Presumed Extirpated	Species or community is believed to be extirpated from the nation or state/province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
SH Possibly Extirpated (Historical)	Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered.
SE# Exotic Status	
S#? Rank Uncertain	

Ontario Ministry of Natural Resources (OMNR). 2018. Natural Heritage Information Centre Species Lists. Last updated January 30, 2018. <https://www.ontario.ca/page/get-natural-heritage-information>

<b>COSSARO</b>	
END Endangered	A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.
THR Threatened	A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
SC Special Concern	A species with characteristics that make it sensitive to human activities or natural events.
DD Data Deficient	
EXP Extirpated	A species that no longer exists in the wild in Ontario but still occurs elsewhere.

Ontario Ministry of Natural Resources and Forestry (2018). Species Risk in Ontario. Last updated UNE 28, 2018. <https://www.ontario.ca/environment-and-energy/species-risk-type>

<b>COSEWIC</b>	
END Endangered	A wildlife species facing imminent extirpation or extinction.
THR Threatened	A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
SC Special Concern	A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.
VUL Vulnerable	
NAR Not at Risk	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
DD Data Deficient	A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.
NA Non-active	
XT Extirpated	A wildlife species that no longer exists in the wild in Canada, but exists elsewhere.

Committee for the Status on Endangered Wildlife in Canada (COSEWIC). 2018. Canadian Wildlife Species at Risk. Last updated February 22, 2018. [http://www.sararegistry.gc.ca/sar/index/default\\_e.cfm](http://www.sararegistry.gc.ca/sar/index/default_e.cfm)

#### Coefficient of Conservation

'Higher values of the coefficients of conservatism, on the scale of 1–10, indicate species that are more "conservative" (or ecologically sensitive), including those least associated with anthropogenic disturbance, least aggressive, least able to spread, and most confined to particular natural habitat' (Catling Catling, Paul M. 2013. Using Coefficients of Conservatism and the Floristic Quality Index to assess the potential for serious and irreversible damage to plant communities. Canadian Field-Naturalist 127(3): 285–288.

#### Coefficient of Wetness

5 - Almost always occur on upland; 3 - Usually occur on uplands; 0 - Found on uplands and in wetlands; -3 Usually occur in wetlands; -5 Almost always occur in wetlands

Floristic Assessment System for Southern Ontario (Oldham et al, 1995).



# **Appendix D**

## **Species at Risk Assessment**

## Appendix D: Species at Risk Assessment

NAME	SARA STATUS	SARO	COSEWIC	S-RANK	HABITAT REQUIREMENTS	SOURCE OF RECORD	HABITAT PRESENT (Y/P/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
<b>AVIFAUNA</b>									
Acadian Fly Catcher ( <i>Empidonax virescens</i> )	END	END	END	S2S3B	The Acadian Flycatcher is typically found in mature, shady forests with ravines, or in forested swamps with lots of maple and beech trees. In Canada, the Acadian Flycatcher nests only in southwestern Ontario, near the shore of Lake Erie, in large forests and forested ravines. This species is found primarily southern Ontario's Carolinian forests, and requires large, undisturbed forests, often more than 40 hectares in size. This species is relatively rare in Ontario, with 25 to 75 breeding pairs recorded in 2010 (Ministry of Natural Resources and Forestry, 2017). The main threat to the Acadian flycatcher is habitat loss due to urban and agricultural development.	OBBA	N	No forested communities noted on or adjacent to the Subject Property.	NA
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	No Status	SC	Not at Risk	S2N,S4B	The Bald Eagle is a species of special concern, is found throughout North America, and nest in throughout northern Ontario, with a large numbers found near Lake of the Woods. Bald eagles nest in a variety of habitats and forest types, almost always near a major lake or river where they do most of their hunting. While fish are their main source of food, Bald eagles can easily catch prey up to the size of ducks, and frequently feed on dead animals, including White-tailed Deer. They usually nest in large trees such as pine and poplar. During the winter, bald eagles sometimes congregate near open water such as the St. Lawrence River, or in places with a high deer population where carcasses might be found. The Bald eagle was relatively common in Southern Ontario near Lake Erie, but the population was wiped out in the 1960's related to increased development of the shoreline and introduction of DDT. An intensive re-introduction program and environmental clean-up efforts have caused a rebound in population and may be frequently seen throughout southern Ontario (Ministry of Natural Resources and Forestry, 2015).	OBBA	N	No forested communities or large open waterbodies are noted on or adjacent to the Subject Property.	NA
Bank Swallow ( <i>Riparia riparia</i> )	THR	THR	THR	S4B	The Bank Swallow is threatened by loss of breeding and foraging habitat, destruction of nesting habitat and widespread pesticide use. Bank swallows are small songbirds with brown upperparts, white underparts and a distinctive dark breast band. It averages 12 cm long and weighs between 10 and 18 grams. The swallow can be distinguished in flight from other swallows by its quick, erratic wing beats and its almost constant buzzy, chattering vocalizations. They nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposit, including banks of rivers and lakes, active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	No large, vertical faces (i.e., cliffs or steep riverbanks) are noted on or adjacent to the Subject Property.	NA
Barn Swallow ( <i>Hirundo rustica</i> )	THR	SC	SC	S4B	The Barn Swallow is a threatened species, is found throughout southern Ontario, and can range into the north as long as suitable nesting locations can be found. These birds prefer to nest within human made structures such as barns, bridges, and culverts. Barn Swallow nests are cup-shaped and made of mud; they are typically attached to horizontal beams or vertical walls underneath an overhang. A significant decline in populations of this species has been documented since the mid-1980s, which is thought to be related to a decline in prey. Since the Barn Swallow is an aerial insectivore, this species relies on the presence of flying insects at specific times during the year. Changes in building practices and materials may also be having an impact on this species (Ministry of Natural Resources and Forestry, 2015).	OBBA, NHIC	Y	Barn swallow nests were observed within the barn structure during the November field investigation.	Removal of structures to occur outside the mid-April to early August breeding bird survey window. If the structures are to be demolished within this window, a qualified biologist must screen the area to ensure no breeding individuals are present. See also SWH analysis.
Black Tern ( <i>Chlidonias niger</i> )	No Status	SC	Not at Risk	S3B	The Black Tern is a small shorebird that builds floating nests in loose colonies in shallow marshes, with a preference for cattails. The Black Tern is a species of special concern in Ontario due to population decline that is thought to be directly related to the loss of wetland habitat and anthropogenic influences in near shore areas of wetlands and shallow water bodies (i.e. fluctuations in water level, boat traffic, and wakes) (Ministry of Natural Resources and Forestry, 2015).	OBBA	N	No cattail marshes or shoreline habitat are noted on or adjacent to the Subject Property.	NA

Bobolink ( <i>Dolichonyx oryzivorus</i> )	THR	THR	SC	S4B	The Bobolink is found in grasslands and hayfields, and feeds and nests on the ground. This species is widely distributed across most of Ontario; however, are designated at risk because of rapid population decline over the last 50 years (Ministry of Natural Resources and Forestry, 2014). The historical habitat of the bobolink was tallgrass prairie and other natural open meadow communities; however, as a result of the clearing of native prairies and the post-colonial increase in agriculture, bobolinks are now widely found in hayfields. Due to their reproductive cycle, nesting habits, and use of agricultural areas, bobolink nests and young are particularly vulnerable to loss as a result of common agricultural practices (i.e. first cut hay).	OBBA, NHIC	N	Although suitable habitat is present on the Subject Property, this habitat is small in size and is therefore insufficient.	NA
Canada Warbler ( <i>Cardellina canadensis</i> )	THR	SC	THR	S4B	The Canada Warbler is found in a variety of forest types, but is most abundant in moist, mixed forests with a well-developed, dense shrub layer. This species can also be locally abundant in regenerating forests following natural or anthropogenic disturbances. Nests are usually located on or near the ground on mossy logs, and along stream banks. In Canada, habitat loss due to conversion of swamp forests, agricultural activities and road development have contributed to the species' significant long-term decline, and its special concern designation. A reduction in forests with a well-developed shrub-layer has also likely impacted Canada warblers throughout their breeding range in Ontario (Committee on the Status of Endangered Wildlife in Canada, 2008).	OBBA	N	No forested communities noted on or adjacent to the Subject Property.	NA
Cerulean Warbler ( <i>Setophaga cerulea</i> )	END	THR	END	S3B	The Cerulean Warbler is a small wood-warbler that breeds in a few areas in southern Ontario. A general continental decline of this species has been observed, possibly greater than that of any other wood-warbler. The cerulean warbler requires relatively large tracts of forest, and as such, the main threat to this species is habitat loss due to forest degradation and fragmentation. In Ontario, the Cerulean Warbler nests in older, second-growth deciduous forests. During breeding season, it is found in relatively large tracts of mature deciduous forests that feature large, tall trees and an open understorey. The species is considered area-sensitive and have demonstrated edge effects up to 340 metres in the forest, with abundance positively correlated to the distance from the edge. Trees that leaf late (Bitternut Hickory; oaks) provide singing posts in its Ontario range (Environment Canada, 2011).	OBBA	N	No forested communities noted on or adjacent to the Subject Property.	NA
Chimney Swift ( <i>Chaetura pelagica</i> )	THR	THR	THR	S4B,S4N	The Chimney Swift is a threatened species which breeds in Ontario and winters in northwestern South America. It is found mostly near urban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. Prior to settlement, the Chimney Swift would mainly nest in cave walls and hollow tress. The Chimney Swift initially benefitted from human settlement; however, recent declines in flying insects and the modernization of chimneys are factors attributed to their current population declines. As a threatened species, the Chimney Swift receives protection for both species and habitat under the ESA (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	Suitable structures are not present on or adjacent to the Subject Property.	NA
Common Nighthawk ( <i>Chordeiles minor</i> )	THR	SC	THR	S4B	The Common Nighthawk is an extremely well camouflaged bird that inhabits gravel beaches, rock outcrops and burned woodlands, that have little to no ground vegetation. This species can also be found in highly disturbed locations such as clear cuts, mine tailings areas, cultivated fields, urban parks, gravel roads, and orchards. As an insectivore, the primary threat to this species is the widespread application of pesticides (Ministry of Natural Resources and Forestry, 2015). Special concern species do not receive habitat protection under the ESA.	OBBA	N	Suitable gravel beach, rock outcrops, and burned woodland communities were not noted on or adjacent to the Subject Property.	NA
Eastern Meadowlark ( <i>Sturnella magna</i> )	THR	THR	THR	S4B	The Eastern Meadowlark is a bird that prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields and human use areas such as airports and roadsides. Eastern meadowlarks can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses. The decline in population of these species is thought to be at least partially related to habitat destruction and agricultural practices (Ministry of Natural Resources and Forestry, 2014).	OBBA, NHIC	N	Although suitable habitat is present on the Subject Property, this habitat is small in size and is therefore insufficient.	NA



Eastern Whip-poor-will ( <i>Antrostomus vociferus</i> )	THR	THR	THR	S4B	Once widespread throughout the central Great Lakes region, distribution of the Eastern Whip-poor-will in this area is now fragmented. Although there is uncertainty about the causes of the population decline, the main threat is likely habitat loss and fragmentation. Additional threats may include car mortality and food supply changes related to pesticides and climate change. The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as patchy forests with clearings, forests that are regenerating after major disturbances, savannahs, open woodlands or openings in more mature forests. Breeding habitat is dependent on forest structure rather than composition, although common tree associations are pine and oak, and it nests directly on the forest floor. Its distinctive call can be heard at dusk or dawn during the breeding season, and whip-poor-wills heard singing between mid-May and mid-July are likely local breeders (Committee on the Status of Endangered Wildlife in Canada, 2009).	OBBA	N	No forested communities noted on or adjacent to the Subject Property.	NA
Eastern Wood-Pewee ( <i>Contopus virens</i> )	SC	SC	SC	S4B	The Eastern Wood-pewee is classified as a species of special concern by COSSARO. Their population has been gradually declining since the mid-1960's (The Cornell Lab of Ornithology, 2015). The Eastern Wood-pewee is a "flycatcher", a bird that eats flying insects, that lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation. Threats to the population are largely unknown; however, causes may include loss of habitat due to urban development and decreases in the availability of flying insect prey (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	No forested communities noted on or adjacent to the Subject Property.	NA
Golden-winged Warbler ( <i>Vermivora chrysoptera</i> )	THR	SC	THR	S4B	The Golden-winged Warbler is classified as a species of special concern by COSSARO. It is a small grey songbird, with yellow patches on its wings and forehead. Nests are built on the ground, in areas with young shrubs surrounded by mature forest. Threats to the species include habitat loss, hybridization with blue-winged warblers, and nest parasitism by brown-headed cowbirds (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	No shrubland communities noted on or adjacent to the Subject Property.	NA
Grasshopper Sparrow ( <i>Ammodramus savannarum</i> )	No Status	No Status	SC	S4B	Grasshopper Sparrow are specialized to open relatively short grassland habitat, preferably grasslands with relatively sparse cover such as those in areas of poor soils, including alvars, moraines, and sand plains and generally does not favour tall grass moist meadows. It will also breed in manmade hayfields and occasionally in cereals such as Rye ( <i>Secale cereale</i> ).	OBBA	N	Suitable habitats (alvar, moraines, and sandy plains) are not present on or adjacent to the Subject Property.	NA
Least Bittern ( <i>Ixobrychus exilis</i> )	THR	THR	THR	S4B	The Least Bittern prefers marshes and swamps dominated by emergent vegetation, preferably cattails, interspersed with patches of woody vegetation and open water. The smallest member of the heron family, least bitterns nest in marshes south of the Precambrian Shield in Ontario. Due to the location of the nests close to the water surface, least bittern nests are susceptible to damage as a result of wakes cast by recreational boats (Government of Canada, 2015).	OBBA	N	No cattail marshes or open water habitats with trees are noted on or adjacent to the Subject Property.	NA
Peregrine Falcon ( <i>Falco peregrinus</i> )	SC	SC	Not at Risk	S3B	The Peregrine Falcon is a species of Special Concern in Ontario because of habitat loss and destruction, disturbance and persecution by people, and environmental contaminants. Peregrine falcons are medium sized birds of prey, with a blue back, cream-coloured chest covered in dark markings and bright yellow legs and feet. It can be found nesting on tall, steep cliff ledges close to large bodies of water. The majority of Ontario's breeding population is found around Lake Superior in northwestern Ontario (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	No steep cliff ledges or similar structures are noted on the Subject Property. Areas of open water are also not documented on or adjacent to the Subject Property.	NA
Red-headed Woodpecker ( <i>Melanerpes erythrocephalus</i> )	THR	SC	THR	S4B	The Red-headed Woodpecker is a medium-sized bird, with black and white colouring and a bright red head, neck, and breast. Adults often return to the same nesting site year after year. Between May and June, adults often return to the same nesting site and females lay from three to seven eggs. Habitat for the birds includes open woodland and woodland edges, often near man-made landscapes such as parks, golf courses and cemeteries. The red-headed woodpecker is widespread across southern Ontario but rare (Ministry of Natural Resource and Forestry, 2014).	OBBA	N	No forested communities noted on or adjacent to the Subject Property.	NA



Tri-colored Bat (Eastern Pipistrelle) ( <i>Perimyotis subflavus</i> )	END	END	END	S3?	The eastern pipistrelle is a small bat that is widely distributed in eastern North America and whose range extends north to southern Ontario. The eastern pipistrelle is rare in this region of Ontario which is at the northernmost limit of the natural range for the species. These bats prefer to nest in foliage, tree cavities and woodpecker holes, and are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Eastern pipistrelles feed primarily on small insects and prefer an open forest habitat type in proximity to water (University of Michigan Museum of Zoology, 2004).	Professional Experience	P	Although no suitable trees are located on the Subject Property, the old house provides potential habitat.	Removal of structures is recommended to occur outside the bat roosting window (April 1 to September 30).
Eastern Small-footed Myotis ( <i>Myotis leibii</i> )	No Status	END	No Status	S2S3	The eastern small-footed myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Eastern small-footed bat's fur has black roots and shiny light brown tips, giving it a yellowish-brown appearance. Its face mask, ears and wings are black, and its underside is grayish-brown, about 8 cm long in size and weighs 4-5 grams. In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects to eat, including beetles, mosquitos, moths, and flies. They hibernate in winter, often in caves and abandoned mines. They can be found from south of Georgian Bay to Lake Erie and east to the Pembroke area, and choose colder and drier sites (Ministry of Natural Resources and Forestry, 2014).	Professional Experience	P	Although no suitable trees are located on the Subject Property, the old house provides potential habitat.	E Small-footed bats have a different active season (typically between mid March and late November) therefore building removal is recommended to be carried out between December 1 and March 15.
Little Brown Myotis ( <i>Myotis lucifugus</i> )	END	END	END	S4	Little brown myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Little brown bats have glossy brown fur and usually weigh between four and 11 grams. Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing – an ideal environment for the fungus to grow and flourish. The syndrome affects bats by disrupting their hibernation cycle, so that they use up body fat supplies before the spring when they can once again find food sources (Ministry of Natural Resources and Forestry, 2014).	Professional Experience	P	Although no suitable trees are located on the Subject Property, the old house provides potential habitat.	Removal of structures is recommended to occur outside the bat roosting window (April 1 to September 30).
Northern Myotis ( <i>Myotis septentrionalis</i> )	END	END	END	S3	The northern long-eared myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Northern long-eared bats have dull yellow-brown fur with pale grey bellies. They are approximately eight cm long, with a wingspan of about 25 cm, and usually weigh six to nine grams. Northern long-eared bats can be found in boreal forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines (Ministry of Natural Resources and Forestry, 2014).	Professional Experience	P	Although no suitable trees are located on the Subject Property, the old house provides potential habitat.	Removal of structures is recommended to occur outside the bat roosting window (April 1 to September 30).
<b>OTHER</b>									
Monarch Butterfly ( <i>Danaus plexippus</i> )	SC	SC	END	S2N,S4B	The monarch is an orange and black butterfly with small white spots and is classified as a species of special concern by COSSARO. The monarch relies on milkweed plants as a food source for growing caterpillars, but the adult butterflies forage in diverse habitats for nectar from wildflowers. The greatest threat to the monarch is loss of overwintering habitat in Mexico. Other threats include use of pesticides and herbicides throughout its range (Ministry of Natural Resources and Forestry, 2014).	OBA	N	No milkweed was observed on the Subject Property. Additionally, the Subject Property is not located within close proximity to a large waterbody and contains a small meadow community.	NA

**Notes:**

SC - Special Concern

THR - Threatened

END - Endangered

S1 - Extremely rare in Ontario

S2 - Very rare in Ontario

S3 - Rare to uncommon in Ontario

S4 - Considered to be common in Ontario

S5 - Species is widespread in Ontario

SH - Possibly extirpated

S#S# - Indicates insufficient information exists to assign a single rank.

S#? - Indicates some uncertainty with the classification due to insufficient data.

S#N - Nonbreeding

Y = Yes, P= Potential, N = No





S#B - Breeding

# **Appendix E**

## **Significant Wildlife Habitat Assessment**

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	
<b>Seasonal Concentration Areas of Animals</b>					
Waterfowl Stopover and Staging Areas (Terrestrial)	Ducks	CUM + CUT ecosites	Fields with sheet-water flooding mid-March to May	P	Not anticipated to occur on-site, but will be confirmed in spring 2023
Waterfowl Stopover and Staging Area (Aquatic)	Ducks, Geese	Ponds, Lakes, Inlets, Marshes, Swamps, Shallow Water Ecosites	Sewage & SWM ponds <b>not</b> SWH. Reservoir managed as a large wetland or pond/lake qualifies.	N	No open wetland or waterbody observed on or adjacent to the Subject Property.
Shorebird Migratory Stopover Area	Shorebirds	Beaches, Dunes, Meadow Marshes	Shorelines. Sewage treatment ponds and storm water ponds <b>not</b> SWH.	N	River shorelines are not present on the Subject Property.
Raptor Wintering Area	Eagles, Hawks, Owls	<b>Hawks/Owls:</b> Combination of both Forest and Cultural Ecosites <b>Bald Eagle:</b> Forest or swamp near open water (hunting ground)	<b>Raptors:</b> >20ha, with a combo of forest and upland. Meadow (>15ha) with adjacent woodlands. <b>Eagles:</b> open water, large trees & snags for roosting.	N	Associated ecosites are not present on or adjacent to the Subject Property.
Bat Hibernacula	Big Brown Bat, Tri-coloured Bat	Caves, Crevices, mines, karsts	Buildings and active mine sites <b>not</b> SWH.	N	Associated ecosites are not present on or adjacent to the Subject Property.
Bat Maternity Colonies	Big Brown Bat, Silver-haired Bat	Deciduous or mixed forests and swamps.	Mature deciduous and mixed forests with >10/ha cavity trees >25 cm DBH.	N	Associated ecosites are not present on or adjacent to the Subject Property.
Turtle Wintering Area	<b>Turtles</b> (Midland, N. Map, Snapping)	SW, MA, OA, SA, FEO, BOO (requires open waters)	<b>Free water beneath ice.</b> Soft mud substrate. Permanent water bodies, large wetlands, bogs, fens with adequate DO.	N	Open waters were not observed within the PSW on or adjacent to the Subject Property.
Reptile Hibernaculum	Snakes	<b>Snakes:</b> Any ecosite (esp. w/ rocky areas), other than very wet ones. <b>Five-lined Skink:</b> FOD and FOM, FOC1, FOC3 - with rock outcrops	<b>Access below frost line:</b> burrows; <b>rock</b> crevices, piles or slopes, <b>stone</b> fences or foundations. Conifer/shrubby swamps/swales, poor fens, depressions in bedrock w/ accumulations of sphagnum moss or sedge hummock ground cover.	N	Associated ecosites are not present on or adjacent to the Subject Property. No rocky outcrops documented.



SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Cliff Swallow, N. Rough-winged Swallow	Banks, sandy hills/piles, pits, slopes, cliff faces, bridge abutments, silos, barns.	Exposed soil banks, <b>not</b> a licensed/permitted aggregate area or new man-made features (2 yrs).	N	No soil banks or cliffs were noted on or adjacent to the Subject Property.
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Great Blue Heron, Black-crowned NightHeron, Great Egret, Green Heron	SWM2, SWM3, SWM5, SWM6, SWD1 to SWD7, FET1	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and emergents may be used. Nests in trees are 11 - 15 m from ground, near tree tops.	N	Associated ecosites are not present on or adjacent to the Subject Property. No large trees present within the PSW.
Colonially-nesting Bird Breeding Habitat (Ground)	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	<b>Gulls/Terns:</b> Rocky island or peninsula in lake or river. <b>Brewer's Blackbird:</b> close to watercourses in open fields or pastures with scattered trees or shrubs.	<b>Gulls/Terns:</b> islands or peninsulas with open water or marshy areas. <b>Brewers Blackbird colonies:</b> on the ground in low bushes close to streams and irrigation ditches.	N	The Subject Property is not located on an island or peninsula near open water or marshy areas. A defined watercourse was not noted on the Subject Property and minimal shrubs were documented in or adjacent to the PSW.
Migratory Butterfly Stopover Area	Painted Lady, Red Admiral, <b>Special Concern:</b> Monarch	Combination of open (CU) and forested (FO) ecosites (need one from each).	≥10 ha, located within 5 km of Lake Ontario. Undisturbed sites, with preferred nectar species.	N	The Subject Property is not within 5 km of Lake Ontario.
Landbird Migratory Stopover Areas	All migratory songbirds. All migrant raptor species.	Forest (FO) and Swamp (SW) ecosites	Woodlots >10 ha within 5 km of Lake Ontario. If multiple woodlands are along the shoreline, those <2 km from L. Ontario are more significant.	N	The Subject Property is not within 5 km of Lake Ontario.
Deer Yarding Areas	White-tailed Deer	Mixed or Conifer ecosites	Determined by MNRF - no studies	N	Not anticipated to occur on-site, but will be confirmed in spring 2023
Deer Winter Congregation Areas	White-tailed Deer	Mixed or Conifer ecosites	Determined by MNRF - no studies	N	No forested ecosites were documented on or adjacent to the Subject Property.
<b>Rare Vegetation Communities</b>					
Cliffs and Talus Slopes		TAO, TAS, CLO, CLS, TAT, CLT e.g., Niagara Escarpment (contact NEC)	<b>Cliff:</b> near vertical bedrock >3m <b>Talus Slope:</b> coarse rock rubble at the base of a cliff	N	No soil banks or cliffs were noted on or adjacent to the Subject Property.
Sand Barren		SBO1, SBS1, SBT1	Sand Barrens >0.5 ha. Vegetation can vary from patchy and barren to tree covered, but <60%. <50% vegetation cover are exotic species.	N	Associated ecosites are not present on or adjacent to the Subject Property.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	
Alvar	<i>Carex crawei</i> , <i>Panicum philadelphicum</i> , <i>Eleocharis compressa</i> , <i>Scutellaria parvula</i> , <i>Trichostema brachiatum</i> , Loggerhead Shrike	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Alvar >0.5 ha. <b>Need 4 of the 5 Alvar Indicator Spp.</b> <50% vegetation cover are exotic species.	N	Associated ecosites are not present on or adjacent to the Subject Property. Required alvar indicator species were not documented.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	
Old Growth Forest	Trees >140 yrs; heavy mortality = gaps. Multi-layer canopy, lots of snags and downed logs	FOD, FOC, FOM, SWD, SWC, SWM	Woodland areas ≥30 ha with ≥10 ha interior habitat, assuming a 100 m buffer at edge of forest.	N	Forested areas were not documented on or adjacent to the Subject Property.
Savannah	Prairie Grasses w/ trees	TPS1, TPS2, TPW1, TPW2, CUS2	A Savannah is a <u>tallgrass prairie</u> habitat that has tree cover of 25 – 60%. <50% cover of exotic species.	N	Associated ecosites are not present on or adjacent to the Subject Property.
Tallgrass Prairie	Prairies Grasses dominate	TPO1, TPO2	An <u>open Tallgrass Prairie</u> habitat has < 25% tree cover. Less than 50% cover of exotic species.	N	Associated ecosites are not present on or adjacent to the Subject Property.
Other Rare Vegetation Communities		Provincially Rare S1 - S3 veg. comm. are listed in Appendix M of SWHTG.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	N	Provincially significant vegetation communities were not documented on the Subject Property.
<b>Specialized Habitat for Wildlife</b>					
Waterfowl Nesting Area	Ducks	Upland habitats adjacent to: MAS1 to MAS3, SAS1, SAM1, SAF1, MAM1 to MAM6, SWT1, SWT2, SWD1 to SWD4 (>0.5 ha open water wetlands, alone or collectively).	Extends 120 m from a wetland or wetland complex. Upland areas should be at least 120 m wide. Wood Ducks and Hooded Mergansers use cavity trees (>40 cm dbh).	N	No open wetland observed on or adjacent to the Subject Property.
Bald Eagle & Osprey Nesting, Foraging and Perching Habitat	Osprey, Bald Eagle	FOD, FOM, FOC, SWD, SWM, SWC directly adjacent to riparian areas	Nesting areas are associated with waterbodies along forested shorelines, islands, or on structures over water.	N	Forested areas were not documented on or adjacent to the Subject Property.
Woodland Raptor Nesting Habitat	Barred Owl. <b>Hawks:</b> N. Goshawk, Cooper's, Sharp-shinned, Red-shouldered, Broad-winged.	Forests (FO), swamps (SW), and conifer plantations	>30 ha with > 10 ha interior habitat.	N	Forested areas were not documented on or adjacent to the Subject Property.
Turtle Nesting Areas	Midland Painted Turtle <b>Special Concern:</b> Snapping Turtle, Northern Map Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within: MAS1 to MAS3, SAS1, SAM1, SAF1, BOO1	Nest sites within open sunny areas with soil suitable for digging. Sand and gravel beaches.	N	Exposed mineral soils were not documented adjacent to the PSW. Additionally, no open areas were noted within the PSW.
Seeps and Springs	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp.	Seeps/Springs are areas where ground water comes to the surface.	Any forested area within the headwaters of a stream/river system. <b>(2 or more confirms SWH type).</b>	N	Forested areas were not documented on or adjacent to the Subject Property. No seeps or springs were observed during field investigations.



SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	
Amphibian Breeding Habitat (Woodland)	Woodland Frogs and Salamanders	FOC, FOM, FOD, SWC, SWM, SWD	Open water wetlands, pond or woodland pool of >500 m <sup>2</sup> within or adjacent to wooded areas. Permanent ponds or holding water until mid-July preferred.	N	Forested communities and open water areas were not documented on or adjacent to the Subject Property.
Amphibian Breeding Habitat (Wetlands)	Toads, Frogs, and Salamanders	SW, MA, FE, BO, OA and SA. Typically isolated (>120m) from woodland ecosites, however larger wetlands may be adjacent to woodlands.	Open water wetland ecosites >500m <sup>2</sup> isolated from woodland ecosites with high species diversity. Permanent water with abundant vegetation for bullfrogs.	P	Open water areas were not documented on or adjacent to the Subject Property. The PSW had no standing water during October and November 2022 site visits, however, surveys in spring 2023 will determine if amphibian SWH is present.
Woodland Area-Sensitive Bird Breeding Habitat	Birds (area-sensitive species)	FOC, FOM, FOD, SWC, SWM, SWD	Large mature (>60 years) forest stands/woodlots >30 ha. Interior forest habitat >200m from forest edge.	N	Forested areas were not documented on or adjacent to the Subject Property.
<b>Habitat of Species of Conservation Concern</b>					
Marsh Bird Breeding Habitat	Wetland Birds	MAM1 to MAM6, SAS1, SAM1, SAF1, FEO1, BOO1 <b>Green Heron:</b> SW, MA and CUM1	Wetlands with shallow water and emergent vegetation. Gr. Heron @ edges of these types w/ woody cover.	N	Area of suitable habitat is too small to contain SWH for marsh birds.
Open Country Bird Breeding Habitat	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, N. Harrier, Savannah Sparrow, <b>Short-eared Owl (SC)</b>	CUM1, CUM2	Grassland/meadow >30 ha. Not being actively used for farming. Habitat established for 5 years or more.	N	The CUM community documented on the Subject Property does not meet the size criteria.
Shrub/Early Successional Bird Breeding Habitat	<b>Brown Thrasher + Clay-coloured Sparrow (indicators)</b> , Field Sparrow, Black-billed Cuckoo, E. Towhee, Willow Flycatcher, Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large field areas succeeding to shrub and thicket habitats > 10 ha. Areas not actively used for farming in the last 5 years.	N	The CUT communities documented on the Subject Property do not meet the size criteria.
Terrestrial Crayfish	Chimney or Digger Crayfish; Devil Crayfish or Meadow Crayfish	MAM1 to MAM6, MAS1 to MAS3, SWD, SWT, SWM. CUM1 sites with inclusions of the aforementioned.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish (typc. protected by wetland setbacks).	N	No crayfish species were observed during October and November 2022 field investigations.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	
Special Concern and Rare Wildlife Species	Any species of concern or rare wildlife species	Any ELC code.	Presence of species of concern or rare wildlife species.	P	Although evidence of the Special Concern species, Barn Swallow (i.e., nests), was documented within the vacant structures on the Subject Property, this SWH was not confirmed. As a conservative approach, the demolition of these structures are to occur outside the breeding bird window of April 1 - August 31.
<b>Animal Movement Corridors</b>					
Amphibians	Amphibians	all ecosites assoc. w/ water	When Breeding Habitat - wetland confirmed	N	No amphibian movement corridors have been documented by MNRF or the municipality.
Deer Movement	White-tailed Deer	all forested ecosites	When Deer Wintering Habitat confirmed	N	No deer movement corridors have been documented by MNRF or the municipality.
<b>Exceptions for Ecoregion 6E</b>					
Mast Producing: 6E-14	Black Bear	Forested Ecosites	>30 ha w/ mast producing species: Cherry (berries), Oak, Beech (nuts).	N	Not in 6E-14.
Leks: 6E-17	Sharp-tailed Grouse	CUM, CUS, CUT	Grassland/meadow >15 ha adjacent to shrublands, >30 ha adjacent to woodlands. Low agricultural intensity.	N	Out of range.