

Environmental Impact Statement

**5783 BLOOMINGTON ROAD, TOWN OF
WHITCHURCH-STOUFFVILLE**

Prepared for

1398493 Ontario Inc.

c/o Schaeffers Consulting Engineers
6 Ronrose Drive
Concord, ON L4K 4R3

January 15, 2025

Project No. P2024-839

Prepared by



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January 15, 2025

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**Re: Environmental Impact Statement
5783 Bloomington Road, Town of Whitchurch-Stouffville, ON**

GeoProcess Research Associates Inc. (GeoProcess) is pleased to present the following Environmental Impact Statement (EIS) for the lands owned by 1398493 Ontario Inc. located on Parts of Lots 9 and 10, Concession 8 in the Town of Whitchurch-Stouffville. The study is required as part of an application for large-scale fill placement on the lands. This EIS reports the findings from both in-field and desktop assessments conducted by GeoProcess and identifies the potential impacts and mitigation measures associated with the proposed site alteration as they relate to the property's natural heritage and hydrological features and functions.

Regards,

GEOPROCESS RESEARCH ASSOCIATES INC

Ian Roul, M.Sc.
Senior Ecologist

Executive Summary

The following Environmental Impact Statement (EIS) was completed by GeoProcess Research Associates (GeoProcess) in accordance with the York Region Official Plan, Town of Whitchurch-Stouffville Official Plan, and Toronto Region Conservation Authority regulations. The Subject Property is located on the lands on Parts of Lot 9 and 10, Concession 8 in the Town of Whitchurch-Stouffville, Ontario and is the location of a former aggregate quarry. This report is required to support the data necessary to meet the Site Alteration and Fill Management application requirements for large-scale fill applications.

Based on Schedule A (Town Structure) of the Town of Whitchurch-Stouffville Official Plan, a Natural Heritage System and Regional Greenlands System associated with the Oak Ridges Moraine Natural Linkage Designation have been identified within the Subject Property. According to Schedules C and M, the Subject Property has also been identified as a Secondary Aggregate Resource Area within the Agricultural System. Schedule K of the Town of Whitchurch-Stouffville Official Plan identified two aggregate ponds located at the northeast quadrant of the Subject Property that are remnants of former quarry operations and have since filled with water. Based on consultation with the TRCA, it has been confirmed they do not meet the criteria to be considered Key Hydrologic Features and do not require protection or associated vegetation protection zones. Dewatering of the features will be required to support proposed works and may constitute the need for a Permit to Take Water issued by the Ontario Ministry of Environment, Conservation and Parks (MECP) under Section 34 of the *Ontario Water Resources Act* (OWRA). Based on the policies of Section 4.1.6.1 of the Town of Whitchurch-Stouffville Official Plan, any development or site alteration within 120 m of the Regional Greenlands System requires an EIS. This EIS identifies the environmental character of the Subject Property and recommends mitigation measures to avoid impacting significant features and function associated with the natural heritage system.

GeoProcess conducted field surveys in the spring and summer of 2024 to characterize the natural heritage features located within the Study Area. A review of all relevant policies and applicable existing background information was included in the scope of the EIS. The results of the biophysical analysis indicate that the proposed site alteration does not show alteration of the existing function of the Subject Property. Fill placement and associated grading will not change the current land use as the property will remain primarily agricultural. Following the recommended mitigation measures, the proposed site alteration will not result in negative impacts to the Natural Heritage System and Regional Greenlands System.



Table of Contents

Executive Summary	iii
List of Tables	v
List of Maps	vi
1. Introduction.....	1
1.1. Study Area.....	1
2. Policy Context.....	1
2.1. Provincial Planning Statement	2
2.2. Endangered Species Act	3
2.3. Federal Fisheries Act	4
2.4. Oak Ridges Moraine Conservation Plan.....	5
2.5. York Region Official Plan.....	5
2.6. Town of Whitchurch-Stouffville Official Plan.....	5
2.7. Toronto Region Conservation Authority.....	6
3. Study Methodology	6
3.1. Background Studies	6
3.2. Field Work	7
3.2.1. Amphibian Surveys	7
3.2.2. Floristic Studies	7
3.2.3. Tree Inventory.....	8
3.2.4. Breeding Bird Surveys.....	8
3.2.5. Aquatic Habitat Assessment	8
3.2.6. Incidental Wildlife Surveys.....	9
3.2.7. Species at Risk Screening and Assessment.....	9
3.2.8. Significant Wildlife Habitat Screening and Assessment.....	9
4. Existing Conditions.....	9
4.1. General Landscape Position	9
4.2. Physiography and Geology	10
4.3. Natural Heritage Systems	10
4.3.1. Aggregate Ponds.....	10
4.3.2. Regional Greenlands System and Natural Heritage System.....	10
4.4. Amphibian Surveys.....	11
4.5. Floristic Studies	12
4.5.1. Ecological Land Classification.....	12



4.6. Tree Inventory.....	12
4.7. Breeding Bird Surveys.....	14
4.7.1. Bobolink and Eastern Meadowlark Surveys	16
4.8. Aquatic Habitat Assessment	17
4.9. Incidental Wildlife	18
4.10. Species at Risk Screening.....	19
4.10.1. Screening.....	19
4.11. Assessment.....	20
5. Significant Wildlife Habitat Screening.....	21
5.1. SWH Screening.....	21
5.2. SWH Assessment.....	22
6. Proposed Site Alteration and Fill Placement	23
6.1. Natural Heritage System Implications.....	23
7. Environmental Impact Assessment	24
7.1. Direct Impact Assessment.....	27
7.2. Indirect Impact Assessment	27
7.3. Cumulative Impact Assessment.....	27
8. Mitigation Measures.....	28
8.1. Natural Heritage System Measures.....	28
8.2. Construction Measures	28
9. Policy Conformity.....	29
10. Recommendations.....	29
11. References.....	30
Maps.....	34
Appendix A TRCA Correspondence	40
Appendix B Tree Inventory Table.....	42
Appendix C Species Ranking Systems	44
Appendix D Species at Risk Screening Sources	46
Appendix E Significant Wildlife Habitat Assessment (7E).....	48

List of Tables

Table 1. Applicable Policies of the Provincial Policy Statement.....	2
Table 2. Completed Field Work	7
Table 3. Amphibian Call Survey Results	11
Table 4. Ecological Land Classification Communities.....	12
Table 5. Tree Inventory Results.....	13

Table 6. Breeding Bird Survey Conditions	14
Table 7. Breeding Bird Survey Results	14
Table 8. Bathymetric Survey Summary Statistics	17
Table 9. Gill Net Catch Record	17
Table 10. Minnow Trap Catch Record	18
Table 11. Morphometrics for Ponds 1 and 2	18
Table 12. Incidental Wildlife Summary	18
Table 13. SAR Screening Results	19
Table 14. Impact Assessment Table	25

List of Maps

Map 1. Key Map	35
Map 2. Existing Conditions	36
Map 3. Natural Heritage Surveys	37
Map 4. Tree Inventory	38
Map 5. Proposed Site Alteration and Fill Placement	39

1. Introduction



GeoProcess Research Associates Inc. (GeoProcess) has been retained by 1398493 Ontario Inc. to complete an Environmental Impact Statement (EIS) for the lands on Parts of Lot 9 and 10, Concession 8 in the Town of Whitchurch-Stouffville, Ontario. This is herein referred to as the "Subject Property". The "Study Area" is defined as the Subject Property in addition to 120 metres (m) of surrounding lands. We understand that the Subject Property is the location of a former aggregate quarry, and this report is required to support an application for large-scale fill placement on the site. We note that the detailed ecological data necessary to meet the Site Alteration and Fill Management application requirements for large-scale fill applications is consistent with data collected through the completion of an EIS. Refer to Map 1 for a review of the property location and boundary.

This EIS has been completed to provide a comprehensive understanding of the existing ecology on the Subject Property and within the Study Area based on field surveys and policy conformity of the Town of Whitchurch-Stouffville, York Region, Toronto Region Conservation Authority (TRCA), Fisheries and Oceans Canada (DFO), and the Province of Ontario. It has been prepared to establish the baseline natural heritage features, primarily, the conditions of the remnant excavations which have filled with water. This report also intends to review the proposed fill placement and propose any mitigation measures required to ensure compliance with environmental policies.

1.1. Study Area

The Subject Property is approximately 33 hectares (ha) in size and is located 500 metres (m) west of the Bloomington Road and Ninth Line intersection in the Town of Whitchurch-Stouffville. The lands were formerly used as an aggregate quarry, with two major excavations that have since filled with water and two smaller ponds. These features have been confirmed to not be regulated by the TRCA. Currently, the Subject Property includes multiple rural residential and agricultural buildings that are surrounded by actively farmed agricultural fields. A small subdivision exists to the east of the Subject Property. Beyond the Study Area, the surrounding landscape is predominantly rural with larger urban settlement areas spread throughout. To the northeast of the Subject Property, active aggregate quarry operations are abundant. To the northwest, York Regional Forest tracts span the landscape.

The Study Area is encompassed within the Agricultural and Regional Greenlands Systems per the York Region Official Plan (ROP). The Regional Greenlands System spanning the Subject Property is included within the Natural Linkage Designation per the Oak Ridges Moraine (ORM) Conservation Plan within the larger Agricultural Area. The Subject Property also contains features identified within the Secondary Mineral Aggregate Resource Area as per the ROP. Existing conditions are illustrated in Map 2 for reference.

2. Policy Context

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

2.1. Provincial Planning Statement

The Provincial Planning Statement (PPS), 2024 is administered under Section 3 of the *Planning Act*. It became effective October 20, 2024, and replaces the Provincial Policy Statement that came into effect May 1, 2020. The PPS applies to planning decisions made on or after that date. It provides policy direction for land use and development within the Province of Ontario and provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment. The policies of the PPS may be complemented by provincial and municipal plans and policies.

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

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

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

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

Table 1. Applicable Policies of the Provincial Policy Statement

Policy Number	Policy
(4.1 - Natural Heritage)	The diversity and connectivity of natural features in an area and the long-term <i>ecological function</i> and biodiversity of <i>natural heritage systems</i> should be maintained, restored or where possible, improved, recognizing linkages between and among <i>natural heritage features and areas, surface water features and ground water features</i> .
4.1.2	
4.1.3	<i>Natural heritage systems</i> shall be identified in Ecoregions 6E & 7E, recognizing that <i>natural heritage systems</i> will vary in size and form in <i>settlement areas, rural areas, and prime agricultural areas</i> .
4.1.4	<i>Development</i> and site alteration shall not be permitted in: a) <i>significant wetlands</i> in Ecoregions 5E, 6E and 7E; and, b) <i>significant coastal wetlands</i> .

Policy Number	Policy
4.1.5	Development and site alteration shall not be permitted in: a) <i>significant wetlands</i> in the Canadian Shield north of Ecoregions 5E, 6E and 7E; b) <i>significant woodlands</i> in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); c) <i>significant valleylands</i> in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); d) <i>significant wildlife habitat</i> ; e) <i>significant areas of natural and scientific interest</i> ; and f) <i>coastal wetlands</i> in Ecoregions 5E, 6E and 7E that are not subject to policy 4.1.4(b) unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.
4.1.6	<i>Development and site alteration</i> shall not be permitted in <i>fish habitat</i> except in accordance with <i>provincial and federal requirements</i> .
4.1.7	<i>Development and site alteration</i> shall not be permitted in <i>habitat of endangered species and threatened species</i> , except in accordance with <i>provincial and federal requirements</i> .
4.1.8	<i>Development and site alteration</i> shall not be permitted on <i>adjacent lands</i> to the <i>natural heritage features and areas</i> identified in policies 4.1.4, 4.1.5 and 4.1.6 unless the <i>ecological function</i> of the <i>adjacent lands</i> has been evaluated and it has been demonstrated that there will be no <i>negative impacts</i> on the natural features or on their <i>ecological functions</i> .
(4.2 - Water) 4.2.2	<i>Development and site alteration</i> shall be restricted in or near <i>sensitive surface water features</i> and <i>sensitive ground water features</i> such that these features and their related <i>hydrologic functions</i> will be protected, improved or restored, which may require mitigative measures and/or alternative development approaches.
(5.2 - Natural Hazards) 5.2.1	Planning authorities shall, in collaboration with conservation authorities where they exist, identify <i>hazardous lands</i> and <i>hazardous sites</i> and manage development in these areas, in accordance with provincial guidance.
5.2.2	Development shall generally be directed to areas outside of: a) <i>hazardous lands</i> adjacent to the shorelines of the <i>Great Lakes - St. Lawrence River System</i> and <i>large inland lakes</i> which are impacted by <i>flooding hazards</i> , <i>erosion hazards</i> and/or <i>dynamic beach hazards</i> ; b) <i>hazardous lands</i> adjacent to <i>river, stream</i> and <i>small inland lake systems</i> which are impacted by <i>flooding hazards</i> and/or <i>erosion hazards</i> ; and c) <i>hazardous sites</i> .
5.2.4	Planning authorities shall prepare for the impacts of a changing climate that may increase the risk associated with natural hazards

2.2. Endangered Species Act

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

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

Activities that relate to Species at Risk (SAR) are regulated through the following subsections:

9 (1) No person shall,

kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;

10 (1) No person shall damage or destroy the habitat of,

- a) a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species;

Or

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

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

Activities that may impact a protected species or its habitat require the prior issuance of a permit from the Ministry of Environment, Conservation and Parks (MECP) unless the activities are exempted under Ontario Regulation 242/08. Ontario Regulation 242/08 (current as of April 1, 2024) identifies activities which are exempt from the permitting requirements of the Act, these activities are subject to rigorous controls outside the permit process including, registration of the activity and preparation of mitigation plans. Activities that are not exempted require a complete permit application process.

2.3. Federal Fisheries Act

The Federal Fisheries Act was established in 1985 with amendments that came into effect on November 25, 2013, and June 21, 2019. This Act protects fish and fish habitat such that:

"No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat" (Section 35 (1)).

Fish habitat is defined by the Act as *"water frequented by fish and any other areas on which fish depend directly or indirectly to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas".*

The Fisheries Act requires that any development project avoid Harmful Alteration, Disruption, or Destruction of fish habitat (HADD) unless authorized by Fisheries and Oceans Canada (DFO). If mitigation measures cannot be applied, and residual effects will cause a HADD, then provisions under the Act may apply (i.e., approval(s) may need to be secured through DFO). Any waterbody or watercourse that contains fish or any other area on which fish depend directly or indirectly to carry out their life processes as described in the

Fisheries Act, is protected under the Act. Based on this, an aquatic habitat assessment was required to identify and determine if fish habitat is present within the water bodies present on the Subject Property.

2.4. Oak Ridges Moraine Conservation Plan

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

The Study Area is included within the Natural Linkage Designation within the ORM Conservation Plan Area. Requirements of the ORM Conservation Plan are facilitated through regional, municipal, and conservation authority policies and guidelines.

2.5. York Region Official Plan

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

Maps 1 and 2 of the Plan show the Regional Greenlands System overlay the Study Area and Subject Property, within the larger Agricultural System. It is also designated a Natural Linkage within the Oak Ridges Moraine Conservation Plan boundary and is within the Provincial Natural Heritage System. Development and/or site alteration applications within 120 m of the Regional Greenlands System trigger the need for an EIS under Policy 3.2.4.

2.6. Town of Whitchurch-Stouffville Official Plan

The Town of Whitchurch-Stouffville Official Plan (2024) provides direction and a policy framework for managing growth, land use, infrastructure decisions, and the effects on the social, economic, and natural environment within the Town of Whitchurch-Stouffville. The Official Plan, among other planning matters, establishes how to protect, enhance, and grow the Natural Heritage System (NHS) and Greenlands System. Elements of the NHS include provincially, regionally and locally significant woodlands, rivers, wetlands, and ecological connections that are intended for protection and enhancement.

Based on Schedule A (Town Structure) of the Plan, a Natural Heritage System and Regional Greenlands System within the larger Agricultural System is located within the Study Area and is associated with the Oak Ridges Moraine Natural Linkage Area designation. The policies of Section 4.1.6.1 (Regional Greenlands

System) apply to the Study Area, particularly Subsection 4.1.6.1. b. such that an EIS is required for development and site alteration applications within 120 m of the Regional Greenlands System.

According to Schedules C and M, the Subject Property has also been identified as a Secondary Aggregate Resource Area within the Agricultural System. As previously noted, two former aggregate excavations are located on the Subject Property, which have since filled with water and resemble natural ponds. These features have been identified on Schedule K-4a as Key Hydrologic Features. However, further investigation of the features and consultation with TRCA has confirmed they do not meet the criteria to be considered Key Hydrologic Features and do not require protection or associated vegetation protection zones.

2.7. Toronto Region Conservation Authority

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

The TRCA Regulated Areas Mapping tool is a screening tool that shows the water bodies on the Subject Property as located within a TRCA-regulated area. A site visit was conducted with the TRCA to determine if the features were Regulated and based on the absence of wetland communities, and the history as old aggregate ponds, the areas were determined to not be Regulated. TRCA confirmed this in their correspondence dated October 1, 2024. (see Appendix A).

3. Study Methodology

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

3.1. Background Studies

Background planning policy documentation and information sources relevant to the Study Area were reviewed and evaluated to identify natural heritage features and constraints. A list of documents and information sources consulted to support this study are provided below:

- 2022 York Region Official Plan (June 2024)
- Town of Whitchurch-Stouffville Official Plan (Adopted by Council, May 2024)
- Oak Ridges Moraine Conservation Plan (May 2017)
- Toronto Region Conservation Authority Regulated Area Search
- Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits (February 2024)
- Natural Heritage Information Center (NHIC)
- iNaturalist – NHIC Rare Species of Ontario
- Ontario Breeding Bird Atlas (OBBA) and eBird
- Ontario Moth and Butterfly Atlases
- Fisheries and Oceans Canada (DFO) Aquatic Species at Risk Map
- Google Earth Pro

3.2. Field Work

GeoProcess conducted field studies to characterize and inventory the natural heritage features and wildlife activity of the Subject Property and surrounding landscape. A summary of the completed fieldwork is provided below in Table 2.

Table 2. Completed Field Work

Activity	Timing	Date	Staff
Amphibian Surveys	Visit 1 (>5°C)	April 8, 2024	S. Dowle, A. Meeker, B. Bespolko
	Visit 2 (>10°C)	May 9, 2024	
	Visit 3 (>17°C)	July 4, 2024	
Bathymetric Surveys		May 28, 2024	F. McLaughlin, P. Anderson
Bobolink and Eastern Meadowlark Surveys	Visit 1	June 6, 2024	D. Graham
	Visit 2	June 20, 2024	
	Visit 3	July 4, 2024	
Breeding Bird Surveys	Visit 1	June 6, 2024	D. Graham
	Visit 2	June 20, 2024	
Fish Community Sampling		July 16, 2024	P. Anderson, S. Dowle
		July 17, 2024	
Floristic Studies(ELC)	Summer (July to August)	August 9, 2024	S. Dowle
Tree Inventory		August 9, 2024	S. Dowle

3.2.1. Amphibian Surveys

Amphibian surveys were completed following the Marsh Monitoring Program protocol for amphibians (MMP and BBS, 2000), which requires three surveys to be completed between mid-April to the end of June at the proper air temperature triggers and weather conditions. The surveys are conducted 30 minutes following local sunset and must be completed by midnight. Suitable weather includes no rain and light winds, at air temperatures above 5°C, 10°C, and 17°C or higher for each of the three surveys. Amphibian survey results are discussed in Section 4.4.

3.2.2. Floristic Studies

A single-season floristic inventory was completed in the summer of 2024. Species nomenclature and ranking were determined provincially by the Ministry of Natural Resources Natural Heritage Information Database (S-Rank). Vegetation communities were mapped and described according to the Ecological Land Classification (ELC) system for Southern Ontario (Lee et al., 2008). Vegetation community boundaries were determined using desktop analysis and further refined in the field. The results of this assessment are found in Section 4.5, Map 3, and Appendix A.

3.2.3. Tree Inventory

A tree inventory was completed to identify and assess the tree resources within the Subject Property. The assessment included individual trees 10 centimetres (cm) in Diameter at Breast Height (DBH) or greater within the boundaries of the Subject Property and within 6 m of the property limits, where accessible.

Trees were assessed for condition utilizing the following parameters:

- Tree #: Numbers assigned to trees that correspond to their surveyed/mapped location.
- Species: common and botanical names provided in the inventory table.
- DBH: Diameter (cm) at breast height, measured at 1.4 m above the ground.
- Condition: The overall condition of the trees was assessed as follows:
 - Trunk integrity (TI): Conditions on the trunk that might affect the likelihood of failure based on factors including co-dominant stems, cracks, decay, poor taper, lean, response growth, abnormal or missing/dead bark, etc.
 - Crown Structure (CS): Condition of crown structure that might affect the likelihood of failure including live crown ratio, presence of defects (including bark, weak attachments, cracks, decay, cavities), and crown density.
 - Crown Vigor (CV): An assessment of overall tree health classified as weak/under stress (poor), average vigor for its species and site condition with some signs of stress (fair), growing well and appears to be free of significant health stress factors (good).
 - Canopy Dieback (CDB): The extent of dead branching and canopy cover loss measured as a percentage of the entire crown.

Tree location coordinates were collected during the inventory using a hand-held Global Positioning System (GPS). Species nomenclature and ranking are based on the Ministry of Natural Resources and Forestry Natural Heritage Information Centre species list.

3.2.4. Breeding Bird Surveys

Breeding bird surveys were undertaken on two separate dates by a breeding bird expert, under appropriate weather conditions. The Subject Property was surveyed by systematically walking transects across the site and recording the presence, abundance, and level of breeding evidence using Ontario Breeding Bird Atlas (OBBA) protocols. The level of breeding evidence using OBBA protocols was determined after both surveys. Bobolink and Eastern Meadowlark surveys were also conducted on three separate dates, at two-week intervals within the Subject Property. Results and analysis of this assessment are further discussed in Section 4.7.

3.2.5. Aquatic Habitat Assessment

An aquatic habitat assessment was conducted to identify and evaluate fish presence, composition, and habitat availability within the ponds. Sampling included coverage of both ponds and consisted of bathymetric surveys, fish community sampling completed by capture with gill nets and minnow traps, and a brief habitat assessment. The catch was processed following the MNRF Fisheries Animal Care Class Protocol (OMNRF 2023b). Each fish was identified to species level by qualified Biologists trained and tested in fish

identification. Total length and weight were recorded for each fish, and a brief assessment of any external deformities was conducted.

3.2.6. Incidental Wildlife Surveys

Formal surveys for mammals, reptiles, and insects were not completed, but incidental observations were documented while completing other field surveys. The results are discussed in Section 4.9.

3.2.7. Species at Risk Screening and Assessment

A screening and assessment of potential Species at Risk was conducted for the Subject Property based on Federal and Provincial status. Following the Ministry of Environment, Conservation and Parks (MECP) Guide to Preliminary SAR Screening (2019), this screening was based on a review of the Natural Heritage Information Centre, the regional species list, atlases (breeding bird, butterfly, reptile, and moth), citizen science databases (i.e. iNaturalist), and any additional lists provided. The preliminary screening was submitted as a memo to sar@ontario.ca for assignment to a management biologist for review. The Species at Risk assessment results are found in Section 4.10. Data sources utilized for screening are described in Appendix D.

3.2.8. Significant Wildlife Habitat Screening and Assessment

A screening for Significant Wildlife Habitat following the Ministry of Natural Resources and Forestry Significant Wildlife Habitat Technical Guide (2000) and Significant Wildlife Habitat Criteria Schedule for Ecoregion 7E (January 2015) was conducted for the Subject Property. Potential SWH identified was assessed during the complementary field studies. The results of this assessment are detailed in Section 5 and Appendix E.

4. Existing Conditions

4.1. General Landscape Position

The Study Area is generally situated approximately 10 km east of Highway 404 towards the north end of the Town of Whitchurch-Stouffville. Located about 500 m west of Ninth Line and the hamlet of Bloomington, the Subject Property is bound by Bloomington Road to the north and residences located on Thornbay Drive to the east. Surrounding land use is agricultural to the south which transitions to urban and residential at the Town of Stouffville boundary, which is largely developed among the larger agricultural landscape. To the north, small quarries and associated aggregate operations are common through the surrounding agricultural landscape.

The Study Area is encompassed within the Regional Greenlands System that is associated with the Oak Ridges Moraine Natural Linkage Designation. This Provincial Natural Heritage System extends east across the landscape through the York Region and the connected agricultural landscape, creating natural and open space linkages between the Natural Core Areas and along rivers and streams (Ministry of Municipal Affairs, 2017). No watercourses or wetlands exist within the boundaries of the Subject Property.

4.2. Physiography and Geology

The Study Area is located within the Oak Ridges Moraine physiographic region of Southern Ontario (Chapman and Putman, 1984). The ORM is approximately 160 km in length, extending between the Trent River and the Niagara Escarpment, generally making up the topographic highs within the landscape. The sands and gravels that compose the ORM were deposited approximately 12,000 years ago at the meeting place of two glacial lobes (TRCA, 2007). The surficial geology is comprised of clay to silt-textured till derived from glaciolacustrine deposits or shale. The former aggregate excavations of interest within the Subject Property are within an identified area of ice-contact stratified deposits of gravel. Bedrock geology within the Study Area is characterized as being from the Paleozoic Era, consisting of shale, limestone, dolostone, and siltstone that is Upper Ordovician in age. Soils across the Study Area and large swaths of the Oak Ridges Moraine are included within the Woburn series comprised of loam, in the Grey-Brown Podzolic soil group (Hoffman and Richards, 1955). The soil group has been identified as having good drainage.

4.3. Natural Heritage Systems

4.3.1. Aggregate Ponds

Two ponds are located at the northeast quadrant of the Subject Property and are remnants of former quarry operations, where aggregates were removed from the landscape. The aggregate pits have since filled with water, and at present, resemble natural ponds. The ponds of interest were proposed to be dewatered and filled, as part of the site alteration application for large-scale fill placement. As the water bodies were identified as being regulated by the TRCA, field investigations were completed to assess the existing condition and ecological function of the features. Based on the results of the field data collected, and through consultation with the TRCA, it has been confirmed that the ponds are not wetland communities or Regulated features, and therefore alteration will not constitute wetland removal.

Fish communities and habitats were also assessed to determine if a DFO Request for Review was required for alteration to the water bodies. DFO guidance states that the following features do not require review, including *"artificial waterbodies that aren't connected to a waterbody that contains fish at any time during any given year, such as: ... quarries and aggregate pits"*. Quarries and aggregate pits are not considered fish habitat similar to private ponds, irrigation ponds, stormwater management ponds, and other commercial ponds that do not require DFO consultation.

4.3.2. Regional Greenlands System and Natural Heritage System

The Subject Property and much of the surrounding landscape are designated as a Regional Greenlands System within the York Region Official Plan. The Study Area is also encompassed within the Town of Whitchurch-Stouffville's Natural Heritage System, which reflects both the Regional Greenlands System as well as the Natural Linkage Designation of the Oak Ridges Moraine Conservation Plan. As previously noted, Schedule K of the Town of Whitchurch-Stouffville Official Plan also identified the aggregate pits as kettle lakes and subsequently Key Hydrologic Features. Further assessment of the features confirmed they are not Key Hydrologic Features, but rather remnants of historical quarry operations. As required by the regional and local Official Plans, an assessment of the ecological functions and features is required prior to site alteration or development within 120 m of the Regional Greenlands and Natural Heritage Systems.

4.4. Amphibian Surveys

Amphibian surveys were completed following the Marsh Monitoring Program protocol during the appropriate weather and temperature conditions. Five stations were established within the Subject Property and results are provided in Table 3 below. Station locations are presented on Map 3. Three species were heard within the property limits and could be accurately counted. These included an American toad, green frogs, and a northern leopard frog. Full choruses of spring peepers were heard outside of the established stations, well beyond the Study Area. Assessment of the presence and species composition of the amphibians within the Subject Property does not indicate an abundant population of amphibian species common to wetland environments.

Table 3. Amphibian Call Survey Results

Visit	Start Time	Air Temp. (°C)	Wind (Beaufort)	Precip.	Cloud Cover (10ths)	Species Calling (Call Code-Individuals)		Background Noise	
						In Station	Out of Station	Code	Notes
Station 1									
1	20:22	10	1	Dry	1	-	SPPE3	2	Traffic in distance. SPPE ~300 m west
2	21:00	12	1	Dry	9	-	SPPE3	2	SPPE >200 m in distance
3	22:15	23	1	Dry	8	-	-	4	Continuous traffic
Station 2									
1	20:43	10	1	Dry	1	-	-	1	Light traffic noise
2	21:13	12	1	Dry	9	-	SPPE3	1	SPPE >300 m in distance
3	22:20	23	2	Dry	8	GRFR1-4	-	3	Continuous traffic passing in distance
Station 3									
1	20:49	10	1	Dry	1	-	SPPE3	1	SPPE calling ~300 m in distance
2	21:19	12	1	Dry	9	GRFR1-1	AMTO1-1	1	Calling heard outside timed window
3	22:27	23	2	Dry	8	-	-	2	
Station 4									
1	21:02	10	1	Dry	0	-	SPPE3	1	SPPE in distance
2	21:34	12	1	Dry	9	NLFR1-1	-	3	Continuous traffic

Visit	Start Time	Air Temp. (°C)	Wind (Beaufort)	Precip.	Cloud Cover (10ths)	Species Calling (Call Code-Individuals)		Background Noise	
						In Station	Out of Station	Code	Notes
3	22:42	22	2	Dry	8	-	-	4	Continuous traffic
Station 5									
1	21:07	9	1	Dry	0	-	-	1	
2	21:43	12	1	Dry	9	-	-	2	
3	22:35	22	2	Dry	8	GRFR1-7	-	4	Very loud traffic noise.

4.5. Floristic Studies

4.5.1. Ecological Land Classification

GeoProcess conducted a single-season flora assessment following the guidelines outlined by the Ecological Land Classification system on August 9, 2024. The results of the assessment are presented below in Table 4. One vegetation community was identified within the Study Area, as the majority of the Subject Property is actively used for agricultural purposes, in addition to several Open Water (OA) polygons with no macrophyte vegetation, and no tree or shrub cover.

Table 4. Ecological Land Classification Communities

ELC Code	Ecosite Classification	Structural Layer	Dominant Vegetation
CVR	Cultural Residential	Understory	European buckthorn (<i>Rhamnus cathartica</i>)
		Ground	Smooth brome (<i>Bromus inermis</i>) with occasional wild carrot (<i>Daucus carota</i>), bird's-foot trefoil (<i>Lotus corniculatus</i>), creeping thistle (<i>Cirsium arvens</i>), Canada goldenrod (<i>Solidago canadensis</i>), and reed canary grass (<i>Phalaris arundinacea</i>)

CVR – Cultural Residential: This polygon was characterized by landscape trees and shrubs that included large sugar maples, silver maples, and white spruce interspersed on manicured lawns surrounding the existing residences on the Subject Property. The lawns were also interspersed with common species associated with agricultural field margins such as smooth brome, goldenrod, and creeping thistle. European buckthorn was common among hedgerows and the property boundaries.

4.6. Tree Inventory

GeoProcess conducted a tree inventory on August 9, 2024, to assess existing trees within the Subject Property. An assessment was completed for all individual trees 10 cm in diameter at breast height (DBH) or

greater, which were concentrated near the existing residential buildings on the Subject Property as well as along the property boundary. Trees captured included those on the Subject Property and in the York Region right of way. A summary of the tree inventory is provided in Table 5 below.

Table 5. Tree Inventory Results

Common Name	Scientific Name	S-Rank ¹	Inventory Count
Ash <i>sp.</i>	<i>Fraxinus sp.</i>	-	3
Austrian Pine	<i>Pinus nigra</i>	SNA	3
Black Cherry	<i>Prunus serotina</i>	S5	3
Black Walnut	<i>Juglans nigra</i>	S4?	3
Blue Spruce	<i>Picea pungens</i>	SNA	3
Bur Oak	<i>Quercus macrocarpa</i>	S5	2
Common Apple	<i>Malus domestica</i>	SNA	2
Eastern White Cedar	<i>Thuja occidentalis</i>	S5	2
Honey Locust	<i>Gleditsia tricanthos</i>	S2?	1
Manitoba Maple	<i>Acer negundo</i>	S5	1
European Mountain-ash	<i>Sorbus aucuparia</i>	SNA	2
Norway Maple	<i>Acer platanoides</i>	SNA	8
Norway Spruce	<i>Picea abies</i>	SNA	1
Red Oak	<i>Quercus rubra</i>	S5	2
Silver Maple	<i>Acer saccharinum</i>	S5	14
Sugar Maple	<i>Acer saccharum</i>	S5	16
Trembling Aspen	<i>Populus tremuloides</i>	S5	3
White Birch	<i>Betula papyrifera</i>	S5	1
White Spruce	<i>Picea glauca</i>	S5	19

¹ The NHIC assigns subnational ranks (S-Ranks) for species and plant communities in Ontario using the most up-to-date information and considering factors such as abundance, distribution, population trends, and threats.

A total of 89 trees were documented, as well as one additional deciduous snag, and three hedgerows. A detailed tree inventory table is provided in Appendix B. Most trees were identified as being in "Good" overall health apart from several snag trees including the Ash *sp.*, deciduous snag, and a trembling aspen. Fifty-five trees are proposed for removal to accommodate the fill placement. Trees proposed for removal in the York Region right of way will be compensated for according to York Region's compensation rates (\$909.11 per deciduous tree and \$834.36 per coniferous tree).

4.7. Breeding Bird Surveys

Breeding bird surveys were conducted on two separate dates within the Study Area as per OBBA protocols. As Eastern Meadowlarks were observed during the first survey, formal surveys for Eastern Meadowlark and Bobolink, two species at risk, were completed concurrently and during one additional visit on July 4, 2024 (Table 6). The Subject Property is approximately 33 ha and was encompassed within the larger agricultural landscape. The northern extent of the Subject Property is dominated by grasses, with trees and shrubs limited to fence lines and property boundaries, while the southern portion is occupied by row crops. The two ponds were present within the eastern portion. Based on these features, birds were classified as occurring within grassland (Plot 839-1), pond (Plot 839-2), or agricultural (Plot 839-3) habitats. The Study Area was thoroughly covered by walking transects throughout the site and recording presence, abundance, and level of breeding evidence using OBBA protocols.

Table 6. Breeding Bird Survey Conditions

Visit Date	Visit Time	Temperature Range (°C)	Cloud Cover (%)	Wind Speed (Beaufort Scale)
June 6, 2024	6:20 – 9:10 am	19 – 19	100 – 100	0 – 0
June 20, 2024	6:30 – 9:00 am	22 – 23	90 – 80	2 – 1
July 4, 2024 (BOBO and EAME)	6:00 – 8:00 am	20 – 21	50 – 50	0 – 0

Species heard or observed within the search area were recorded and the highest level of breeding evidence, using OBBA protocols, was determined after completion of both surveys. The results are outlined in Table 7.

Table 7. Breeding Bird Survey Results

Common Name	Scientific Name	Plot 839-1	BL	Plot 839-2	BL	Plot 839-3	BL	S-Rank
Canada Goose	<i>Branta canadensis</i>			50	FY	50	FY	S5
Gadwall	<i>Mareca strepera</i>			2	T			S4B, S4N, S5M
Mallard	<i>Anas platyrhynchos</i>			15	FY	3	FY	S5
Rock Pigeon	<i>Columba livia</i>					5	T	SNA
Mourning Dove	<i>Zenaida macroura</i>	5	T					S5
Killdeer	<i>Charadrius vociferus</i>					4	A	S4B
Spotted Sandpiper	<i>Actitis macularius</i>			2	A			S5B
Ring-billed Gull	<i>Larus delawarensis</i>					5	X	S5
Double-crested Cormorant	<i>Nannopterum auritum</i>			1	X			S5B, S4N
Great Blue Heron	<i>Ardea herodias</i>					2	Flyover	S4
Merlin	<i>Falco columbarius</i>					1	Flyover	S5

Common Name	Scientific Name	Plot 839-1	BL	Plot 839-2	BL	Plot 839-3	BL	S-Rank
Eastern Kingbird	<i>Tyrannus tyrannus</i>	2	T					S4B
Willow Flycatcher	<i>Empidonax traillii</i>	1	S					S4B
Warbling Vireo	<i>Vireo gilvus</i>	1	S					S5B
American Crow	<i>Corvus brachyrhynchos</i>	4	T					S5
Horned Lark	<i>Eremophila alpestris</i>					1	S	S4
Bank Swallow	<i>Riparia riparia</i>	25	X					S4B
Tree Swallow	<i>Tachycineta bicolor</i>	5	H	2	H			S4S5B
Barn Swallow	<i>Hirundo rustica</i>	15	T			5	NE	S4B
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	10	T			3	NE	S4S5B
House Wren	<i>Troglodytes aedon</i>	2	T					S5B
American Robin	<i>Turdus migratorius</i>	4	FY					S5
European Starling	<i>Sturnus vulgaris</i>	10	FY			30	FY	SNA
Cedar Waxwing	<i>Bombycilla cedrorum</i>	2	T					S5
House Sparrow	<i>Passer domesticus</i>	5	H					SNA
American Goldfinch	<i>Spinus tristis</i>	8	T					S5
Chipping Sparrow	<i>Spizella passerina</i>	4	FY					S5B, S3N
Vesper Sparrow	<i>Pooecetes gramineus</i>	1	S					S4B
Savannah Sparrow	<i>Passerculus sandwichensis</i>	8	T					S5B, S3N
Song Sparrow	<i>Melospiza melodia</i>	6	T					S5
Eastern Meadowlark	<i>Sturnella magna</i>	3	CF					S4B, S3N
Baltimore Oriole	<i>Icterus galbula</i>	2	T					S4B
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	30	A					S5
Brown-headed Cowbird	<i>Molothrus ater</i>	2	H					S5
Common Grackle	<i>Quiscalus quiscula</i>	5	CF					S5
Northern Cardinal	<i>Cardinalis cardinalis</i>	2	S					S5

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



Species status was evaluated using the following sources:

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

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

During the field surveys, 37 summer resident bird species were observed, 21 with some breeding evidence. Three of the observed species were those of conservation concern, including the Eastern Meadowlark, Barn Swallow, and Bank Swallow. Species of conservation concern include those that are designated by COSEWIC and/or listed under SARA, species designated by COSSARO, including Endangered, Threatened, and Special Concern species listed and regulated under Ontario's ESA, and provincially rare species (NHIC S-Rank of S1 to S3). A non-native species, the European Starling (*Sturnus vulgaris*) was detected, and Great Blue Herons and a Merlin were observed flying over the study site.

The highest level of breeding evidence observed during surveys was the "confirmed" breeding of nine species, based on the presence of recently fledged young (FY) and the observations of adults carrying food for young (CF) and nests containing eggs (NE). Fourteen species were observed exhibiting "probable" breeding behaviour as pairs observed in their breeding season in suitable habitat (P), singing in permanent territory during both rounds of surveys (T), and exhibiting agitated behaviour or anxiety calls (A). Nine residents were observed in suitable habitat (H) during the breeding season, or a singing male was present in the breeding season in suitable habitat (S), indicating "possible" breeding evidence (OBBA, 2001). The remaining five species observed showed no breeding evidence or had no suitable habitat present (X) or were flyovers.

Based on the breeding bird surveys, habitat is present within the Subject Property for two of three observed SAR. Barn Swallows were confirmed breeding in one of the several barns present on the Subject Property which provide suitable habitat for the species. Although Bank Swallows were observed, no suitable nesting habitat is present on the Subject Property, nor were any nests found. The species is an aerial forager and forages over a variety of open habitats including hayfields or grasslands which was observed during the surveys conducted. Two Eastern Meadowlarks were seen carrying food in grassland in the west part of the subject property on the June 6th survey. This behaviour is considered to confirm breeding by the OBBA. Because of its status as a Species at Risk, it was decided to conduct a third survey of the subject property to obtain additional information. Otherwise, the Study Area provides habitat for species that are generally considered "apparently secure" (S4) and "secure" (S5). Rankings are provided by the Natural Heritage Information Centre (NHIC, 2019).

4.7.1. Bobolink and Eastern Meadowlark Surveys

Two Eastern Meadowlarks (a provincially and federally Threatened species) were identified, seen carrying food, and determined to be breeding within the Subject Property during the first breeding bird survey conducted on June 6, 2024, which triggered formal surveys. Additionally, four male Bobolinks were also observed in an agricultural field south of the Study Area. Bobolinks are provincially Threatened and of Special Concern federally. Bobolink and Eastern Meadowlark surveys were undertaken on three separate dates by a

qualified biologist. Surveys were completed at two-week intervals, in the early morning when bird activity was greatest, and in appropriate weather conditions.

During surveys, it was observed that the northern half of the Subject Property is dominated by grasses with trees and shrubs limited to fence lines and exceeds what is considered a minimum size for Eastern Meadowlark (COSEWIC, 2011) and Bobolink (COSEWIC, 2022). Based on the grass-dominated vegetation throughout a large area, this habitat is considered suitable for Eastern Meadowlark (COSEWIC, 2011) as well as Bobolink (COSEWIC, 2022).

Based on the surveys, it was determined that one pair of Eastern Meadowlarks likely nested on the Subject Property, but the success of nesting is unknown, while two individuals held territories but did not nest within the Subject Property. No Bobolinks nested or held territories within the subject property during the observation period. Due to the size and suitability of the habitat, further nesting by either species is considered possible in the future.

4.8. Aquatic Habitat Assessment

An aquatic habitat assessment was conducted to identify and evaluate fish presence, composition, and habitat availability within the ponds. Sampling included coverage of both ponds and consisted of bathymetric surveys, fish community sampling completed by capture with gill nets and minnow traps, and a brief habitat assessment. The catch was processed following the MNRF Fisheries Animal Care Class Protocol (OMNRF 2023b). Each fish was identified to species level by qualified Biologists trained and tested in fish identification. Total length and weight were recorded for each fish, and a brief assessment of any external deformities was conducted. The results of the bathymetric surveys are summarized in Table 8.

Table 8. Bathymetric Survey Summary Statistics

Pond	Location	Volume (m ³)	Area (m ²)
Pond 1	Southeastern quadrant of the Subject Property	48,465.89	18,131.19
Pond 2	Northeastern quadrant of Subject Property adjacent to Bloomington Road	40,755.20	13,789.20

**Note: Calculated volumes should be considered estimates.*

Two large mesh gill nets (North American Size; NA1) and two small mesh gill nets (Ontario Small Mesh; ON2) were deployed in each pond. Gill nets were oriented roughly perpendicular to the shore, with the small mesh nets set in shallow areas and the large mesh nets set near the deepest point of each pond. Gill nets were set for 19 to 23 hours. The results of sampling completed using gill nets are presented in Table 9 below.

Table 9. Gill Net Catch Record

Location	Common Name	Total Catch		Large Mesh		Small Mesh	
		n	CPUE*	n	CPUE	n	CPUE
Pond 1	Pumpkinseed Sunfish	25	0.53	17	0.72	8	0.34
	Largemouth Bass	6	0.13	5	0.21	1	0.04

	Goldfish	1	0.02	1	0.04	0	0
	White Sucker	1	0.02	1	0.04	0	0
	Total	33	0.70	24	1.02	9	0.39
Pond 2	Goldfish	24	0.02	0	0	24	1.16
	Total	24	0.59	0	0	24	1.16

*CPUE – Catch per unit effort

Five galvanized steel minnow traps were deployed in the nearshore areas of Pond 1 and Pond 2, at a maximum depth of approximately 1 m. Traps were deployed in strategic locations around each pond which were considered good habitats for small-bodied fish based on cover, aquatic vegetation, and substrate. The minnow traps were set overnight for approximately 20 hours. The results of the minnow trap sampling are summarized in Table 10 below. Species Mean lengths and weights of species with more than one individual captured for all sampling are listed in Table 11.

Table 10. Minnow Trap Catch Record

Common Name	Total Catch		Pond 1		Pond 2	
	n	CPUE	n	CPUE	n	CPUE
Goldfish	1	0.005	0	0	1	0.005
Pumpkinseed Sunfish	1	0.005	1	0.005	0	0
Total	2	0.01	1	0.005	1	0.005

Table 11. Morphometrics for Ponds 1 and 2

Waterbody	Species	n	Mean Total Length (mm)	Mean Weight (g)
Pond 1	Pumpkinseed Sunfish	25	187.0	147.0
Pond 1	Largemouth Bass	6	211.8	121.0
Pond 2	Goldfish	25	64.9	5.7

Four species of fish were captured on the Subject Property. All four species were found within Pond 1, largemouth bass, pumpkinseed sunfish, goldfish, and white sucker, while only goldfish were captured from Pond 2. These fish are typical of a warmwater fish community and are commonly found in ponds or other small waterbodies in Southern Ontario. In Pond 1, pumpkinseed sunfish were most abundant, followed by largemouth bass.

4.9. Incidental Wildlife

Formal surveys for mammals, reptiles, and insects were not completed. However, incidental observations were collected while completing other assessments on-site (Table 12).

Table 12. Incidental Wildlife Summary

Common Name	Scientific Name	Evidence	Abundance
Eastern Meadowlark	<i>Sturnella magna</i>	Audio and Visual	3

Common Name	Scientific Name	Evidence	Abundance
Northern Harrier	<i>Circus hudsonius</i>	Visual	1
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Audio	1
Spotted Sandpiper	<i>Actitis macularius</i>	Audio and Visual	2
Killdeer	<i>Charadrius vociferus</i>	Visual	1
Swan sp.	<i>Cygnus sp.</i>	Visual	1

4.10. Species at Risk Screening

The Endangered Species Act, 2007, S.O. 2007 was passed to protect the biodiversity of Ontario by using the best available scientific, community, and indigenous traditional knowledge alongside the precautionary principle as its doctrine. The purpose of the Act is to identify species at risk, protect species at risk and their habitats, and promote the recovery of Species At Risk (SAR) and stewardship activities which assist in these goals. The Committee on the Status of Species at Risk in Ontario (COSSARO) functions to maintain an up-to-date database of information about species in Ontario and their classification. COSSARO advises the Minister of Natural Resources and Forestry, who makes and files a regulation that lists all plant and animal species classified by COSSARO as extirpated, endangered, threatened, or of special concern. This regulation is the Species at Risk in Ontario List (Ontario Regulation 230/08). Ontario Regulation 242/08 provides general policies concerning exemptions and habitat specifications for those listed SAR species.

4.10.1. Screening

A long list of potential SAR was compiled for the Subject Property based on Provincial and Federal status. Following the MECP Client's Guide to Preliminary SAR Screening (2019), this screening was based on a review of the NHIC, the regional species list, atlases (breeding bird, reptile, butterfly, and moth), citizen science databases (i.e. iNaturalist, eBird), and any additional sources provided by the MECP. Descriptions of the various data sources are included in Appendix D. The SAR screening results in Table 13 below was acquired from the listed data source on September 9, 2024.

Table 13. SAR Screening Results

Common Name	Scientific Name	S-Rank	SARO Status	COSEWIC Status
Birds				
Barn Swallow ^{1,2}	<i>Hirundo rustica</i>	S4B	SC	SC
Bobolink ^{1,2}	<i>Dolichonyx oryzivorus</i>	S4B	THR	SC
Eastern Meadowlark ^{1,2,4}	<i>Sturnella magna</i>	S4B, S3N	THR	THR
Eastern Wood-pewee ^{1,2,4}	<i>Contopus virens</i>	S4B	SC	SC
Rough-legged Hawk ⁷	<i>Buteo lagopus</i>	S1B, S4N	NAR	NAR
Wood Thrush ^{1,2,4}	<i>Hylocichla mustelina</i>	S4B	SC	THR
Insects				
Monarch ⁵	<i>Danaus Plexippus</i>	S2N, S4B	SC	END

Common Name	Scientific Name	S-Rank	SARO Status	COSEWIC Status
Plants				
Black Ash ⁷	<i>Fraxinus nigra</i>	S4	END	THR
Reptiles and Amphibians				
Blandings Turtle ³	<i>Emydoidea blandingii</i>	S3	THR	END
Eastern Milksnake ³	<i>Lampropeltis triangulum</i>	S4	NAR	SC
Midland Painted Turtle ^{3,7}	<i>Chrysemys picta marginata</i>	S4		SC
Snapping Turtle ^{3,7}	<i>Chelydra serpentina</i>	S4	SC	SC
Western Chorus Frog – Great Lakes – St. Lawrence Canadian Shield population ¹	<i>Pseudacris maculata pop. 1</i>	S4	NAR	THR
Sources: ¹ NHIC Database, ² OBBA, ³ Ontario Reptile and Amphibian Atlas, ⁴ eBird Database, ⁵ Ontario Butterfly Atlas, ⁶ DFO Aquatic SAR Map, ⁷ iNaturalist				

4.11. Assessment

An assessment of the above SAR long list results was completed by comparing species habitat needs against the findings of the field surveys for the Study Area. The assessment found that the Study Area has the potential to provide habitat for the following Threatened and Endangered species:

- Bobolink
- Eastern Meadowlark

An assessment of the above list found that the Study Area has the potential to provide habitat for the species described below.

Bobolink

Bobolink was listed as Threatened in the Province of Ontario on September 28, 2010. The preferred breeding habitat for Bobolink consists of hayfields, pastures, and meadows which are dominated by a mixture of grasses and broad-leaved forbs (e.g., red clover, dandelion, timothy). It also occurs in wet prairie, graminoid peatlands, abandoned fields, no-till cropland, small-grain fields, and reed beds. It does not *typically* occupy agricultural fields of row crops such as corn, soybean, and wheat.

Bobolink density is significantly higher in areas with relatively low amounts of total vegetative cover, low alfalfa cover, and low total legume cover but with high litter cover and high grass-to-legume ratios (e.g. hayfields ≥ 8 yrs. old). The nests tend to be sited in wet habitats, transitional between drier soils and areas providing poor drainage and are always on the ground, often at the base of large forbs such as meadow rue, golden alexander, clover, etc. Bobolink avoids nesting in habitats dominated by overly dense shrubs and overly deep litter layers (>2cm). Bobolink density and the likelihood of occurrence increase as a function of distance from forest edges (Martin *et al.*, 1995; COSEWIC 2010). The primary threat to the species is the loss of habitat through the conversion of hayfields to other crops and mowing practices.

As noted, four Bobolinks were observed south of the Subject Property during breeding bird surveys, although no confirmed breeding was identified within the property limits. It was determined that breeding may be possible within the Study Area in the future.

One threatened species was observed on-site during breeding bird surveys. The sections below describe the implications of their presence within the Subject Property.

Eastern Meadowlark

The Eastern Meadowlark was designated as Threatened under the Ontario *Endangered Species Act* on January 13, 2012. This species primarily resides south of the Canadian Shield within mid-height meadows and open areas including agricultural crops (hay and alfalfa), pastures, orchards, fallow fields, and other similar ecosites. The species uses shrubbery and fence posts for perching and singing. The Eastern Meadowlark is a migratory songbird of medium build with distinct colouring. Their throat and belly are bright yellow against a brown with black-streaked head and back. They have a black "V" across their breast area and white flanks. The species is threatened by habitat loss on breeding grounds from several factors including land use change, farming practices, pesticides and habitat fragmentation.

One pair of Eastern Meadowlarks likely nested on the Subject Property, as determined by breeding bird surveys conducted in 2024, but the overall success of nesting remains unknown. It was also determined that two individuals held territories but did not nest within the Subject Property. An assessment of the Study Area confirmed that appropriate habitat was present and further nesting in the future is possible. Changes to the Subject Property's land use is not proposed, and therefore minimal impact to habitat availability is expected.

5. Significant Wildlife Habitat Screening

Significant Wildlife Habitat (SWH) is considered a natural heritage feature and is protected as per Section 2.1 of the Provincial Policy Statement, 2014. The Significant Wildlife Habitat Technical Guide (OMNRF, 2000) aids in land use planning by providing the identification, description, and prioritization of significant wildlife habitats in Ontario. The associated Ecoregion Criteria Schedules are used to further provide detailed criteria for assessing and confirming SWH within Ontario.

5.1. SWH Screening

Significant (and/or sensitive) Wildlife Habitat features and functions as described within the OMNRF Significant Wildlife Habitat Ecoregion Criteria Schedule for Region 7E (OMNRF, 2015) were reviewed and evaluated for the Subject Property and Study Area. The document groups habitat into five main categories:

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

The full screening found in Appendix E consisted of a review of the ELC codes and habitat criteria for candidate SWH. Any SWH on the Subject Property or adjacent lands was noted in Column 4 and a rationale was provided in Column 5. In the case of potential SWH, Confirmed Defining Criteria Studies were reviewed.

5.2. SWH Assessment

Based on a review of background information and accompanying field studies, the assessment indicated no presence of candidate or confirmed SWH within the Study Area as the majority of the Subject Property is actively farmed or utilized for other agricultural uses and is occupied by two residences with manicured lawns and landscaping that reduce wildlife functions in their immediate area. Beyond the residences, several open water areas were identified and assessed to determine if they provided wetland habitat for amphibians or other species. Results of the field investigations further confirmed that abundant and diverse amphibian species were not supported. Suitable habitat for Barn Swallow was observed in the buildings that are proposed for removal.

6. Proposed Site Alteration and Fill Placement

The site plan proposes the large-scale placement of fill across the site to facilitate the return to original grade of an old gravel pit. The fill placement will remove the existing residential and agricultural structures on the Subject Property. Following fill placement, the Subject Property will continue being utilized for agricultural purposes.

6.1. Natural Heritage System Implications

Aggregate Ponds

Assessment of the two ponds located at the northeast quadrant of the Subject Property confirmed their structure as former aggregate pits allowed to fill with surface water and groundwater naturally over time. The ponds were identified by TRCA's Regulation Mapping as regulated areas. As previously noted, field investigations completed to assess the ecological function of the features confirmed that they are not wetlands and fish habitat is limited to common warm-water species that are not of conservation concern. Consultation with the TRCA was conducted to confirm findings and overall applicability for the proposed fill placement. It was also confirmed that a DFO Request for Review is not required for alteration to the water bodies as the features are considered artificial and are not connected to another water body that contains fish (i.e. quarries and aggregate pits), and therefore are not considered fish habitat. The two smaller ponds on the western portion of the property were never identified as Regulated by the TRCA.

As per the Ontario Fisheries Regulations, 2007 (OFRs) under the federal *Fisheries Act*, you cannot fish, deposit, or transport live fish without a licence. As such, a Licence to Collect Fish for Scientific Purposes issued by the Ontario Ministry of Natural Resources and Forestry (MNRF) will be obtained prior to the beginning of work. This will be followed by a fish salvage, and rescue of reptiles and amphibians that may reside in the features.

Dewatering of the features will be required to support proposed works and may constitute the need for a Permit to Take Water issued by the Ontario Ministry of Environment, Conservation and Parks (MECP) under Section 34 of the *Ontario Water Resources Act* (OWRA). It is understood that Stantec will manage the dewatering plan for this project.

Regional Greenlands System

As per Schedule A of the Town of Whitchurch-Stouffville official plan, the Subject Property is encompassed within the local Natural Heritage System and Regional Greenlands System that spans the larger Agricultural System. The Study Area is also within the Oak Ridges Moraine Natural Linkage Area designation.

The proposed site alteration works are not proposed to alter the existing function of the Subject Property. As the extent of the works includes fill placement and associated grading, no changes to the current land use will occur and the Subject Property will remain primarily agricultural.

7. Environmental Impact Assessment

Impacts on the natural heritage features associated with and adjacent to the Subject Property were considered in the impact analysis. Table 14 presents the natural heritage components which were considered in this assessment, the proposed activity associated with that component, potential short-term and long-term impacts, and recommended mitigation measures as well as anticipated residual effects. Potential impacts were assessed using data collected in the field and through secondary sources, including an overlay of the proposed site alteration plan.

Table 14. Impact Assessment Table

Feature and Function	Proposed Activity	Potential Impacts	Recommended Mitigation	Residual Effects
Short-Term Impacts				
Adjacent Regional Greenlands System	Grading and Fill Placement	Release of dust associated with construction activities.	Implement dust suppression measures during site grading when conditions are dry or strong winds are anticipated.	Impacts from dust on the surrounding landscape should be minimal. A Dust Mitigation and Best Practices Report has been prepared by SLR Consulting to mitigate impacts. No residual effects are expected.
Breeding Birds	Site Clearing and Vegetation Removal	Impacts on nests and nesting birds.	Vegetation and tree clearing (if required) should not occur between April 1 st and September 30 th as per the Migratory Birds Convention Act (1994). If clearing is to occur during the nesting season, a nest survey should be completed by a qualified bird biologist 48 hours before the proposed works to identify any active nests. Nests are not to be disturbed until the young have fledged or until the nest is deemed inactive. Education of contractors on wildlife encounters.	Implementation of applicable mitigation measures is expected to reduce or eliminate impacts on migratory and breeding birds during the construction period.
Surrounding Habitat	Grading and Fill Placement	Release of petroleum products or other contaminants into surrounding habitats.	To prevent contaminant runoff into the nearby natural heritage features, equipment maintenance and refuelling need to be controlled to prevent any discharge of petroleum products. Vehicular maintenance and refuelling should be conducted at least 30 m from the Regional Natural Heritage System. Construction material, excess material, construction debris, and empty containers should be stored in one location with proper containment and spill control measures in place.	No residual effects are expected if mitigation measures are followed.
Local and Migrating Wildlife	Grading and Fill Placement	Noise from construction works on local and migrating wildlife.	Limited measures can be employed as a certain level of construction noise will occur. Limit construction activities at sunrise and sunset during the active spring breeding bird season.	Noise impacts to wildlife present may occur, however, due to the Subject Property's proximity to Bloomington Road much of the area is already impacted by traffic noise. As much of the wildlife found within the local landscape is tolerant of disturbances, they are anticipated to return to the area once construction activities end. No residual effects are expected.



Feature and Function	Proposed Activity	Potential Impacts	Recommended Mitigation	Residual Effects
Local Aquatic Species	Fill Placement	Removal of Aquatic Species	Follow MNRF protocols for removal of stocked/invasive aquatic species which includes humanely euthanizes invasive/stocked fish.	Aquatic species are either stocked or invasive species and cannot be released to the natural environment. No effects on natural aquatic habitat if MNRF protocols are followed.
Individual Landscape Trees	Filling and Grading	Removal of 55 landscape trees.	Landscaping associated with the continued agricultural lands	Landscape trees are not part of the Natural Heritage System. No residual effects on the NHS are expected.
Surrounding Habitat	During Construction	Movement of invasive species to and from the site.	Machinery is a major vector for spreading terrestrial invasive species into new areas as they may spread seeds or plant parts to other properties. Contractors are to follow the Clean Equipment Protocol for Industry (2013) as laid out by the Ontario Invasive Plants Council.	Few invasive plant species were found on-site during floristic surveys. Minimal residual effects are expected while adhering to the recommended mitigation measures.



7.1. Direct Impact Assessment

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

Based on the existing site conditions, the proposed fill placement within the aggregate ponds will not result in any measurable changes to the Subject Property's composition, structure, or function except for the reduction of the open water area. As the ponds were confirmed to be remnants of former quarry operations, and assessed for ecological function, they were not determined to be wetlands or a significant wildlife habitat their removal will not result in a reduction of habitat within the larger surrounding landscape. The proposed site alteration increases the useable agricultural area within the surrounding agricultural landscape, which may ultimately provide an increase in habitat for SAR bird species known to occur within the Study Area. Furthermore, the proposed fill placement will not alter the function of the Subject Property within the Regional Greenlands System which will continue to act as a Natural Area Linkage as per the Oak Ridges Moraine Conservation Plan.

The potential direct impacts identified for the proposed site alteration include:

- Increase in dust levels during construction. Fine sediments and particulate matter could be distributed throughout the NHS through saltation (e.g. movement of sediment via wind).
- Increase in noise levels impacting local and migrating wildlife. Noise can reduce the ability of wildlife to hear other individuals, which can be particularly problematic during breeding season.
- Edge impacts on the existing landscape due to dumping, soil compaction, and removal or introduction of non-native vegetation.
- Vegetation and tree removal.
- Change in surface runoff to the adjacent natural heritage features due to grade change and addition of impermeable surfaces.

7.2. Indirect Impact Assessment

Indirect impacts are those which occur as a secondary result of the proposed activity, and not necessarily as a direct result of the activity. These are usually associated with effects such as population growth, density changes, or alterations/additions to road networks. Indirect impacts on wildlife and the surrounding environment are expected to be minimal based on the existing conditions of the Subject Property and the continued use of the site as an agricultural site following the fill placement.

7.3. Cumulative Impact Assessment

Cumulative impacts are the cumulation of changes to the environment due to past, present, and reasonably foreseeable future impacts. The proposed site alteration does not alter the existing agricultural landscape or use of the Subject Property. As the former aggregate pits are proposed to be dewatered for large-scale fill placement, the site alteration will ultimately increase productive agricultural land within the Subject Property. The existing ponds are not natural features within the landscape and do not provide significant ecological

function or value as a result, nor do they act as a corridor for aquatic wildlife movement. The modification of the Subject Property will have limited changes to the character and function of the landscape. Implementing the suggested mitigation measures will ensure that possible cumulative impacts will be negligible.

8. Mitigation Measures

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

8.1. Natural Heritage System Measures

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

Other natural heritage system measures include:

- Inspection by a qualified person(s) to conduct regular monitoring of all sediment and erosion measures implemented to ensure they are in working order. Any deficiencies observed are to be recorded and immediately reported to the site contractor.

8.2. Construction Measures

General construction-related mitigation measures include the following:

- Dewatering of the aggregate ponds should be completed in a manner that prevents the unethical death of fish within the features. A fish salvage, as well as amphibian and reptile rescue, should be completed by a qualified environmental professional before dewatering to minimize impacts to existing residents.
- Clearing of vegetation within the Subject Property as part of site preparation should be conducted in late summer or winter months (September to March) so as not to coincide with breeding bird season. If clearing is to proceed within the breeding bird window, the Subject Property should be screened by a qualified bird biologist to determine if any migratory songbirds are nesting within the work zone. Any identified nests are to be protected until it is confirmed that the young have fledged from the nest.
- Implementation of the erosion and sediment control plan is recommended to prevent releases of sediment into the adjacent natural areas.
- Inspection by a qualified person(s) to conduct regular monitoring of all sediment and erosion measures to ensure they are in good working order. Any deficiencies observed are to be recorded and immediately reported to the site contractor.
- Topsoil removed during stripping is recommended to be stockpiled for reapplication post-construction.

- A construction work plan should designate specific locations for fill placement as well as final grading to ensure adequate surface drainage.
- Implementation of dust control measures is recommended to reduce dust impacts on the adjacent lands.

9. Policy Conformity

The proposed site alteration conforms with the policies of the Town of Whitchurch-Stouffville Official Plan as it relates to Natural Heritage Systems. Specifically, it ensures that fill placement does not impact the Regional Greenlands System within the Subject Property or surrounding landscape. Field investigations and consultation with agencies confirmed the aggregate ponds are artificial water bodies and subsequently are not regulated by the TRCA nor is DFO input required before works commence. However, a Licence to Collect Fish for Scientific Purposes issued by the local MNRF office is recommended before the removal of fish from the ponds during the dewatering process to accommodate fill placement and recommended best practices for fish salvages should be followed.

10. Recommendations



This EIS completed a policy review, conducted biophysical surveys to document the existing ecological conditions, consulted regulatory agencies, and reviewed the proposed site alteration plan for large-scale fill placement. From a natural heritage perspective, the proposed plan meets the requirements of the Town of Whitchurch-Stouffville Official Plan and with the implementation of the standard mitigation measures described, can proceed without negative impacts to the natural heritage system.

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Environmental Impact Statement

Part of Lots 9 and 10, Concession 8, Town of Whitchurch-Stouffville

Prepared for 1398493 Ontario Inc.

January 15, 2025



Ian Roul, M.Sc.
Senior Ecologist

Disclaimer

We certify that the services performed by GeoProcess Research Associates were conducted in a manner consistent with the level of care, skill and diligence to be reasonably exercised by members of the engineering and science professions.

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

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Project Number: P2024-839





Maps



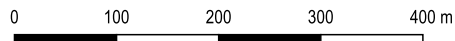
Legend

Subject Property 

Study Area 120 m 



CREATED BY: DH PROJECT NO.: P2024-839
 CHECKED BY: IR DATE: Nov 22, 2024



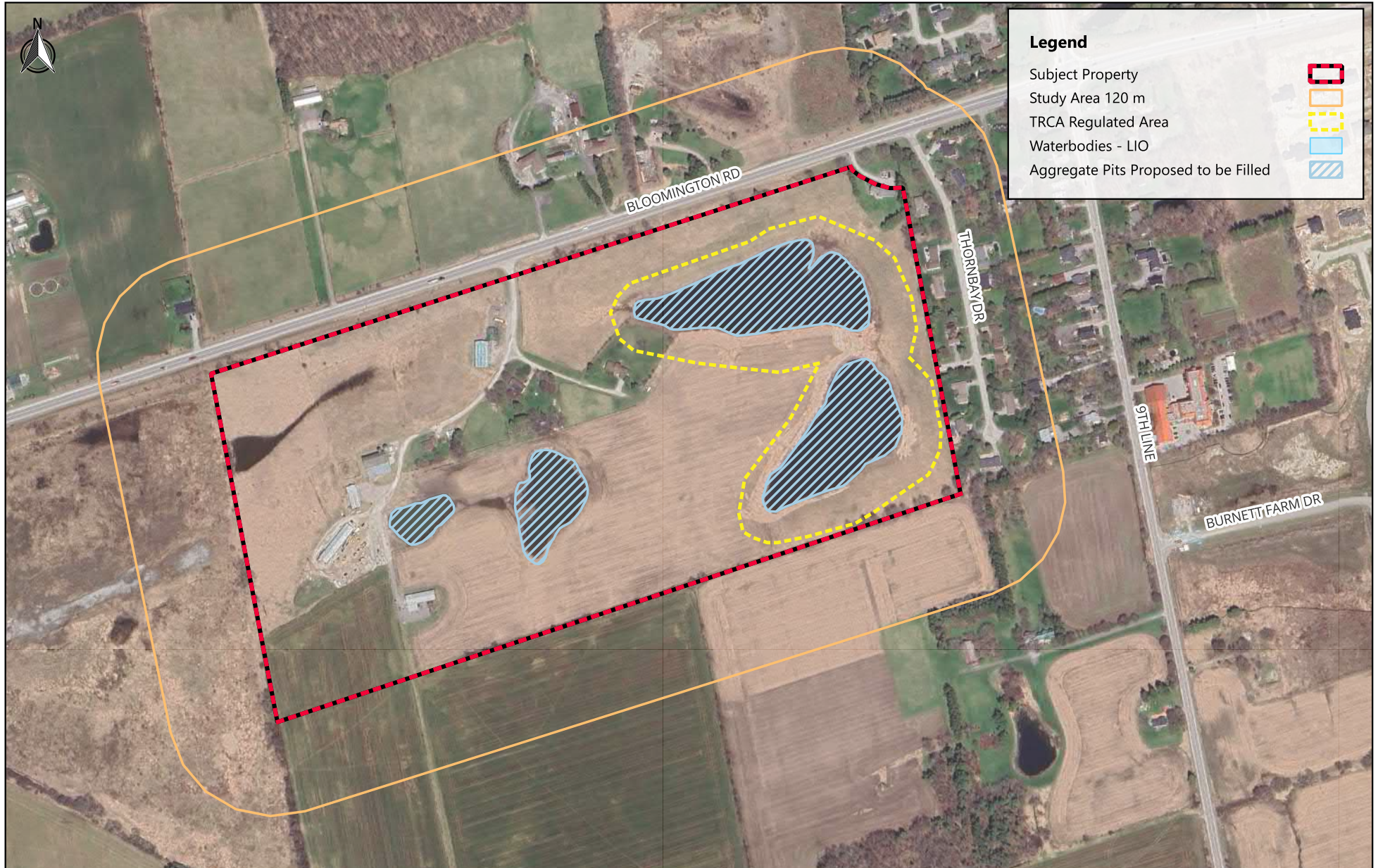
NAD83 / UTM zone 17N (EPSG:26917)

Notes:
 [1] Imagery from Google Earth.

Map 1.

Key Map

**Lot 9 and 10, Concession 8
 Whitchurch-Stouffville**
 1398493 Ontario Inc.



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 CHECKED BY: IR DATE: Nov 22, 2024

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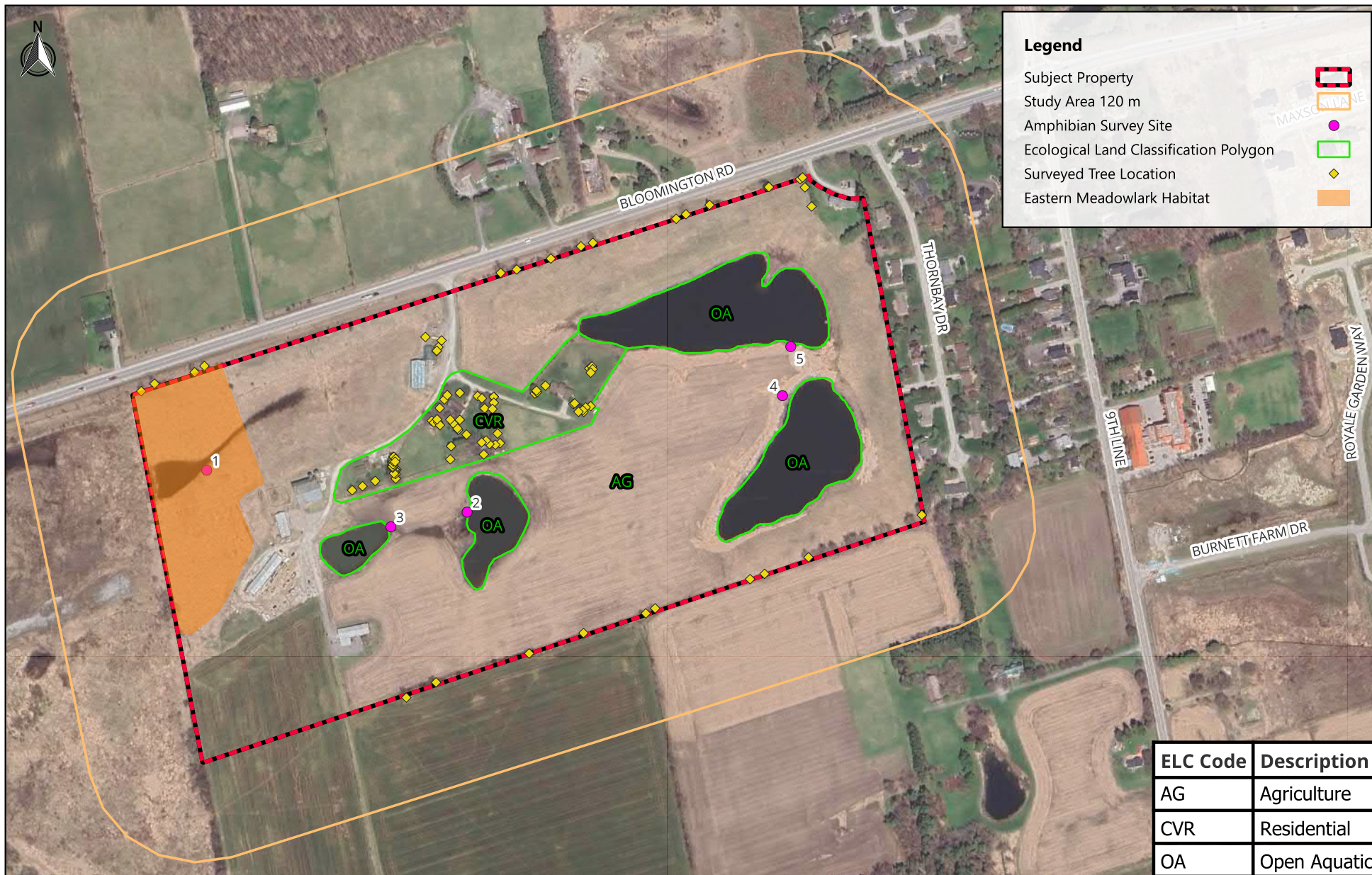
Notes:
 [1] Imagery from Google Earth.
 [2] Contains information licensed under the Open Government Licence – Ontario.

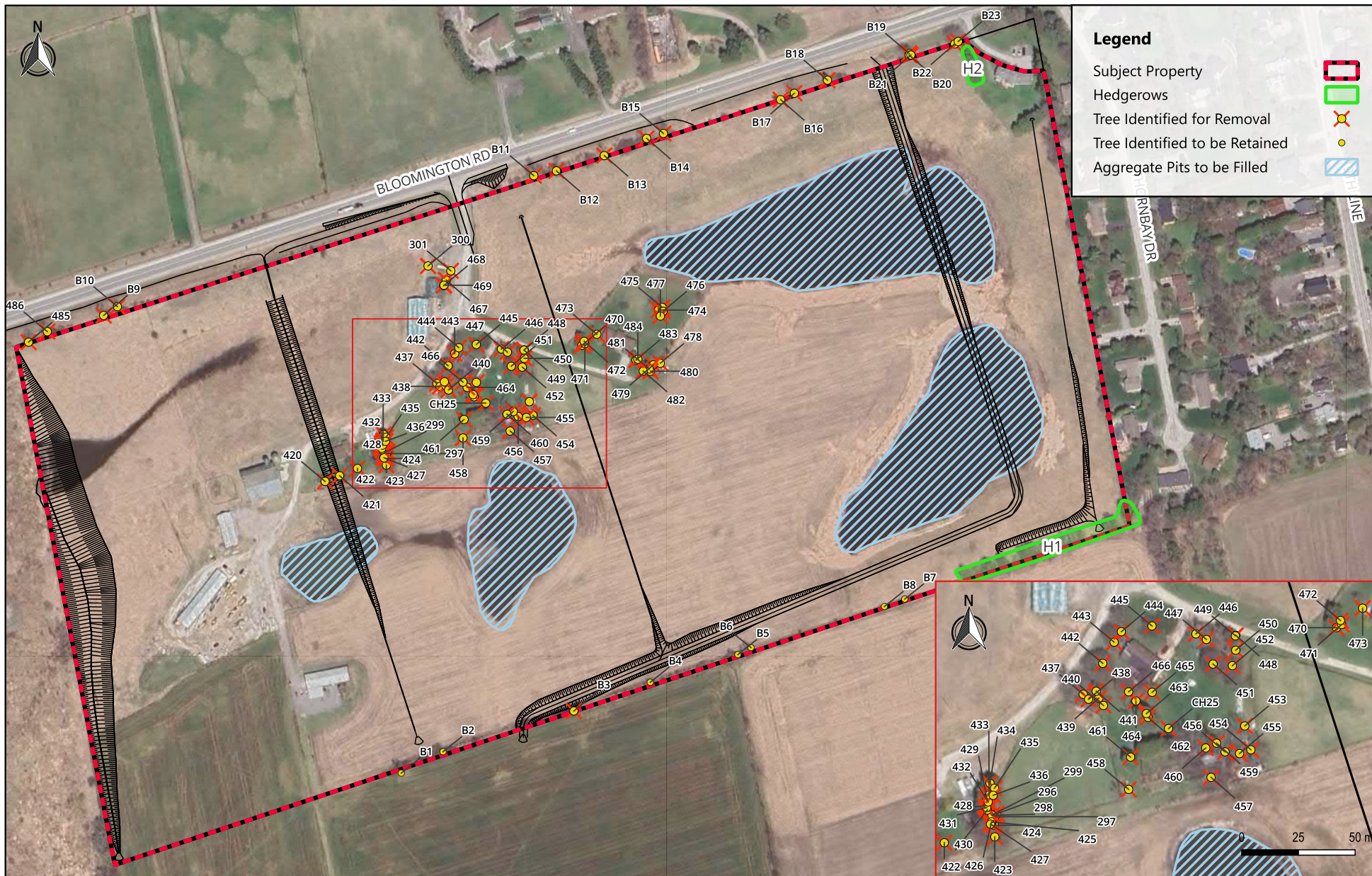
Map 2.

Existing Conditions

**Lot 9 and 10, Concession 8
 Whitchurch-Stouffville**

1398493 Ontario Inc.





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 CHECKED BY: IR DATE: Jan 13, 2025

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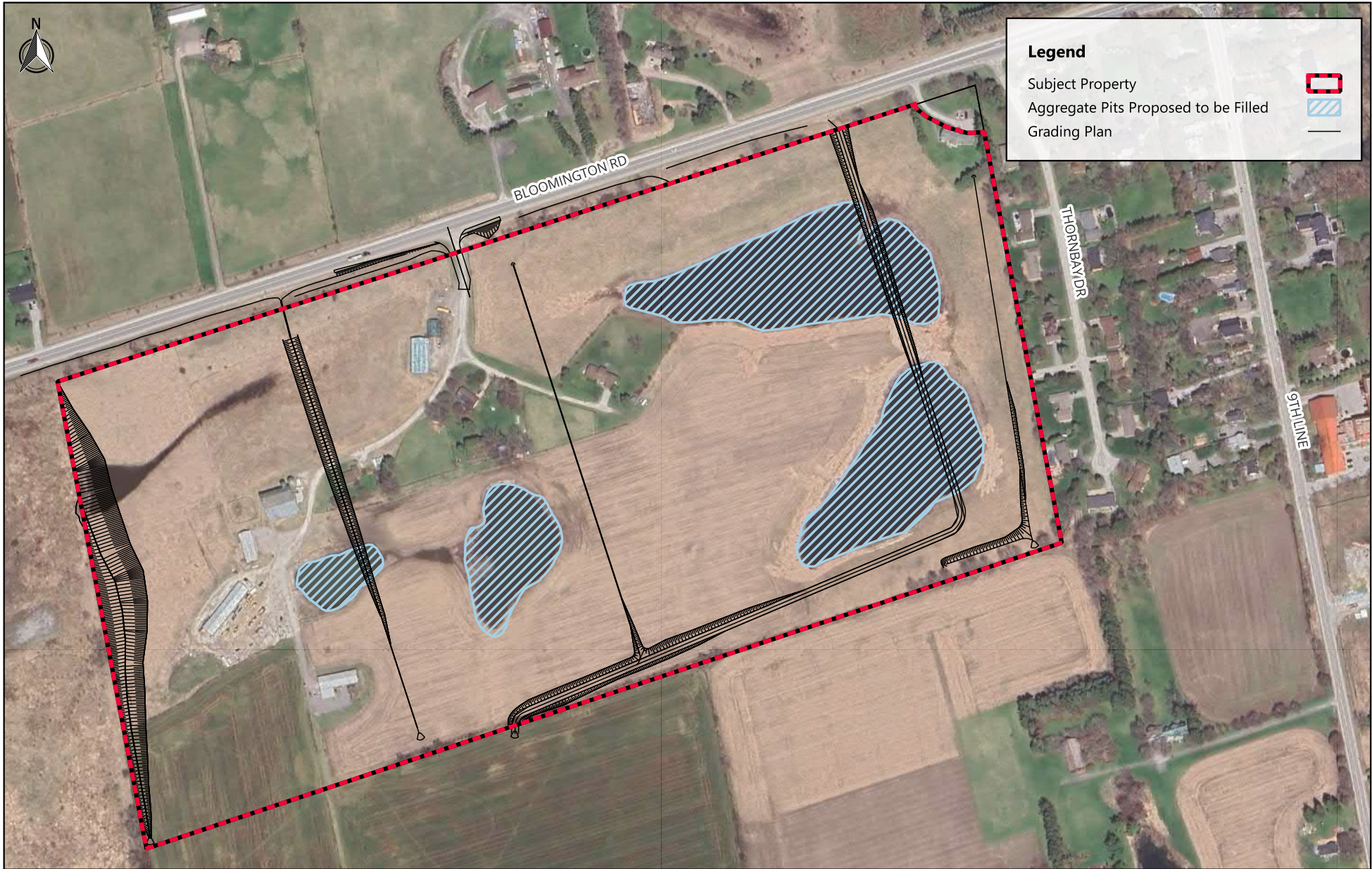
NAD83 / UTM zone 17N (EPSG:26917)

Notes:
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Map 4.

Tree Inventory & Removals

**Lot 9 and 10, Concession 8
 Whitchurch-Stouffville
 1398493 Ontario Inc.**



0 100 200 300 400 m

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
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Map 5.

Grading & Fill Plan

**Lot 9 and 10, Concession 8
 Whitchurch-Stouffville**

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 CHECKED BY: IR DATE: Nov 22, 2024



Appendix A

TRCA Correspondence



TRCA Clearance - 5783 Bloomington Road, Whitchurch-Stouffville - Concept Development Application (CDA-2024-00056)

1 message

Rameez Sadafal <Rameez.Sadafal@trca.ca>

Tue, Oct 1, 2024 at 2:26 PM

To: Leonid Groysman <LGroysman@schaeffers.com>

Cc: Domenic Battistella <dom.battistella@hotmail.com>, Ian Roul <iroul@geoprocessresearch.com>, Jamie Milnes

<Jamie.Milnes@trca.ca>, Koryun Shahbikian <kshahbikian@schaeffers.com>, "skatukurunde@schaeffers.com"

<skatukurunde@schaeffers.com>, Hamedeh Razavi <Hamedeh.Razavi@trca.ca>, Brad Suckling <Brad.Suckling@trca.ca>

Hi Leonid,

My sincere apologies for the delayed response.

Following our site visit on September 4, 2024, TRCA staff have concluded that the two ponds located in the northeastern portion of the property do not meet the tests for a wetland as per TRCA's definition. As such, the ponds are not regulated by TRCA.

It is staff's understanding that the current proposal is to fill in the two ponds and raise the surface to historic grades, for the purposes of restoring the site for agricultural use. TRCA has **no objections** to this proposal.

Given the above, staff note that a **TRCA Permit is not required**. Please accept this email in lieu of a formal clearance letter.

TRCA thanks the applicant for the submission of the concept development application review fee of \$1380 received on August 20, 2024. Please note that Concept Development Application CDA-2024-00056 will be closed going forward.

Should you have any questions or concerns, please let me know.

Best regards,

Rameez Sadafal, M.Sc.PI

Planner - York East Review Area

Development Planning and Permits | Development and Engineering Services

T: (437) 880-2163

E: rameez.sadafal@trca.ca

A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Leonid Groysman <LGroysman@schaeffers.com>
Sent: September 26, 2024 10:54 AM
To: Rameez Sadafal <Rameez.Sadafal@trca.ca>
Cc: Domenic Battistella <dom.battistella@hotmail.com>; iroul <iroul@geoprocessresearch.com>; Jamie Milnes <Jamie.Milnes@trca.ca>; Koryun Shahbikian <kshahbikian@schaeffers.com>; Sadh Katukurunde <skatukurunde@schaeffers.com>
Subject: RE: [5354] 5783 Bloomington Road, Whitchurch-Stouffville - Concept Development Application (CDA-2024-00056)
Importance: High

EXTERNAL SENDER

Hi Rameez,

I hope you're doing well. I'm reaching out again regarding our inquiry below about the status of declassifying the regulated area under the concept development application (Ref. # CDA-2024-00056). The lack of response is concerning, as this matter significantly impacts our current design and the overall progress of the project.

Please provide an update on the review status and the expected timeline for closing the file.

Thank you for your immediate attention to this matter. I would greatly appreciate a prompt reply.

Kind regards,

Leonid

Leonid (Leon) Groysman, M. Sc.

Environmental Assessment and Permitting Lead



6 Ronrose Drive, Concord, Ontario, L4K4R3

(905) 738-6100 – Ext. 245

www.schaeffers.com

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From: Leonid Groysman
Sent: Thursday, September 12, 2024 12:08 PM
To: Rameez Sadafal <rameez.sadafal@trca.ca>
Cc: Domenic Battistella <dom.battistella@hotmail.com>; Ian Roul <iroul@geoprocessresearch.com>; Jamie.Milnes@trca.ca; Koryun Shahbikian (kshahbikian@schaeffers.com) <kshahbikian@schaeffers.com>; Sadh Katukurunde <skatukurunde@schaeffers.com>
Subject: RE: [5354] 5783 Bloomington Road, Whitchurch-Stouffville - Concept Development Application (CDA-2024-00056)
Importance: High

Hello Rameez,

Following your earlier request, we have filed the concept development application (Ref. # CDA-2024-00056). After the site walk with TRCA staff on September 4, 2024, we provided additional information below. We believe the field observations align with the environmental surveys conducted. We understand that the TRCA staff were satisfied with the findings and that the regulated area on the site may be removed, pending senior staff review.

Could you please provide an update on the status of the application and advise on the next steps required to declassify the regulated area on the property? Additionally, could you inform us of the expected timeline for closing the file?

We would appreciate your prompt attention to this matter.

Thank you in advance,

Leonid

Leonid (Leon) Groysman, M. Sc.

Environmental Assessment and Permitting Lead



6 Ronrose Drive, Concord, Ontario, L4K4R3

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From: Ian Roul <iroul@geoprocessresearch.com>
Sent: Wednesday, September 4, 2024 1:06 PM
To: Rameez Sadafal <rameez.sadafal@trca.ca>; Jamie Milnes <Jamie.Milnes@trca.ca>
Cc: Domenic Battistella <dom.battistella@hotmail.com>; Leonid Groysman <LGroysman@schaeffers.com>
Subject: Field data sheets

Hi Rameez, Jamie,

It was great to see you on site today.

Please see attached the amphibian field data sheets for the Whitchurch Stouffville site. The remainder of the data can be provided as the report is compiled but is not in a format that is easily sendable right now.

A summary as discussed in the field is below:

Amphibian Surveys

Large ponds - No calling in survey 1 or 2, individual green frogs were observed during survey 3 but a single species at those levels do not rise to amphibian breeding habitat under the Significant Wildlife Habitat criteria.

Breeding Bird Survey

The ponds were primarily habitat for Canada Goose (50) and Mallard (15), with Gadwall (2). Heron and sandpiper were observed at the edge of the ponds.

The perennial crop is habitat for eastern meadowlark and bobolink, and the barns are suitable for barn swallow. Since the proposal does not change the agricultural use, eastern meadowlark and bobolink habitat will be maintained in the future agricultural lands.

Fish Community

Pond 1 contained Pumpkinseed (sunfish), Largemouth Bass, White Sucker and goldfish (Likely stocked for recreational fishing).

Pond 2 contained exclusively goldfish. (Likely release)

Goldfish are invasive and the MNRF does not want them released to the environment. Matters related to fish communities will be addressed with the MNRF and DFO.

Vegetation

The vegetation communities are primarily annual agriculture and perennial agriculture. Vegetation adjacent to the ponds is limited and the wetland vegetation is found in a narrow band around the ponds. This is consistent with the shape and bathymetry of the ponds as old extraction sites with steep sided slopes.

--



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Appendix B

Tree Inventory Table

Project: P2024-839
Date: 2024-08-09
Surveyor(s): SD

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	Dripline Radius (m)	Ownership	Comments	Retain or Remove	Proposed Action
420	Sugar Maple	<i>Acer saccharum</i>	60	G	G	G	7	Private	healed trunk wound	Remove	Remove due to conflict with grading plan.
421	Sugar Maple	<i>Acer saccharum</i>	63	P	P	G	8	Private	main leader topped, exposed trunk	Remove	Remove due to conflict with grading plan.
422	Sugar Maple	<i>Acer saccharum</i>	71	G	G	G	8.5	Private		Remove	Remove due to conflict with grading plan.
423	Silver Maple	<i>Acer saccharinum</i>	87	G	G	G	9	Private		Remove	Remove due to conflict with grading plan.
424	White Spruce	<i>Picea glauca</i>	21	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
425	White Spruce	<i>Picea glauca</i>	26	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
426	White Spruce	<i>Picea glauca</i>	19	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
427	White Spruce	<i>Picea glauca</i>	24	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
428	White Spruce	<i>Picea glauca</i>	20.5	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
429	White Spruce	<i>Picea glauca</i>	20.5	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
430	White Spruce	<i>Picea glauca</i>	27	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
431	White Spruce	<i>Picea glauca</i>	25	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
432	White Spruce	<i>Picea glauca</i>	22	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
433	White Spruce	<i>Picea glauca</i>	33	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
434	White Spruce	<i>Picea glauca</i>	34	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
435	White Spruce	<i>Picea glauca</i>	40	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
436	Common Apple	<i>Malus domestica</i>	21.5	G	G	G	3	Private		Remove	Remove due to conflict with grading plan.
437	Silver Maple	<i>Acer saccharinum</i>	14, 64	G	G	G	8	Private		Remove	Remove due to conflict with grading plan.
438	Silver Maple	<i>Acer saccharinum</i>	67	G	G	G	7.5	Private		Remove	Remove due to conflict with grading plan.
439	Red Oak	<i>Quercus rubra</i>	43	G	G	G	8.5	Private		Remove	Remove due to conflict with grading plan.
440	Red Oak	<i>Quercus rubra</i>	41	G	G	G	-	Private	Snag	Remove	Remove due to conflict with grading plan.
441	White Spruce	<i>Picea glauca</i>	23	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
442	Norway Maple	<i>Acer platanoides</i>	73	G	G	G	9	Private		Remove	Remove due to conflict with grading plan.
443	Norway Maple	<i>Acer platanoides</i>	58.5	G	G	G	6	Private		Remove	Remove due to conflict with grading plan.
444	Honey Locust	<i>Gleditsia tricanthos</i>	51	G	G	G	10	Private		Remove	Remove due to conflict with grading plan.
445	Common Apple	<i>Malus domestica</i>	10,15,24,24	G	G	G	6	Private	MS	Remove	Remove due to conflict with grading plan.
446	White Birch	<i>Betula papyrifera</i>	33,34	G	G	G	5.5	Private	MS	Remove	Remove due to conflict with grading plan.
447	Norway Maple	<i>Acer platanoides</i>	34	G	F	G	7	Private	MS, CD (M) Pruned	Remove	Remove due to conflict with grading plan.
448	Austrian Pine	<i>Pinus nigra</i>	27	G	G	G	6	Private		Remove	Remove due to conflict with grading plan.
449	Austrian Pine	<i>Pinus nigra</i>	31	G	G	G	5	Private		Remove	Remove due to conflict with grading plan.
450	Ash sp.	<i>Fraxinus sp.</i>	36	P	P	P	2	Private	Snag - hazard	Remove	Remove due to conflict with grading plan.
451	Norway Maple	<i>Acer platanoides</i>	70	G	G	G	8	Private		Remove	Remove due to conflict with grading plan.
452	Norway Maple	<i>Acer platanoides</i>	52	G	G	G	7.5	Private		Remove	Remove due to conflict with grading plan.
453	Ash sp.	<i>Fraxinus sp.</i>	30	P	P	P	2	Private	Snag - hazard	Remove	Remove due to conflict with grading plan.
454	Silver Maple	<i>Acer saccharinum</i>	80	G	G	G	10	Private		Remove	Remove due to conflict with grading plan.
455	Silver Maple	<i>Acer saccharinum</i>	78	G	G	G	9	Private		Remove	Remove due to conflict with grading plan.
456	Silver Maple	<i>Acer saccharinum</i>	82	G	G	G	9	Private		Remove	Remove due to conflict with grading plan.
457	Silver Maple	<i>Acer saccharinum</i>	30,75	G	G	G	8	Private		Remove	Remove due to conflict with grading plan.
458	Ash sp.	<i>Fraxinus sp.</i>	36.5	P	P	P	-	Private	Snag	Remove	Remove due to conflict with grading plan.
459	Norway Spruce	<i>Picea abies</i>	32	G	G	G	3	Private		Remove	Remove due to conflict with grading plan.
460	Silver Maple	<i>Acer saccharinum</i>	64	G	G	G	17	Private		Remove	Remove due to conflict with grading plan.
461	Blue Spruce	<i>Picea pungens</i>	41	G	G	G	4	Private		Remove	Remove due to conflict with grading plan.
462	Blue Spruce	<i>Picea pungens</i>	22	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
463	Blue Spruce	<i>Picea pungens</i>	64	G	G	G	5	Private		Remove	Remove due to conflict with grading plan.
464	Mountain Ash	<i>Sorbus aucuparia</i>	10,20,21,22	F	G	G	5	Private	MS	Remove	Remove due to conflict with grading plan.

465	Norway Maple	<i>Acer platanoides</i>	40	F	G	G	6	Private	CD (M), crack near house	Remove	Remove due to conflict with grading plan.
466	Norway Maple	<i>Acer platanoides</i>	44.5	G	G	G	6	Private		Remove	Remove due to conflict with grading plan.
467	Trembling Aspen	<i>Populus tremuloides</i>	36	G	G	G	6.5	Private		Remove	Remove due to conflict with grading plan.
468	Trembling Aspen	<i>Populus tremuloides</i>	14	G	G	G	4	Private		Remove	Remove due to conflict with grading plan.
469	Trembling Aspen	<i>Populus tremuloides</i>	22	P	P	P	-	Private	Snag	Remove	Remove due to conflict with grading plan.
470	White Spruce	<i>Picea glauca</i>	31	G	G	G	5	Private		Remove	Remove due to conflict with grading plan.
471	White Spruce	<i>Picea glauca</i>	31	G	G	G	5	Private		Remove	Remove due to conflict with grading plan.
472	White Spruce	<i>Picea glauca</i>	37	G	G	G	5	Private		Remove	Remove due to conflict with grading plan.
473	Norway Maple	<i>Acer platanoides</i>	29	G	G	G	4	Private	CD (S)	Remove	Remove due to conflict with grading plan.
474	Silver Maple	<i>Acer saccharinum</i>	19,22,22	F	G	G	5	Private	CD (M), MS	Remove	Remove due to conflict with grading plan.
475	Silver Maple	<i>Acer saccharinum</i>	30	G	G	G	5	Private	CD (S), MS	Remove	Remove due to conflict with grading plan.
476	Silver Maple	<i>Acer saccharinum</i>	17,18	F	G	G	4.5	Private	CD (S), MS	Remove	Remove due to conflict with grading plan.
477	Silver Maple	<i>Acer saccharinum</i>	13	G	G	G	3.5	Private	CD (S), MS	Remove	Remove due to conflict with grading plan.
478	Bur Oak	<i>Quercus macrocarpa</i>	21	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
479	White Spruce	<i>Picea glauca</i>	30	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
480	White Spruce	<i>Picea glauca</i>	37	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
481	White Spruce	<i>Picea glauca</i>	30	G	G	G	3.5	Private		Remove	Remove due to conflict with grading plan.
482	Bur Oak	<i>Quercus macrocarpa</i>	32	G	G	G	4	Private		Remove	Remove due to conflict with grading plan.
483	Eastern White Cedar	<i>Thuja occidentalis</i>	10,25	G	G	G	3.5	Private	MS	Remove	Remove due to conflict with grading plan.
484	Eastern White Cedar	<i>Thuja occidentalis</i>	10,30	G	G	G	4.5	Private	MS	Remove	Remove due to conflict with grading plan.
485	Sugar Maple	<i>Acer saccharum</i>	79	G	G	G	11	Regional	1 leader lost but tree recovered	Remove	Remove due to conflict with grading plan.
486	Sugar Maple	<i>Acer saccharum</i>	75	G	G	G	8	Regional		Remove	Remove due to conflict with grading plan.
CEDAR HEDGEROW - 25 TREES BETWEEN 10-23 DBH										Remove	Remove due to conflict with grading plan.
H1	HEDGEROW: 1 Acer saccharinum 50cm DBH, 10 Tilia americana 40cm DBH, 1 Populus deltoides 50cm DBH									Remove	Remove due to conflict with grading plan.
H2	HEDGEROW: 8 Picea glauca 20-40cm DBH									Remove	Remove due to conflict with grading plan.
B1	Silver Maple	<i>Acer saccharinum</i>	105	F	F	F	8	Private	CDB	Retain	Protect tree as per applicable guidelines.
B2	Silver Maple	<i>Acer saccharinum</i>	90	G	G	G	10	Private		Retain	Protect tree as per applicable guidelines.
B3	Black Cherry	<i>Prunus serotina</i>	65	G	P	P	9	Private	Overgrown with vines	Remove	Remove due to conflict with grading plan.
B4	Black Walnut	<i>Juglans nigra</i>	45	F	F	F	8	Private	CDB exposed bark	Retain	Protect tree as per applicable guidelines.
B5	Manitoba Maple	<i>Acer negundo</i>	30,36	G	G	G	5	Private		Remove	Remove due to conflict with grading plan.
B6	Black Cherry	<i>Prunus serotina</i>	70	F	F	F	9	Private		Retain	Protect tree as per applicable guidelines.
B7	Black Walnut	<i>Juglans nigra</i>	22	G	G	G	6	Private		Retain	Protect tree as per applicable guidelines.
B8	Black Walnut	<i>Juglans nigra</i>	28	G	G	G	6.5	Private		Retain	Protect tree as per applicable guidelines.
B9	Sugar Maple	<i>Acer saccharum</i>	71	F	G	G	8	Regional*		Remove	Remove due to conflict with grading plan.
B10	Sugar Maple	<i>Acer saccharum</i>	62	F	G	G	5.5	Regional*	Lost leader but recovered	Remove	Remove due to conflict with grading plan.
B11	Sugar Maple	<i>Acer saccharum</i>	59	G	G	G	9	Regional*	CD	Remove	Remove due to conflict with grading plan.
B12	Sugar Maple	<i>Acer saccharum</i>	77	G	P	G	9	Regional*	Parts of tree dying, large crevices in trunk	Remove	Remove due to conflict with grading plan.
B13	Black Cherry	<i>Prunus serotina</i>	40	G	G	G	6	Regional*		Remove	Remove due to conflict with grading plan.
B14	Sugar Maple	<i>Acer saccharum</i>	82	F	G	G	10	Regional*	Main leader lost but recovered	Remove	Remove due to conflict with grading plan.
B15	Sugar Maple	<i>Acer saccharum</i>	91	G	G	G	9	Regional*	CD (S)	Remove	Remove due to conflict with grading plan.
B16	Deciduous Snag	-	46	P	P	P	-	Regional*	Snag	Remove	Remove due to conflict with grading plan.
B17	Sugar Maple	<i>Acer saccharum</i>	88	G	G	G	10	Regional*		Remove	Remove due to conflict with grading plan.
B18	Austrian Pine	<i>Pinus nigra</i>	39	G	G	G	4	Regional*		Remove	Remove due to conflict with grading plan.
B19	Mountain Ash	<i>Sorbus aucuparia</i>	23	G	G	G	6	Regional*		Remove	Remove due to conflict with grading plan.
B20	Sugar Maple	<i>Acer saccharum</i>	77	G	G	G	7	Regional*		Remove	Remove due to conflict with grading plan.
B21	Sugar Maple	<i>Acer saccharum</i>	48	G	G	G	7	Regional*		Remove	Remove due to conflict with grading plan.

B22	Sugar Maple	<i>Acer saccharum</i>	78	F	G	G	9	Regional*	2 trunk cavities	Remove	Remove due to conflict with grading plan.
B23	Sugar Maple	<i>Acer saccharum</i>	61	G	G	G	9	Regional*		Remove	Remove due to conflict with grading plan.

*Replace at York Region compensation rate. Deciduous trees compensated at \$909.11 per tree. Coniferous trees compensated at \$834.36 per tree.

Legend

- DBH** Diameter at Breast Height (cm)
- TPZ** Tree Protection Zone
- GOOD** Dead branches less than 10%; good compartmentalization on any wounds, no structural defects
- FAIR** 10-30% dead branches, size or occurrence of wounds present some concerns, minor structural defects.
- POOR** More than 30% dead branches, weak compartmentalization, early leaf drop, presence of insects or disease, major structural defects.
- DEAD** Tree shows no signs of life
- Rating** (L) = light; (M) = moderate; (H) = heavy

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Appendix C

Species Ranking Systems

Table A 1. Species Ranking Systems

Rank	Code	Meaning
OBBA Breeding Level		
Possible	H	Species observed in breeding season in suitable nesting habitat
	S	Singing male present or breeding calls heard in breeding season in suitable habitat
Probable	P	Pair observed in their breeding season in suitable habitat
	T	Permanent territory presumed through registration of territorial song or presence of adult bird in breeding habitat on at least 2 days, one week or more apart at the same place
	D	Courtship or display between a male and female, or two males including courtship feeding and copulation
	V	Visiting probable nest site
	A	Agitated behavior or anxiety calls of adults
	B	Brood patch on adult female or cloacal protuberance on adult male
	N	Nest building or excavation of nest hole
	Confirmed	DD
NU		Used nest or eggshell found (occupied/laid during atlas period)
FY		Recently fledged young or downy young
AE		Adults leaving or entering nest site in circumstances indicating occupied nest
FS		Adult carrying faecal sac
CF		Adult carrying food for young
NE		Nest containing eggs
NY		Nest with young seen or heard
NHIC S-Rank		
SH	Possibly Extirpated (Historical). Species occurred historically and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years	
S1	Critically Imperiled. Extremely rare in Ontario; usually 5 or fewer occurrences in the province	
S2	Imperiled. Very rare in Ontario; usually between 6 and 20 occurrences in the province	
S3	Vulnerable. Rare to uncommon in Ontario; usually between 21 and 60 occurrences in the province; may have fewer occurrences but with some extensive examples remaining	
S4	Apparently secure. Considered to be common in Ontario. It denotes a species that is apparently secure, with over 80 occurrences in the province	
S5	Secure. Indicates that a species is widespread in Ontario. It is demonstrably secure in the province	
?	Indicates some uncertainty with the classification due to insufficient information	
SNR	Not Ranked.	
SNA	Not Applicable. A conservation status rank is not applicable because the species is not a suitable target for conservation activities	
COSEWIC & COSSARO Rankings		
SC	Special Concern	
END	Endangered	
THR	Threatened	
EX	Extirpated	



Appendix D

Species at Risk Screening Sources

Table A 2. SAR Screening Resources

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



Appendix E

Significant Wildlife Habitat Assessment (7E)

Table A 3. Significant Wildlife Habitat Ecoregion Criteria Schedule for Region 7E

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Seasonal Concentration Areas				
Waterfowl Stopover and Staging Areas (Terrestrial)	CUM, CUT1 - plus evidence of annual spring flooding within these ecosites *Fields with seasonal flooding and waste grains in certain areas are specific to Tundra Swan	Fields with sheet water during Spring (mid-March to May) •agricultural fields with waste grain are not SWH unless they have spring sheet water available.	No	No habitat features on site.
Waterfowl Stopover and Staging Areas (Aquatic)	MAS1,MAS2,MAS3,SAS1,SAM1,SAF1,SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. • Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify.	No	No habitat features on site.
Shorebird Migratory Stopover Area	BBO1,BBO2,BBS1,BBS2,BBT1,BBT2,SDO1,SDS2,SDT1,MAM1,MAM2,MAM3,MAM4,MAM5	•Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. •Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores in May to mid-June and early July to October. • No sewage treatment ponds.	No	No habitat features on site.

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Raptor Wintering Area	Combo of one of each Community Series from Forest (FOD,FOM,FOC) and Upland (CUM,CUT,CUS,CUW). Bald Eagle: Forest on shoreline area adjacent to large rivers and lakes.	A combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Need to be >20 ha. •Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands. • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • Eagle sites have open water and large trees and snags available for roosting .	No	No habitat features on site.
Bat Hibernacula	CCR1,CCR2,CCA1,CCA2. * buildings are not to be considered SWH	May be found in caves, mine shafts, underground foundations and Karsts. •Active mine sites are not considered SWH.	No	No habitat features on site.
Bat Maternity Colonies	All Ecosites in: FOD,FOM,SWD,SWM.	Maternity colonies can be found in tree cavities, vegetation and often in building. *Building is not considered SWH. • Not found in caves or mines in ON. •Located in Mature Deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees. •Prefer snags in early stages of decay (class 1-3 or class 1 or class 2). •Silver-haired Bats prefer older mixed or deciduous forests with at least 21 snags/ha.	No	No habitat features on site.
Turtle Wintering Areas	Snapping and Midland Painted: SW,MA,OA,SA and FEO/BOO Series. Northern Map: Open water areas such as deeper rivers or streams and lakes.	Wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. •Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. •Man-	No	Ponds present on Subject Property are man-made (former aggregate pits) and are therefore not considered SWH.

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
		made ponds such as sewage lagoons or storm water ponds should not be considered SWH.		
Reptile Hibernaculum	Any ecosite other than very wet. •Talus, Rock Barren, Crevice, Cave, Alvar may be directly related. •Observations of congregations in spring or fall is good indicator.	Sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line, such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. • Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. •Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover.	No	No habitat features on site.
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles Cliff faces, bridge abutments, silos, barns. CUM1,CUS1,BLS1,CLO1,CLT1,CUT1,BLO1, BLT1,CLS1.	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area, *does not include man-made structures or licenced Mineral Aggregate Operation.	No	No habitat features on site.

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Colonially-Nesting Bird Breeding Habitat (Tree/Shrub)	SWM2,SWM3,SWM5,SWM6,SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7,FET1	Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. •Most nests in trees are 11 to 15 m from ground, near the top of the tree.	No	No habitat features on site.
Colonially-Nesting Bird Breeding Habitat (Ground)	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1:50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM,CUT,CUS	Nesting colonies on islands or peninsulas associated with open water or in marshy areas. Brewers Blackbird colonies found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands.	No	No habitat features on site.
Migratory Butterfly Stopover Areas	Combo of one of each Field (CUM, CUT, CUS) and Forest (FOC, FOD,FOM,CUP).	Minimum 10 ha in size with combo of field and forest located within 5km of Lake Erie or Lake Ontario. •Should not be disturbed. • Field/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. •Should provide protection from the elements, often spits of land or areas with the shortest distance to cross the Great Lakes.	No	No habitat features on site.
Landbird Migratory Stopover Areas	All Ecosites within: FOC,FOM,FOD,SWC,SWM,SWD	Woodlots >5ha in size and within 5km of Lake Erie and Lake Ontario. • If woodlands are rare in area, smaller size can be considered. • If multiple woodlands located along shoreline, those 2km from shoreline are more significant. • Sites have a variety of habitats; forest, grassland and wetland complexes.	No	No habitat features on site.

Wildlife Habitat	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential on Site	Rationale
Deer Winter Congregation Areas	All forested ecosites within: FOC,FOM,FOD,SWC,SWM,SWD + conifer plantations much smaller than 50 ha may be used.	•The largest sites are more significant. •Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Erie and Lake Ontario are Candidate SWH. Woodlots >100 ha in size or if large woodlots are rare in a planning area woodlot >50ha. • Large woodlots > 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha. *Woodlots with high densities of deer due to artificial feeding are not significant.	No	No habitat features on site.
Rare Vegetation Communities				
Cliffs and Talus Slopes	Any Ecosite within: TAO CLO TAS CLS TAT CLT	A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris. Most cliff and talus slopes occur along the Niagara Escarpment.	No	No habitat features on site.
Sand Barren	SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket like (SBS1), or more closed and treed (SBT1). Tree cover always < 60%	A sand barren area >0.5ha in size. • Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. • Vegetation can vary from patchy and barren to tree covered, but less than 60%.	No	No habitat features on site.

Wildlife Habitat	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential on Site	Rationale
Alvar	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2, Five Alvar Indicator Species: 1) <i>Carex crawei</i> 2) <i>Panicum philadelphicum</i> 3) <i>Eleocharis compressa</i> 4) <i>Scutellaria parvula</i> 5) <i>Trichostema brachiatum</i>	An Alvar site > 0.5 ha in size, only known sites are found in the western islands of Lake Erie. • An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. • Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals' species. • Vegetation cover varies from patchy to barren with a less than 60% tree cover.	No	No habitat features on site.
Old Growth Forest	FOD FOC FOM SWD SWC SWM	Woodland area is >0.5ha • Characterized by heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	No	No habitat features on site.
Savannah	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%. • No minimum size to site. • Site must be restored or a natural site. • Remnant sites such as railway right of ways are not considered to be SWH. • Remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along	No	No habitat features on site.

Wildlife Habitat	ELC Ecosite Codes	Candidate SWH	Potential on Site	Rationale
Tallgrass Prairie	TPO1 TPO2	the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario) A Tallgrass Prairie has ground cover dominated by prairie grasses. •An open Tallgrass Prairie habitat has < 25% tree cover. •No minimum size to site. •Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH. May include beaches, fens, forest, marsh, barrens, dunes and swamps. See OMNRF/NHIC for up-to-date list of rare vegetation communities.	No	No habitat features on site.
Other Rare Vegetation Communities	See the Significant Wildlife Habitat Technical Guide (OMNR, 200), Appendix M for Provincially Rare S1,S2 and S3 ELC Vegetation Types.		No	No habitat features on site.

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Specialized Habitat for Wildlife				
Waterfowl Nesting Area	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4. * Note: includes adjacency to Provincially Significant Wetlands	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. •Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. • Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests.	No	No habitat features on site.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. *Nests located on man-made objects are not to be included as SWH. •Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree’s canopy.	No	No habitat features on site.

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Woodland Raptor Nesting Habitat	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3.	All natural or conifer plantation woodland/forest stands >30ha with >4ha of interior habitat. • Interior habitat determined with a 200m buffer. • Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Cooper's hawk nest along forest edges sometimes on peninsulas or small off-shore islands. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.	No	No habitat features on site.
Turtle Nesting Areas	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. •For an area to function as a turtle nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. *Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.	No	No habitat features on site.
Seeps and Springs	Where ground water comes to the surface. Often, they are found within headwater areas within forested habitats. • Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system.	No	No habitat features on site.

Wildlife Habitat	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential on Site	Rationale
Amphibian Breeding Habitat (Woodland)	All Ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM SWD •Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	Presence of a wetland, pond or woodland pool (including vernal pools) >500m ² (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). • Some small wetlands may not be mapped and may be important breeding pools for amphibians. •Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	No	No habitat features on site.
Amphibian Breeding Habitat (Wetlands)	ELC Community Classes SW, MA, FE, BO, OA and SA. •Typically, these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	Wetlands >500m ² (about 25m diameter), supporting high species diversity are significant; •some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. •Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. • Bullfrogs require permanent water bodies with abundant emergent vegetation.	No	OA habitat features on Subject Property were assessed and determined not to be wetlands nor did they support high species diversity.
Woodland Area-Sensitive Bird Breeding Habitat	All Ecosites withing: FOC FOM FOD SWC SWM SWD	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs. old) forest stands or woodlots >30 ha. •Interior forest habitat is at least 200 m from forest edge habitat.	No	No habitat features on site.
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)				

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Marsh Bird Breeding Habitat	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites	Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. •For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.	No	No habitat features on site.
Open Country Bird Breeding Habitat	CUM1 CUM2	Large grassland areas (includes natural and cultural fields and meadows) >30 ha. •Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e., no row cropping or intensive hay or livestock pasturing in the last 5 years). •Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. •The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species.	No	No habitat features on site.

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Shrub/Early Successional Bird Breeding Habitat	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 •Patches of shrub ecosites can be complexed into a larger habitat for some bird species.	Large field areas succeeding to shrub and thicket habitats > 10ha in size. •Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e., no row cropping, haying or livestock pasturing in the last 5 years). •Shrub thicket habitats (> 10 ha) are most likely to support and sustain a diversity of these species. •Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands.	No	No habitat features on site.
Terrestrial Crayfish	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1-with inclusions of above meadow marsh ecosites can be used by terrestrial crayfish.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. •Usually, the soil is not too moist so that the tunnel is well formed. •Can often be found far from water.	No	No habitat features on site.
Special Concern and Rare Wildlife Species	All plant and animal element occurrences (EO) within a 1 or 10km grid.	Identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites	N/A	See SAR Screening Section
Animal Movement Corridors				

Wildlife Habitat	Candidate SWH		Potential on Site	Rationale
	ELC Ecosite Codes	Habitat Criteria		
Amphibian Movement Corridors	Corridors may be found in all ecosites associated with water.	Corridors will be determined based on identifying the significant breeding habitat for these species. Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when the amphibian breeding habitat is confirmed as SWH from this Schedule.	No	No habitat features on site.
Exceptions for EcoRegion 7E				
Bat Migratory Stopover Area	No specific ELC types.	Long distance migratory bats typically migrate during late summer and early fall from summer breeding habitats throughout Ontario to southern wintering areas. Their annual fall migration may concentrate these species of bats at stopover areas.	No	No habitat features on site.