ENVISION
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ENVIRONMENTAL IMPACT STUDY

580 Hazelhurst Road, Mississauga, Ontario

Project No.: 25-1071
Prepared for: York1 Environmental Waste Solutions Inc.
Date: November 12, 2025

Report Version: 01

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SUBJECT: ENVIRONMENTAL IMPACT STUDY, 580 HAZELHURST ROAD, MISSISSAUGA, ONTARIO

EnVision Consultants Ltd. is pleased to present the enclosed Environmental Impact Study for the site described as 580 Hazelhurst Road located in Mississauga, Ontario. Please find the document attached for your review. The study outlines the proposed development and the field investigations undertaken to assess potential environmental impacts, and it recommends mitigation measures to help maintain the form and function of the natural heritage features within the area of influence.

Thank you for the opportunity to complete this assignment. Please contact the undersigned with questions or comments.

Yours sincerely,

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QUALITY MANAGEMENT

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1. INTRODUCTION

EnVision Consultants Ltd. (EnVision) was retained by York1 Environmental Waste Solutions Inc. (the 'Client') to conduct an Environmental Impact Study (EIS) for the property identified as 580 Hazelhurst Road, Mississauga, Ontario; herein referred to as the 'Site'. In accordance with the Provincial Planning Statement (PPS) 2024, this review also includes consideration for a larger 'Study Area' defined as the lands beyond 120 m of the Site.

The Site is located in the City of Mississauga, Peel Region, Ontario. The Site consists of an industrial lot and is rectangular in shape, comprising an area of approximately 1.52 ha. The Site lacks mapped natural heritage features; however, adjacent to the Site, a woodland feature abuts the south-west boundary which is the reason for the requirement of the EIS. It should be noted that no other natural heritage feature (NHF) besides for the noted adjacent woodland is present within the Site. Otherwise, the surrounding lands include industrial lots, Hazelhurst Road to the north-east and a meadow and woodland beyond that. Refer to Appendix B, Figure 1 for Site location details.

It is our understanding that the Site is proposed to be developed as a recyclable materials/waste processing facility. This study aims to identify the location and extent of regulated NHF and their functions in accordance with provincial and municipal legislation and policies in order to define constraints and opportunities for development. The study also identifies potential impacts associated with the proposed development and recommends measures to mitigate those impacts while evaluating compliance with the applicable planning framework. The information presented in this report is based on review of relevant background information sources, consultation with relevant agencies and authorities, and direct observations through field investigations. This EIS conforms with the guidelines outlined within the Mississauga Official Plan (office consolidation May 15, 2025), the Region of Peel Official Plan (adopted April 28, 2022) and the Terms of Reference (ToR) with respective comments received on October 15, 2025.

2. ENVIRONMENTAL POLICY REVIEW

To ensure that the proposed development plan for the Site is consistent with requirements outlined in the applicable environmental legislations, regulations and policies related to protection and management of natural resources, the following policy review table has been developed to summarize the various legislation, regulations and policies that need to be considered through the planning process.

The policy review table presented below in Table 2-1 provides a summary of key statutory requirements and policy tests that need to be satisfied. The purpose of including this table in this EIS report is to inform the constraint analysis and necessary mitigation which was used to guide the design of the proposed development plan and to ensure these plans are consistent with the various regulatory requirements relating to environmental protection and enhancement.

Table 2-1: Environmental Policy Review

LEVEL OF GOVERNMENT	ACT, REGULATION, POLICY AND/OR GUIDELINE	RELEVANCE TO THE PROPOSED DEVELOPMENT
FEDERAL	Fisheries Act (1985; 2019 Update)	In Ontario, Fisheries and Oceans Canada (DFO) manages fish habitat and the Ontario Ministry of Natural Resources (MNR, including all name variations) manages fisheries. Fish and fish habitat are protected under the federal Fisheries Act, last amended on August 28, 2019. The protection provisions of the Fisheries Act apply to all fish and fish habitat throughout Canada, and include 2 key prohibitions, specifically: • Subsection 34.4(1) – No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish. • Subsection 35(1) – No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat. Proponents are responsible for planning and implementing works, undertakings or activities in a manner that avoids harmful impacts, specifically the death of fish and the harmful alteration, disruption or destruction of fish habitat. Where proponents believe that their work, undertaking or activity will result in negative impacts to fish or fish habitat that cannot be fully mitigated, a Fisheries Act Authorization may be required. No watercourses or fish habitat were identified in the background review or the field investigations. Fish habitat is not present on Site or in the Study Are; therefore, the Fisheries Act will not be discussed further in this report.
	Migratory Birds Convention Act (1994)	The federal Migratory Birds Convention Act (MBCA, 1994) protects the nests, eggs and young of most bird species from harassment, harm or destruction. No permitting or authorization is required under the MBCA; however, proponents who fail to comply with the legislation may be fined if found to be in contravention of the MBCA. The Study Area is within Zone C1 of the Lower Great Lakes/St. Lawrence Plain; in that zone, the active nesting period for migratory forest birds is approximately April 1 to August 31. Vegetation clearing outside of this period (i.e., during the non-nesting period) is the primary mechanism through which proponents can avoid potential contravention of the MBCA; although this is not guaranteed. If vegetation clearing must occur within the active nesting period, clearing may be permissible if nesting birds are not impacted. The woodland south-west of the Site in the Study Area has the potential to provide nesting habitat for migratory birds. Removal of a limited number of trees that may provide nesting habitat within the Site is anticipated to be required for potential development. These are detailed in the Arborist Report and Tree Preservation Plan, 580 Hazelhurst Road (EnVision, 2025). See Section 7 for discussion of recommended vegetation clearing timing restrictions.
	Species at Risk Act (2002)	The Species at Risk Act (SARA; 2002) is Canada's federal legislation aimed at preventing wildlife species from being extirpated or becoming extinct, providing for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened. The general prohibitions set out to protect Schedule 1 listed extirpated, endangered, or threatened species include: • Subsection 32 (1): No person shall, kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species. • Subsection 33: No person shall damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada. On non-federal lands, SARA is generally only applicable to aquatic species or migratory birds: • Subsection 34 (1): With respect to individuals of a listed wildlife species that is not an aquatic species or a species of birds that are migratory birds protected by the MBCA (1994), sections 32 and 33 do not apply in lands in a province that are not federal lands unless an order is made under subsection 34 (2) to provide that they apply. • Subsection 34 (2): The Governor in Council may, on the recommendation of the Minister, by order, provide that sections 32 and 33, or either of them, apply in lands in a province that are not federal lands with respect to individuals of a listed wildlife species that is not an aquatic species or a species of birds that are migratory birds protected by the MBCA (1994). Activities that may contravene subsections 32 and 33 may be authorized under a permit: Subsection 73 (1): the Minister may enter into an agreement or issue a permit authorizing to engage in an activity affecting a listed wildlife species, any part of its critical habitat or the residence of its individuals if certain conditions are met which are outlined within SARA (2002). The Study Area is not located on federal lands nor is the proposed development project receiving deferral funding; therefore, only SARA (2002) policies regarding Schedule 1 listed extirpated, endangered, or threatened aquatic species or migratory birds are applicable to the proposed work and hereby, Species at Risk (SAR) will refer only to these species. A review of potential SAR habitat identified through the background information review and site investigation and their potential relevance to the Site and/or Study Area is provided in Section 5.3 and Appendix F.

LEVEL OF GOVERNMENT	ACT, REGULATION, POLICY AND/OR GUIDELINE	RELEVANCE TO THE PROPOSED DEVELOPMENT
PROVINCIAL	Conservation Authorities Act (1990) and Ontario Regulation 41/24	The Conservation Authorities Act (CAA) (1990) provides the legal framework for the establishment and operation of Conservation Authorities (CA) across Ontario. Its purpose is to provide for the organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources in watersheds in Ontario. Ontario Regulation 41/24 (Prohibited Activities, Exemptions, and Permits) replaced the previous individualized CA regulations. This regulation introduced updated definitions, reduced the regulated area around provincially significant wetland (PSW), and removed permit tests related to pollution and conservation of land. CA have jurisdiction over areas termed regulated areas, within which, development activities are prohibited under paragraph 2 of subsection 28 (1) of the CAA. The following activities are prohibited unless a permit is issued by the respective CA: 1. Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland. 2. Development activities in areas that are within the authority's area of jurisdiction and are: I. hazardous lands; II. wetlands; III. river or stream valleys the limits of which shall be determined in accordance with the regulations; IV. areas that are adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to an inland lake and that may be affected by flooding, erosion or dynamic beach hazards, such areas to be further determined or specified in accordance with the regulations; or, V. other areas in which development should be prohibited or regulated, as may be determined by the regulations. The Site is within the Credit Valley Conservation Authority (CVC) watershed but is not within the CVC regulated area. The wetland south-west of the Site, a potential regulated feature, does not explicitly directly contribute to the hydrological function of the watershed through connection with a surface watercourse as it is an isolated wetland in the landscape with no explicit connection to a surface watercourse. CVC declined to attend the Site visit on September 16, 2025 as they have no regulated features within the Site (See Appendix A); therefore, the CAA will not be considered further in this report.
	Fish and Wildlife Conservation Act (1997)	The Fish and Wildlife Conservation Act (1997) enables the MNR to provide sound management of the province's fish and wildlife. Specifically, it protects the nest or eggs of birds not already protected under the MBCA (1994), with some exceptions; and it prohibits the harassment, capture, or killing of wild animals without proper authorization. No wildlife habitat is anticipated to be directly impacted. General mitigations outlined in Section 7 describe preventative measures to avoid impacts to wildlife that would contravene the Fish and Wildlife Conservation Act (1997).
	Endangered Species Act (2007)	The Ontario Endangered Species Act (ESA) (2007) provides for the protection and conservation of SAR while taking into account social and economic considerations including the need for sustainable economic growth in Ontario. The ESA (2007) lists species as endangered, threatened or special concern on the Species at Risk in Ontario (SARO) List (O. Reg. 230/08). Species listed as endangered or threatened, as well as their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation and migration) are afforded legal protection under the ESA (2007) and are hereby termed SAR. The general prohibitions set out to protect endangered and threatened species, as well as their habitats include: • Subsection 9 (1): No person shall, a) kill, harm, capture or take a living member of a species that is listed on the SARO List as an extirpated, endangered or threatened species; • Subsection 10 (1): No person shall damage or destroy the habitat of, a) a species that is listed on the SARO List as an endangered or threatened species; or b) a species that is listed on the SARO 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]). Activities that are anticipated to contravene subsections 9 (1) and 10 (1) may be authorized under a permit which may contain conditions as the Minister considers appropriate: • Subsection 17 (1): After considering an application for a permit, the Minister may issue a permit to a person that, with respect to a species specified in the permit that is listed on the SARO List as an extirpated, endangered or threatened species, authorizes the person to engage in an activity specified in the permit that would otherwise be prohibited by section 9 or 10. On June 5, 2025, the Province of Ontario passed Bill 5: Protecting Ontario by Unleashing our Economy Act (2025) which included amendments to the ESA (2007) that are now in force, and the creation of the Species Conservation Act (2025) which is not yet in effect. Two key amendments to the ESA are: • Undertaking an activity that results in harassment of a species is no longer prohibited, and,

LEVEL OF GOVERNMENT	ACT, REGULATION, POLICY AND/OR GUIDELINE	RELEVANCE TO THE PROPOSED DEVELOPMENT
		• The definition of habitat is revised to: 1. in respect of an animal species, I. a dwelling-place, such as a den, nest or other similar place, that is occupied or habitually occupied by one or more members of a species for the purposes of breeding, rearing, staging, wintering or hibernating, and II. the area immediately around a dwelling place described in subclause (i) that is essential for the purposes set out in that subclause. 2. in respect of a vascular plant species, the critical root zone surrounding a member of the species, and 3. in respect of all other species, an area on which any member of a species directly depends in order to carry on its life processes. **A review of potential SAR habitat identified through the background information review and site investigation and their potential relevance to the Site and/or Study Area is provided in Section 5.3 and Appendix F.**
	Provincial Planning Statement (2024)	The Planning Act (1990) empowers the Minister of Municipal Affairs and Housing (MMAH) to issue the PPS (2024) which is a planning document that provides a framework for, and governs development within, the province of Ontario. To preserve various ecological resources deemed significant in the province, development lands must be assessed for the presence of NHF prior to construction, for which the PPS defines and affords protections. NHF are generally specialized forms of habitat which support rare species in Ontario and are important for their environmental and social values. The PPS natural heritage policy of section 4.1 outlines types of NHF and respective development restrictions as listed below: 1. Natural features and areas shall be protected for the long term. 2. The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among NHF and areas, surface water features and ground water features. 4. Development and site alteration shall not be permitted in: a. significant wetlands in Ecoregions 5E, 6E and 7E; and b. significant coastal wetlands. 5. Development and site alteration shall not be permitted in: a. significant wetlands in the Canadian shield north of Ecoregions 5E, 6E and 7E; b. significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River); c. significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River); d. significant wildlife habitat; e. significant areas of natural and scientific interest; and, f. coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 4.1.4.b), unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. 6. Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements. 7. Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements. 8. Development and site alteration shall not be permitted on adjacent lands to the NHF and areas identified in policies (4, 5 and 6 above) unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions. **A review of NHF and their functions identified in the PPS and their relevance to the Site is presented Section 5 and summarized in Table 5-1.**
	Natural Heritage Reference Manual (2010)	This manual provides guidance for implementing the natural heritage policies of the PPS (2024). NHF as described under section 4.1 of the PPS (2024) are located within the Study Area. The protection of significant features within the natural heritage system will be considered in the proposed development plan.
	Significant Wildlife Habitat Criteria for Ecoregion 7E (2015)	Significant wildlife habitat (SWH) is identified as a natural heritage feature under the PPS (2024). This document provides the recommended criteria for identifying SWH within Ecoregion 7E including the four categories of SWH outlined in the Significant Wildlife Habitat Technical Guide (MNRF, 2000) and its appendices. **A review of potential SWH habitat identified through the background information review and site investigation and their potential relevance to the Site and/or Study Area is provided in Section 5.4 and Appendix G.**

LEVEL OF GOVERNMENT	ACT, REGULATION, POLICY AND/OR GUIDELINE	RELEVANCE TO THE PROPOSED DEVELOPMENT
	Significant Wildlife Habitat Technical Guide (2000)	This guide supports the Natural Heritage Reference Manual (2010). It provides detailed information on the identification, description, and prioritization of SWH. This guide will be used to support assessment of SWH.
REGION	Region of Peel Official Plan (adopted April 28, 2022)	The Region of Peel Official Plan (ROP) provides the Regional Council with a long-term policy framework for decision making and was adopted on April 28, 2022, and approved by the province on November 4, 2022. The ROP (adopted April 28, 2022) sets the regional context for more detailed planning by protecting the environment, managing resources and directing growth, setting the basis for regional services approved by the province in an efficient and effective manner. Policy 2.14.6 identifies the Regional Greenlands System (RGS) on Schedule C-1 (and depicted on Appendix B, Figure 2). The RGS consists of Core Areas, Natural Areas and Corridors (NAC), Potential Natural Areas and Corridors (PNAC), and components of provincial plans (e.g., Greenbelt Plan, Oak Ridges Moraine Conservation Plan). Development or site alteration within the RGS is only permitted in accordance with ROP (adopted April 28, 2022) policies and applicable provincial legislation (Policy 2.14.7). In this case, the Site contains a woodland designated as NAC, and the proposed development will maintain a setback from these naturalized features; therefore, no development is proposed within the RGS. The Region directs natural heritage setback requirements to local municipalities; no stipulated setbacks were found within the ROP (adopted April 28, 2022). **The aforementioned high level regional policies have been considered in the design of the proposed development to minimize impacts to the RGS and the NAC feature present south-west of the Site.**
	Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009)	This study provides additional criteria for identifying SWH to supplement the provincial SWH 7E criteria. **A review of potential SWH habitat identified through the background information review and site investigation and their potential relevance to the Site and/or Study Area is provided in Section 5.4 and Appendix G.**
CITY	Mississauga Official Plan (office consolidation May 15, 2025)	The City of Mississauga Official Plan (COP) (office consolidation May 15, 2025) guides how the City of Mississauga ('the City') will grow and develop, as required by the Ontario Planning Act (1990). The COP (office consolidation May 15, 2025) General Land Use Designations as described in section 11, and depicted in schedule 10 Land Use Designations, identify the Site as Industrial with Business Employment lands adjacent to the south-west of the Site. Of note, per section 11.2.3.3, lands may be zoned Greenlands regardless of any land use designation. The City identifies NHF and their functions as identified in the PPS (2024) as part of the Green System which consists of the Natural Heritage System (NHS), the Urban Forest, Natural Hazard Lands and Parks and Open Spaces as depicted on Appendix B, Figure 2. Although the Site generally contains no NHF, it abuts a woodland to the south-west which also contains a wetland. This feature is part of the Green System, specifically, the NHS, and this woodland feature is also mapped as Significant Natural Area. The following specific policies related to the environment and NHS are applicable to the Site and proposed development: Policy 6.1.1 Mississauga will: a. protect, enhance, restore and expand the NHS; b. encourage the stewardship and enhancement of other areas within the Green System, particularly where it contributes to the function and linkage of the NHS. Policy 6.3.7 Buffers which are vegetated protection areas that provide a physical separation of development from the limits of NHF and Natural Hazard Lands, will be provided to perform the following: • maintenance of slope stability and reduction of erosion on valley slopes; • attenuation of stormwater runoff; • reduction of human intrusion into Significant Natural Areas and allowance for predation habits of pets, such as cats and dogs; • protection of tree root zones to ensure survival of vegetation; • provision of a safety zone for tree fall next to woodlands; • enhancement of woodland interior and edge areas through native species plantings; • enhanced wildlife habitat and corridors for wildlife movement; and, • opportunities for passive recreational activities, in appropriate locations. 6.3.8 Buffers shall be determined on a site specific basis as part of an EIS or other similar study, to the satisfaction of the City and appropriate CA.

LEVEL OF GOVERNMENT	ACT, REGULATION, POLICY AND/OR GUIDELINE	RELEVANCE TO THE PROPOSED DEVELOPMENT
		6.3.15 Special Management Areas are lands adjacent to or near Significant Natural Areas or Natural Green Spaces and will be managed or restored to enhance and support the Significant Natural Area or Natural Green Space. However, no Special Management Area is mapped on the schedule 3, Natural System COP (office consolidation May 15, 2025) mapping adjacent to the Significant Natural Area south-west of the Site. Regardless, per section 6.3.16, the City simply encourages landowners to promote stewardship and enhancement of these areas on private lands. 6.3.23 Mississauga will have regard for the maintenance of the long-term ecological integrity of the NHS in all decisions. 6.3.24 The NHS will be protected, enhanced, restored and expanded through the following measures: a. ensuring that development in or adjacent to the NHS protects and maintains NHF and their ecological functions through such means as tree preservation, appropriate location of building envelopes, grading, landscaping, and parking and amenity area locations; b. placing those areas identified for protection, enhancement, restoration and expansion in public ownership, where feasible; c. using native plant materials and non-invasive species, and reducing and/or eliminating existing invasive, non-native plant species to improve ecological value and the sustainability of indigenous vegetation, where appropriate; d. retaining areas in a natural condition and/or allowing them to regenerate to assume a natural state; e. the promotion of stewardship within privately and publicly owned lands within the NHS; f. controlling activities that may be incompatible with the retention of the NHS and associated ecological functions; and, g. regulation of encroachment into the NHS and other public open spaces. 6.3.26 Lands identified as or meeting the criteria of a Significant Natural Area, as well as their associated buffers will be designated Greenlands and zoned to ensure their long-term protection. Uses will be limited to conservation, flood and/or erosion control, essential infrastructure and passive recreation. 6.3.27 Development and site alteration as permitted in accordance with the Greenlands designation within or adjacent to a Significant Natural Area will not be permitted unless all reasonable alternatives have been considered and any negative impacts minimized. Any negative impact that cannot be avoided will be mitigated through restoration and enhancement to the greatest extent possible. 6.3.29 Development and site alteration on lands adjacent to a PSW, provincially significant coastal wetland and habitat of endangered species and threatened species or other Significant Natural Area will require an EIS, demonstrating no negative impact to the NHF or on their ecological function, to the satisfaction of the City and appropriate CA. 6.3.33 EIS will delineate the area to be analysed, describe existing physical conditions, identify environmental opportunities and constraints, and evaluate the ecological sensitivity of the area in relation to a proposal. It will also outline measures to protect, enhance, restore and expand the NHS and associated ecological functions. EIS will be prepared to the satisfaction of the City and appropriate CA. The aforementioned policies have been considered in the design of the proposed development to minimize impacts to the NHS.

3. STUDY APPROACH

3.1. TERMS OF REFERENCE

A ToR (Appendix H) was prepared and submitted on September 4, 2025, to City staff. CVC was invited to be involved in this project but declined their participation as the Site is not located within a CVC regulated area and does not contain any features of concern from their perspective. Comments on the ToR were received from the City on October 15, 2025. A copy of the ToR correspondence can be found in Appendix A.

3.2. AGENCY CONSULTATION AND BACKGROUND INFORMATION REVIEW

The following information sources were consulted in preparation of this study (databases originally accessed July 2024 and reconfirmed in October 2024):

- DFO Aquatic SAR online mapping tool (2024);
- Ontario Geohub online datasets (2025);
- Natural Heritage Information Centre (NHIC) Make a Map (square 17PJ1016);
- ROP (adopted April 28, 2022);
- COP (office consolidation May 15, 2025);
- City's Natural Areas Study (NAS) SD1 (2024);
- iNaturalist internet site;
- Ontario Breeding Bird Atlas (OBBA) internet site (Bird Studies Canada, 2006; square 17TPJ11);
- Ontario Butterfly Atlas (OBA) internet site (Toronto Entomologists' Association, 2024);
- Ontario Reptile & Amphibian Atlas (ORAA) internet site (Toronto Entomologists' Association, 2019); and,
- Satellite imagery.

A copy of all email correspondences from the regulatory agencies is provided in Appendix A. The Ministry of the Environment, Conservation and Parks (MECP) and MNR were not contacted for agency consultation purposes for this report as it was anticipated that the woodland to the south-west would be retained in full and that no impacts to SAR would occur. A complete list of references used in preparation of this study is provided in Section 10 of this report.

3.3. SPECIES AT RISK SCREENING

As part of the background review, a comprehensive list of SAR potentially present at the Site was assembled from the following sources (databases originally accessed July 2024 and reconfirmed in October 2024):

- DFO Aquatic SAR online mapping tool 1km general vicinity;
- NHIC Make a Map, 1 km grid square 17PJ1016;
- OBA, 10 km atlas squares 17TPJ11;
- OBBA, 10 km atlas squares 17TPJ11;
- ORRA, 10 km atlas squares 17TPJ11;

- iNaturalist species search results; and,
- City's NAS SD1 (2024).

After assembling the list of potential SAR, a screening exercise was completed to evaluate the potential of each species and associated habitat to occur within the Site and Study Area based on existing conditions. This assessment identifies SAR species that may be relevant to the Site and warrant further consideration during field investigations and/or impact assessment, and those that are not relevant to the Site and are thus excluded from further consideration. Results of the SAR screening are summarized in Section 5.3 and Section 0, with the complete assessment matrix included in Appendix F.

3.4. FIELD INVESTIGATION

A field investigation was undertaken in order to confirm and further characterize the NHF and their functions on or adjacent to the Site. Field investigations included Ecological Land Classification (ELC) and botanical inventory, a bat habitat assessment survey, a woodland dripline delineation and an arborist inventory (Arborist Report and Tree Preservation Plan, 580 Hazelhurst Road [EnVision, 2025]), as outlined in this section and summarized in Table 3-1 below.

Table 3-1: Field Investigation Details

DATE	TIME/ DURATION	WEATHER CONDITIONS*	SURVEYS COMPLETED
SPETEMBER 16, 2025	8:30 AM to 4:45 PM	Sunny, ±16°C, light air, no trace of precipitation.	• Ecological Land Classification and Botanical Inventory • Bat Habitat Assessment • Woodland Dripline Delineation • Arborist Inventory

*Sky cover is defined as Clear (0-25 %), Mostly Clear (25-50 %), and Cloudy (75-100 %).
*Precipitation is defined as None, Trace, or Rain.
*Wind is defined as Calm (0-2 km/h), Light Air (3-5 km/h), Slight Breeze (6-11 km/h), Gentle Breeze (12-19 km/h), Moderate Breeze (20-10 km/h), Fresh Breeze (29-38 km/h), or Very Windy (39+ km/h).

3.4.1. Ecological Land Classification and Botanical Inventory

A single late summer/early fall inventory of plant species located within the Site and Study Area where accessible was completed on September 16, 2025, by transversing natural/semi-natural vegetation communities present and recording the species observed. Identified species were evaluated for their provincial rarity (i.e., "S-Rank") and ESA (2007) status based on the NHIC Species List (NHIC, 2024) and the SARO List (O. Reg. 230/08). A complete list of plant species observed is presented in Appendix C.

Vegetation communities were mapped and classified according to the Ecological Land Classification for Southern Ontario (Lee et al, 1998) and the Southern Ontario ELC: Vegetation Type List (Lee, 2008). Community boundaries were delineated using recent digital aerial orthophotography and refined in the field. The boundary of the woodland dripline was staked in the field by a surveyor with high-level accuracy GPS with the City staff present for the dripline staking. Vegetation communities were scored for

dominant species cover, community structure, presence of indicator species, and other notable features. A description of identified vegetation communities is provided in Section 4.2.

3.4.2. Bat Habitat Assessment

It is the recommendation of the MECP that minor scale tree removals that avoid impairing/eliminating SAR bat habitat function and which are completed outside the active season of April 1 to September 30 in Southern Ontario, do not merit SAR bat surveys (MECP, 2022).

Based on the anticipated compliance with the ESA (2007), only a limited reconnaissance level assessment of bat habitat was conducted, and acoustic monitoring was not deemed necessary. The reconnaissance level bat habitat assessment was undertaken generally following the Bat Survey Standard Note 2022 (MECP, 2022). Stick nests were also searched for in conjunction with the bat habitat survey.

3.4.3. Woodland Dripline Delineation

A woodland dripline delineation was conducted on September 16, 2025. The dripline of the existing woodland was staked by EnVision and reviewed by the City staff. GPS points were collected by a surveyor concurrently.

3.5. SIGNIFICANT WILDLIFE HABITAT ASSESSMENT

Based on background information and field investigations, an assessment of potential SWH was performed to evaluate the potential of SWH to occur within or adjacent to the Site. Specifically, all types of SWH identified in the Significant Wildlife Habitat Technical Guide (2000) and the Ecoregion 7E criteria schedules were reviewed to determine if the Site has the potential to support SWH. Additionally, SWH were evaluated against the criteria of the Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009). The results of this evaluation are summarized in Section 0 and the complete SWH assessment matrix is provided in Appendix G.

3.6. ASSESSMENT OF SIGNIFICANCE, CONSTRAINTS, IMPACTS AND MITIGATION

The ecological database assembled for the project through background information review, the site investigation and the City's NAS, as listed in the vascular plant and wildlife lists in Appendix C and Appendix D respectively, was assessed in consideration of the applicable policies outlined in Section 2, to determine the significance and status of the biophysical features and functions within the Site and to identify constraints to development. Constraints were used to guide the design of the proposed works and avoid impacts wherever possible. An assessment of residual impacts was completed and mitigation measures proposed as provided in Section 7.

4. EXISTING CONDITIONS

4.1. SITE OVERVIEW

The Site, depicted in Appendix B, Figure 1, is located at 580 Hazelhurst Road, Mississauga, Ontario and is industrial in nature. The north-west and south-east properties are likewise industrial with trucks and shipping containers present. Hazelhurst Road bounds the Site to the north-east; with cultural meadow and cultural woodland beyond the road. The south-west of the property is bound by a woodland on Hydro One's property. The general vicinity is composed of industrial and agricultural lands.

4.2. TOPOGRAPHY

Under existing conditions, the Site slopes from southwest corner of the Site to the northeast corner of the Site along Hazelhurst Road. Existing elevations within the Site generally range from 93.50 masl to 90.80 masl.

The grading design of the proposed development will direct stormwater runoff to the on-site collection points so that the drainage is self contained.

4.3. VEGETATION AND WETLANDS

4.3.1. Floral Inventory Summary

A list of vascular plant species recorded during field investigations is provided in Appendix C. A total of 63 plant taxa were identified within the Study Area during field investigations. Of the 64 species identified, 44 (69%) are considered native and 19 (31%) are considered non-native in Ontario. All species observed are considered common, with provincial rarity ranks of S5 (demonstrably secure), S4 (apparently secure), or SNA (not suitable for conservation activities).

No plant species of conservation concern per the SWH Ecoregion 7E definition, or endangered or threatened species, were recorded. Six (6) regionally rare or uncommon species known from Ecodistrict 7E4 (Oldham, 2017) were observed and are listed below in Table 4-1Error! Reference source not found.. The Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009) recommends considering the habitat of regionally rare species as SWH. Fringed Sedge (*Carex crinita*) is rare in the region (though a provincially very common S5 plant). It is not anticipated that it or its habitat will be impacted by the proposed works.

Table 4-1: Regionally Rare and Uncommon Vascular Plant Species

SCIENTIFIC NAME	COMMON NAME	LOCATION	COEFFICIENT OF CONSERVATISM	ECODISTRICT 7E4 (OLDHAM 2017)
Carex crinita	Fringed Sedge	Wetland	6	Rare
Carex lupulina	Hop Sedge	Wetland	6	Uncommon

SCIENTIFIC NAME	COMMON NAME	LOCATION	COEFFICIENT OF CONSERVATISM	ECODISTRICT 7E4 (OLDHAM 2017)
Epifagus virginiana	Beechdrops	Woodland	6	Uncommon
Nabalus altissimus	Tall Rattlesnakeroot	Woodland	5	Uncommon
*Oenothera biennis**	Common Evening-Primrose	Industrial	0	Uncommon
Pilea pumila	Dwarf Clearweed	Wetland	5	Uncommon

*Common Evening-Primrose (*Oenothera biennis*) is a widespread species in southern Ontario, typically known from on dry often sandy roadsides, fields, clearings, and disturbed ground. Though listed as uncommon, it is not a sensitive species having a Coefficient of Conservatism of zero (i.e., highly disturbance tolerant).

4.3.2. Ecological Land Classification

The vegetation communities within the Site have been mapped (Appendix B, Figure 3) using the standardized ELC for Southern Ontario – first approximation (Lee et al.,1998) and the Southern Ontario Ecological Land Classification – Vegetation Type List (Lee, 2008). Based on field investigations, identified communities are described below.

Unit 1: Dry – Fresh Sugar Maple – Beech Deciduous Forest Type (FOD5-2)

A Sugar Maple (*Acer saccharum*) dominated woodland is located in the south-west area of the Study Area. The canopy is dominated by Sugar Maple with associates of American Beech (*Fagus grandifolia*), White Ash (*Fraxinus americana*, many dying to Emerald Ash Borer) and Eastern Hemlock (*Tsuga canadensis*). The canopy trees range in size with most trees between 10 cm to 50 cm in diameter-at-breast-height (DBH) and occasional individuals larger than 50 cm DBH. The sub-canopy is composed of similar species but is less than 60% cover. The understory is dominated by invasive species, Glossy Buckthorn (*Frangula alnus*). Additionally, invasive Common Buckthorn (*Rhamnus cathartica*) is present with associates of native White Ash and American Beech sapling regeneration. The ground layer is similarly dominated by Glossy Buckthorn with associates of Northeastern Lady Fern (*Athyrium filix-femina* var. *angustum*), White Ash regeneration and Broad-Leaved Enchanter's Nightshade (*Circaea canadensis*). Standing snags and deadfall logs were generally occasional throughout the woodland.

The east corner of the woodland, while still Sugar Maple dominant, contained a higher proportion of Eastern Hemlock and Red Maple (*Acer rubrum*) with Ostrich Fern (*Matteuccia struthiopteris*) in the understory. The edge of the woodland adjacent to the Site was the most disturbed portion of the woodland observed. Glossy Buckthorn introduction was most dominant from the dripline to approximately 25 m into the interior.

An area of approximately 583 m² at the south corner of the Site showed evidence of past encroachment into the woodland as compared to the property boundary and woodland edge historic conditions. Based on aerial imagery, the encroachment occurred earlier than 2005. The encroached area is currently composed of exposed gravel and patch of Japanese Knotweed (*Reynoutria japonica*) with

Common Reed (*Phragmites australis*) and Riverbank Grape (*Vitis riparia*) associates. The remaining woodland in the direct vicinity of this area contains a disturbed ground layer with Tall Goldenrod (*Solidago altissima* var. *altissima*), Field Horsetail (*Equisetum arvense*), Coltsfoot (*Tussilago farfara*) and Glossy Buckthorn.

Overall, the woodland had only moderate diversity with 32 species observed, of which only one species, Eastern Hemlock, had a coefficient of conservatism above six indicating high sensitivity to disturbance. Two species observed, Beech Drops (*Epifagus virginiana*) and Tall Rattlesnakeroot (*Nabalus altissimus*), are uncommon in the region.

Unit 2: Green Ash Mineral Deciduous Swamp Type (SWD2-2)

A Green Ash (*Fraxinus pennsylvanica*) swamp is located west of the Site. It has been strongly impacted by Emerald Ash Borer. The canopy of Green Ash is largely dead or dying. Mature Silver Maple (*Acer saccharinum*) associates are present in the canopy. Young Green Ash is abundant in the subcanopy and understory also with abundant Glossy Buckthorn and Common Buckthorn. The ground layer, while dry, showed evidence of standing water as evidenced by a flotsam line and moss line as well as a lack of ground vegetation cover in areas indicative of pooling water. The ground layer was dominated by Common Buckthorn seedlings with Purple Loosestrife (*Lythrum salicaria*). Occasional associates of Sensitive Fern (*Onoclea sensibilis*), Broad-Leaved Enchanter's Nightshade, Panicled Aster (*Symphyotrichum lateriflorum*), Spotted Jewelweed (*Impatiens capensis*) and Fowl Mannagrass (*Glyceria striata*) were present.

Standing snags and deadfall logs 10 cm to 24 cm DBH were abundant and those between 25 cm to 50 cm DBH were occasional.

Due to the presence of an encampment at the edge of the swamp, it was only surveyed briefly and commentary regarding the quality of species diversity would be pre-emptive.

Unit 3: Dry – Moist Old Field Meadow (CUM1-1)

A fenced-off cultural meadow was present north-east of the Site across Hazelhurst Road. The fence, covered in Riverbank Grape, obscured much of the view into the meadow. The most dominant species observed was Tall Goldenrod and associate typical cool season non-native grasses were present.

Unit 4: Mineral Cultural Woodland Ecosite (CUW1)

Likewise, as above, a cultural woodland was present north-east of the Site across Hazelhurst Road. The woodland canopy was observed with binoculars. Parts of this woodland appear to be planted but the majority appears to be spontaneously occurring. The dominant species appeared to be Black Locust (*Robinia pseudoacacia*) with associates of Black Walnut (*Juglans nigra*), Norway Spruce (*Picea abies*), Scots Pine (*Pinus sylvestris*), and White Willow (*Salix alba*).

Unit 5: Commercial and Institutional

The majority of the Site is industrial area with no or limited vegetation. Occasional weeds and a few trees as noted in the arborist inventory were present. Common Reed was abundant along the north and south edges of the lot as well as invasive species, Purple Loosestrife and Japanese Knotweed.

4.4. BAT HABITAT ASSESSMENT

SAR screening identified the potential for seven (7) SAR bats currently listed as endangered on the SARO List and protected under the ESA (2007). However, it is the recommendation of the MECP that minor scale tree removals that avoid impairing/eliminating SAR bat habitat function and which are completed outside the active season of April 1 to September 30 in southern Ontario, do not merit SAR bat surveys (MECP, 2022).

Based on the anticipated compliance with the ESA (2007), only a limited reconnaissance level assessment of bat habitat was conducted, and acoustic monitoring was not deemed necessary. The reconnaissance level bat habitat assessment was undertaken generally following the Bat Survey Standard Note 2022 (MECP, 2022).

The bat habitat assessment was conducted in conjunction with the arborist inventory. Generally, only a limited number of large DBH snag trees at the edge of the woodland were observed as potential bat habitat with only a single tree, Tree 153, appearing to be high quality bat habitat having moderate decay class and cavities present high off the ground. Trees with potential for bat habitat are listed in Table 4-2. During the ELC survey, snags did not appear to be limited in the woodland, with an especially high number of snags observed in the Green Ash swamp. Bat habitat in the woodland is not limited to those trees identified below.

Table 4-2: Trees Observed to Have Potentially Suitable Bat Habitat

TREE NO.	BOTANICAL NAME	COMMON NAME	DBH (CM)	CONDITION	COMMENTS	RECOMMENDED ACTION	BAT HABITAT SUITABILITY
145	*Acer saccharum*	Sugar Maple	62	Dead	Gravel at the base of the tree. No obvious cavities.	Removal	Low
153	*Acer saccharum*	Sugar Maple	54	Poor	Broken trunk at the top. Shedding loose bark. Woodpecker cavities 14 m high on the trunk.	Retain	High

TREE NO.	BOTANICAL NAME	COMMON NAME	DBH (CM)	CONDITION	COMMENTS	RECOMMENDED ACTION	BAT HABITAT SUITABILITY
143	*Acer saccharum*	Sugar Maple	44	Poor	Broken trunk at the top, but no obvious cavities. Gravel at the base of the tree.	Retain	Low
139	*Fraxinus americana*	White Ash	42	Dead	Died due to Emerald Ash Borer; some loose bark.	Retain	Low
148	*Acer saccharum*	Sugar Maple	41	Poor	Broken trunk at the top, but no obvious cavities. Gravel at the base of the tree.	Retain	Low

In addition to searching for cavities, no stick nests were observed on or immediately adjacent to the Site. Therefore, the proposed development is not anticipated to impact local nesting raptors.

4.5. INCIDENTAL WILDLIFE OBSERVATIONS

During field surveys, a variety of incidental commonly occurring wildlife observations were recorded within the Site. Species observed included Red-tailed Hawk (*Buteo jamaicensis*), Northern Cardinal (*Cardinalis cardinalis*), Northern Flicker (*Colaptes auratus*), American Crow (*Corvus brachyrhynchos*), Downy Woodpecker (*Dryobates pubescens*), Pileated Woodpecker (*Dryocopus pileatus*), Song Sparrow (*Melospiza melodia*), Common Grackle (*Quiscalus quiscula*), American Goldfinch (*Spinus tristis*), European Starling (*Sturnus vulgaris*), and Mourning Dove (*Zenaida macroura*).

One Peregrine Falcon (*Falco peregrinus*) (listed as S-Rank S4 and special concern species under the ESA [2027]) was observed flying over the Site, but it did not appear to be actively foraging and was not observed to land within the Site.

Refer to Appendix D for a full list of wildlife species documented.

5. SIGNIFICANT FEATURES AND FUNCTIONS SUMMARY

A review of the natural environment features (as defined below) and functions identified on the Site or adjacent lands is presented in Table 5-1Table 5-1.

5.1. FISH HABITAT

The conservation, management, and protection of fish and fish habitat are the responsibility of DFO. DFO is given authority to achieve this under the federal Fisheries Act (1985). In section 35 (1) of the Fisheries Act details that no person shall carry on any work, undertaking, or activity that results in harmful alternation, disruption or destruction of fish habitat. Plans to undertake activities in or near water that have the potential to negatively affect fisheries, shall be avoided or mitigated by following best practices such as those described in the 'Measures to protect fish and fish habitat on DFO's Projects Near Water' on the DFO Website. Any negative impacts to fish and fish habitat that remain following the implementation of avoidance and mitigation measures, is considered to have the potential to negatively affect a fishery. This potential for negative effects has to be reviewed by DFO under the Fisheries Act. If DFO determines that negative effects are likely as a result of the project, then a Fisheries Act Authorization will be required.

No watercourses or fish habitat were identified in the background review or the field investigations. Fish habitat is not present on Site or in the Study Area and will not be discussed further.

5.2. WETLANDS

Wetlands are defined in the PPS (2024) as lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. There are four major wetland types, which are classified as swamps, marshes, bogs, and fens. A PSW is a wetland identified as provincially significant using evaluation criteria and procedures established by the Province, as amended from time to time (i.e., the Ontario Wetland Evaluation System [OWES]). PSW generally have high function as evaluated through biological, social, hydrological and special features components; specifically, a wetland is significant if it has been scored as having 600 or more points, 200 or more points in the biological or the special features components of the OWES evaluation. Evaluated wetlands are mapped by the MNR.

No wetlands were present within the Site. Further, no PSW are identified in the overall Study Area as mapped by MNR Ontario Geohub.

One unevaluated wetland, a disturbed Green Ash swamp, was present in the Study Area to the west of the Site. As per OWES, Southern Manual, 4th Edition (2022), wetlands smaller than 2 ha (5 acres) are generally not evaluated. The wetland as mapped by MNR Geohub is 1.45 ha including area that is clearly industrial lands and not wetland. The same wetland is mapped by EnVision as ELC Unit 2 SWD2-2 and is only 0.51 ha in size; its boundaries were identified though aerial imagery and field verification at the east end. In either case, the wetland would be too small to be considered for provincial significance.

The wetland may be considered a locally significant wetland per policy 6.3.12 of the COP as it is larger than 0.5 based on aerial interpretation.

Potential impacts to this wetland and proposed mitigation are discussed in Section 7.

5.3. ENDANGERED AND THREATENED SPECIES

Background information review identified the potential presence of the following endangered or threatened species in the general vicinity of the Site (S-Rank, ESA [2007], and SARA [2002] statues are provided).

- Bank Swallow (*Hirundo rustica*) (S-Rank: S4B; ESA [2007]: threatened; SARA [2002]: threatened)
- Bobolink (*Dolichonyx oryzivorus*) (S-Rank: S4B; ESA [2007]: threatened; SARA [2002]: threatened)
- Butternut (*Juglans cinerea*) (S-Rank: S2?; ESA [2007]: endangered; SARA [2002]: endangered)
- Chimney Swift (*Chaetura pelagica*) (S-Rank: S3B; ESA [2007]: threatened; SARA [2002]: threatened)
- Eastern Meadowlark (*Sturnella magna*) (S-Rank: S4B,S3N; ESA [2007]: threatened; SARA [2002]: threatened)
- Eastern Red Bat (*Lasiurus borealis*) (S-Rank: S3; ESA [2007]: endangered)
- Eastern Small-footed Myotis (*Myotis leibii*) (S-Rank: S2S3; ESA [2007]: endangered)
- Henslow's Sparrow (*Centronyx henslowii*) (S-Rank: S1B; ESA [2007]: endangered; SARA [2002]: endangered)
- Little Brown Myotis (*Myotis lucifugus*) (S-Rank: S3; ESA [2007]: endangered; SARA [2002]: endangered)
- Northern Hoary Bat (*Lasiurus cinereus*) (S-Rank: S3; ESA [2007]: endangered)
- Northern Myotis (*Myotis septentrionalis*) (S-Rank: S3; ESA [2007]: endangered; SARA [2002]: endangered)
- Prothonotary Warbler (*Protonotaria citrea*) (S-Rank: S1B; ESA [2007]: endangered; SARA [2002]: endangered)
- Silver-haired Bat (*Lasionycteris noctivagans*) (S-Rank: S3; ESA [2007]: endangered)
- Tri-colored Bat (*Perimyotis subflavus*) (S-Rank: S3?; ESA [2007]: endangered; SARA [2002]: endangered)

Overall, based on the industrial nature of the Site and preservation of the adjacent woodland, no SAR species are anticipated to be negatively impacted by the proposed development. A comprehensive review of the potential for these endangered and threatened species to occur on Site or in the Study Area and the likelihood and magnitude of any potential impact is assessed in Appendix F. Regardless, general mitigation toward vegetation and wildlife and mitigation for the woodland feature that may provide potential habitat for some SAR is discussed in Section 7.

5.4. SIGNIFICANT WILDLIFE HABITAT

Wildlife habitat is defined as areas where plants, animals, and other organisms live and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual life cycle; and areas that are important to migratory or non-migratory species (OMMAH, 2024).

Wildlife habitat is referred to as significant if it is ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or NHS (OMMAH, 2024).

Criteria for determining significance of wildlife habitat are provided in provincial guidance, but municipal approaches that achieve or exceed the same objective may also be used.

Provincial guidelines and criteria for the identification of SWH are detailed in the Significant Wildlife Habitat: Technical Guide (MNRF, 2000), and the Significant Wildlife Habitat Criterion Schedule for Ecoregion 7E (MNRF, 2015b).

Municipal criteria (i.e., Region of Peel) as detailed in the Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009) were assessed in tandem with provincial criteria.

SWH is described under the following categories:

- Seasonal concentrations of animals;
- Rare vegetation communities or specialized habitats for wildlife;
- Animal movement corridors; and,
- Habitats of Species of Conservation Concern.

Species of Conservation Concern include species identified as special concern on the SARO List, and provincially rare species with an "S-Rank" of S1-S3. Background information review identified the potential presence of the following special concern or provincially rare species in the general vicinity of the Site:

- Redhead (*Aythya americana*) (S-Rank: S2B, S4N)
- Tufted Titmouse (*Baeolophus bicolor*) (S-Rank: S3)
- Semipalmated Sandpiper (*Calidris pusilla*) (S-Rank: S2B, S4M)
- Long-tailed Duck (*Clangula hyemalis*) (S-Rank: S3B, S5N)
- Eastern Wood-pewee (*Contopus virens*) (S-Rank: S4B; ESA: SC; SARA: SC)
- Peregrine Falcon (*Falco peregrinus*) (S-Rank: S4; ESA: SC)
- Barn Swallow (*Hirundo rustica*) (S-Rank: S4B; ESA: SC; SARA: THR)
- Caspian Tern (*Hydroprogne caspia*) (S-Rank: S3B, S5M)
- Great Black-backed Gull (*Larus marinus*) (S-Rank: S1B, S4N)
- Black-crowned Night-heron (*Nycticorax nycticorax*) (S-Rank: S3B, S2N, S4M)
- Horned Grebe (*Podiceps auritus*) (S-Rank: S1B, S3N, S4M; ESA: SC)
- Purple Martin (*Progne subis*) (S-Rank: S3B)
- Golden-winged Warbler (*Vermivora chrysoptera*) (S-Rank: S3B; ESA: SC)

- Monarch (*Danaus plexippus*) (S-Rank: S4B, S2N; ESA [2007]: special concern; SARA [2002]: endangered)
- Snapping Turtle (*Chelydra serpentina*) (S-Rank: S4; ESA [2007]: special concern; SARA [2002]: special concern)
- Midland Painted Turtle (*Chrysemys picta marginata*) (S-Rank: S4; SARA [2002]: special concern)

An assessment of the habitat potential for the above-mentioned species in and within 120 m of the Site is provided in Appendix G. Of these species, Tufted Titmouse, Eastern Wood-pewee, Black-crowned Night-heron, Purple Martin, Monarch are potentially likely to occur in the Study Area, though none have potential habitat within the Site. Peregrine Falcon was observed as a flyover, but the habitat suitability in the Study Area is low. None of the other Species of Conservation Concern are considered likely based on the SAR screening exercise presented in Appendix F.

Based on the SWH assessment in Appendix G, the following candidate SWH types have potential to occur on-site:

- Seasonal Concentration of Animals:
  - Bat Maternity Colonies;
  - Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs);
  - Migratory Butterfly Stopover Areas; and,
  - Landbird Migratory Stopover Areas.
- Rare Vegetation Communities:
  - Old Growth Forest.
- Specialized Habitat for Wildlife:
  - Waterfowl Nesting Area; and,
  - Amphibian Breeding Habitat (Woodland).

All of these SWH types are related to the woodland and wetland south-west of the Site which is proposed to be buffered by a setback, allowing them to maintain their ecological function. Butterfly stopover area may also be present in the meadow north of the Site within the Study Area, but this is not anticipated to be impacted by the proposed development. Overall, it is not anticipated that the proposed development will directly impact any potential SWH. Any potential indirect impacts can be mitigated, as discussed in Section 7.

5.5. SIGNIFICANT AREAS OF NATURAL AND SCIENTIFIC INTEREST

An Area of Natural and Scientific Interest (ANSI) is defined as area of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education (OMMAH, 2024). An ANSI can be ranked as Provincially or Regionally significant.

There are no ANSI within the general vicinity of the Site. As no ANSI were identified within the Site or overall Study Area, potential impacts and mitigation measures towards these features will not be discussed.

5.6. SIGNIFICANT WOODLANDS

Significant woodlands are defined as treed areas that provide environmental and economic benefits such as erosion prevention, water retention, and provision of habitat, recreation and the sustainable harvest of woodland products (OMMAH, 2024). Woodlands include treed areas, woodlots or forested areas and vary in their level of significance. Woodland significance is determined by evaluating key criteria related to woodland size, ecological function, uncommon woodland species, and economic/social value.

The woodland south-west of the Site is a significant woodland per the COP (office consolidation May 15, 2025) criteria being a woodland, excluding cultural woodlands and cultural savannahs, that is greater than or equal to 2 ha and less than 4 ha.

The woodland is also considered to be NAC under the ROP (adopted April 28, 2022) because it meets the criteria of being greater than 2 ha in size and having a surface water quality feature (i.e., wetland) in proximity.

Impacts and mitigation regarding significant woodland is discussed in Section 7.

5.7. SIGNIFICANT VALLEYLANDS

The PPS (2024) refers to a significant valleyland as a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year and is ecologically important in terms of features, functions, representation or amount, and contributes to the quality or diversity of an identifiable geographic region or NHS. The local planning authority is responsible for identifying and evaluating significant valleylands.

No significant valleylands were identified during the background review and no valleylands were observed during field investigation. Therefore, significant valleylands will not be discussed further.

5.8. SIGNIFICANT FEATURE SUMMARY

The results of the assessment of key natural heritage features identified on or adjacent to the Site are provided in Table 5-1 below.

Table 5-1: Significant Features Summary

FEATURE	PRESENT	COMMENT
FISH HABITAT	No	No fish habitat was identified within the Site or Study Area. Impacts and mitigation measures towards fish habitat are not discussed.
SIGNIFICANT WETLAND	Locally Significant	No PSW were identified within the Site or overall Study Area. Therefore, impacts and mitigation measures towards PSW are not discussed. Wetlands smaller than 2 ha are generally not evaluated. The wetland may be considered a locally significant wetland per policy 6.3.12 of the COP (office consolidation May 15, 2025) as it is larger than 0.5 based on aerial interpretation. Potential impacts to wetland generally will be discussed in Section 7.
THREATENED AND ENDANGERED SPECIES HABITAT	No	Based on the industrial nature of the Site and preservation of the adjacent woodland, no SAR species are anticipated to be negatively impacted by the proposed development. No specific impacts or mitigation towards SAR are discussed further.
SIGNIFICANT WILDLIFE HABITAT	Candidate Only	Refer to Appendix G for a full SWH evaluation matrix. The following SWH types have potential to occur in the Study Area, while none occur within the Site: • Seasonal Concentration of Animals: o Bat Maternity Colonies; o Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs); o Migratory Butterfly Stopover Areas; and, o Landbird Migratory Stopover Areas. • Rare Vegetation Communities: o Old Growth Forest. • Specialized Habitat for Wildlife: o Waterfowl Nesting Area; and, o Amphibian Breeding Habitat (Woodland). These SWH types are primarily related to the woodland and wetland south-west of the Site which is proposed to be buffered, allowing them to maintain their ecological function. Overall, it is not anticipated that the proposed development will directly impact any potential SWH. Any potential indirect impacts can be mitigated, as discussed in Section 7.
SIGNIFICANT ANSI	No	No ANSI were identified within the Site or Study Area; impacts and mitigation measures are not discussed.
SIGNIFICANT WOODLAND	Yes	The woodland south-west of the Site is a significant woodland per the COP (office consolidation May 15, 2025) criteria. Impacts to the significant woodland and mitigation are discussed in Section 7.
SIGNIFICANT VALLEYLAND	No	No significant valleylands were identified within the Site or Study Area; impacts and mitigation measures are not discussed.

6. PROPOSED DEVELOPMENT

The Client is proposing to develop a recyclable materials/waste processing facility within the Site. The proposed plan is illustrated in Appendix B, Figure 6. The plan includes one new industrial building, retention of the existing building at the north end of the Site, material weighing scales, parking spaces and a planned turning radius for trucks. As the Site topography is already flat, grading is anticipated to be limited to feathering of the existing grade. The proposal aims to strike a balance of meeting the intent of policy 6.3.24 of the COP (office consolidation May 15, 2025), which seeks to protect, enhance, restore and expand the NHS, with the constraints of the development design by directing development away from the NHS to the extent possible. Notably, a variable distance setback for the Significant Natural Area has been incorporated into the plan, with enhancements proposed through native vegetation plantings Appendix B, Figure 5. Although all structures were able to be positioned outside of a 10 m setback on the woodland, the truck turning radius and required existing gravel surface was not able to be repositioned outside of a 10 m setback.

7. IMPACTS AND MITIGATION

Potential impacts to the NHF and their functions identified within the Site and adjacent lands, and proposed mitigation measures, are presented below, based on the proposed works outlined in Section 6 and identified on Appendix B, Figure 6. General mitigation measures applicable to the overall Site are also discussed.

The previous owner of the Site impacted the woodland south-west of the Site for a period of approximately 20 years. The goal of this development design is to eliminate future direct impacts and mitigate any potential indirect impacts. In a landscape context, the proposed Site development is only 1.53 ha centered among a 9 ha of industrial area running parallel to Hazelhurst Road. The overall impacts and effects of this proposed development are anticipated to be commensurate with the historic and neighbouring industrial land use adjacent to a natural area. Regardless, mitigation strategies applied to this design will minimize impacts for the portion of the woodland that abuts the Site.

7.1. LOCALLY SIGNIFICANT WETLAND

No direct impacts to the wetland are anticipated. Indirect impacts to wetlands typical of development are listed below:

- Hydrological Alteration:
  - Increased stormwater runoff from impervious surfaces; and,
  - Reduced ground water infiltration.
- Water Quality Degradation:
  - Temporary sedimentation from construction activities/soil disturbance;
  - Nutrient loading and chemical pollution; and,
  - Salt contamination from maintenance.

A majority of the Site is anticipated to remain as a gravel surface. Impacts to hydrology from changes to runoff or infiltration are anticipated to be negligible as compared to existing conditions. As detailed within the Functional Servicing Report (EnVision, 2025), the proposed grading for the Site will, where possible, generally follow the existing grades to maintain drainage patterns and match boundary grades. Therefore, no hydrological impacts to the wetland are anticipated from the proposed development.

As the wetland is considered a locally significant wetland and not a PSW, and no specific setback distances were stipulated for wetlands in the COP (office consolidation May 15, 2025) or the ROP (adopted April 28, 2022), a moderately conservative setback of 15 m was applied to the east limit of the wetland which was delineated using a handheld GPS in the field. This setback, as depicted in Appendix B, Figure 4, does not intercept the Site even considering margin for error based on the use of a handheld GPS. The setback itself, which is already naturally vegetated, is sufficient to minimize any potential negative indirect impacts of the proposed development as described above. Regardless, additional mitigation measures as noted below are recommended to be implemented:

During Construction

- Erosion and sediment control (ESC) measures should be implemented, if necessary, to prevent potential runoff from reaching the wetland. An ESC plan should be developed as part of detailed design based on the guidance provided in the Erosion and Sediment Control Guide for Urban Construction (TRCA, 2019). Recommendations include:
    - Where possible, grading should be scheduled during dry weather;
    - Silt fencing should be erected at the outer limit of the woodland vegetation protection zone (VPZ); and,
    - Silt fencing should be monitored for adaptive management considerations.
- Silt fencing should be clearly marked as the construction boundary to prevent encroachment into the VPZ.

Post-Construction

- It is recommended that winter snow maintenance be achieved with less salt in the vicinity of the natural area either through mechanical snow clearing or alternative snow melting measures such as environmentally friendly mixtures, natural de-icers, or traction aids; and further, that snow piles be directed away from the natural area.
- Avoid application of fertilizers and herbicides in the vicinity of the natural area where possible.

7.2. SIGNIFICANT WILDLIFE HABITAT

The candidate SWH in the Study Area is mainly linked to the woodland and wetland, which are protected by a setback. Since the SWH will be fully preserved, its ecological functions are expected to remain unaffected, provided the general mitigation measures in Section 7.7 are applied. Any indirect impacts from future construction can likely be managed with these measures. Mitigation measures specific to preserving the habitat are discussed in Sections 7.1 and 7.3 for the wetland and woodland respectively and measures aimed toward wildlife specifically are discussed in Sections 7.6 and 7.7.

7.3. SIGNIFICANT WOODLAND

The significant woodland is anticipated to be retained in full with no direct impacts except for select hazard tree removals (as discussed in the Arborist Report and Tree Preservation Plan, 580 Hazelhurst Road [EnVision, 2025]). Potential indirect impacts to the woodland are listed below:

- Spread of invasive species:
    - Invasive species are already present within the Site and in the woodland, but their spread, or the introduction of new invasive species, could negatively impact the diversity of flora in the woodland, and subsequently affect habitat quality for wildlife.
- Erosion and Sedimentation:
    - Effects and mitigation are already discussed in regard to the wetland.
- Dust and emissions:

- Increased dust from construction equipment or truck use may affect wildlife using the woodland and have potential to cover edge vegetation in dust affecting photosynthesis.

No specific setback distances were stipulated for significant woodlands or Significant Natural Areas in the COP (office consolidation May 15, 2025) or the ROP (adopted April 28, 2022); however, comments received from City staff, Community Services Review – Forestry, Natural Heritage, indicate that a minimum 10 m buffer (i.e., setback) be applied to the Significant Natural Area (i.e., the woodland). In consideration of the existing disturbed conditions, including gravel right up to the edge of tree trunk bases, a variable setback ranging from 3.55 m to 33.1 m was applied to the delineated significant woodland dripline as depicted in Appendix B, Figure 5. A fence to separate future Site use from the VPZ (and the woodland) is proposed and is setback 11.9 m from the property edge on average. A variable setback is proposed as a 10 m setback was not feasible based on the requirements of other aspects of the design (i.e., the truck turning radius, which would encroach 189.7 m^2 into a 10 m setback). If a hypothetical 10 m setback was applied to the dripline, the setback area intercepting the Site would be 592.0 m^2. Alternatively, the variable setback area expands the setback in the south corner by 373.1 m for a total VPZ area beyond the dripline and intercepting the Site of 775.4 m^2. Accounting for the gain in VPZ in the south corner, and the loss of VPZ from the truck turning radius, results in a net gain of 183.4 m^2 to VPZ beyond the dripline, or a 30.98 percent increase over the hypothetical 10 m setback on the dripline. This variable setback is intended to meet the intent of policy 6.3.24 whereby the NHS will be protected, enhanced, restored and expanded in the following ways:

- The NHS will be protected and maintained in full with no direct impact, including a tree preservation plan (see Arborist Report and Tree Preservation Plan, 580 Hazelhurst Road [EnVision, 2025]).
- The VPZ which expands and enhances the NHS is anticipated to be planted with native species following Guidelines for Designing Enhancement Plans within Setbacks and Buffers (CVC, 2023). The planting plan is discussed with more detail below in Section 7.5.
- Invasive species removal following best management practices is recommended to restore the Site (i.e., eradicate invasive species within the Site). Moreover, the Client is recommended to work with Hydro One to restore the previous woodland encroachment areas within Hydo One's property (see Appendix B, Figure 5).
- Fencing at the edge of the VPZ, depicted in Appendix B, Figure 6, is proposed to prevent new encroachments from occurring from trucks, equipment or people into the woodland.

Given that the above functionality will be maintained or improved, and that the area of the VPZ exceeds the standard 10 m setback by greater than 30 percent, it is expected that the VPZ will satisfy the requirements of the COP (office consolidation May 15, 2025) and comments submitted by the City's Natural Heritage staff.

In addition to above, the following mitigation measures (on the next page) are recommended:

During Construction

- Temporary vegetation protection fencing should be erected to prevent damage to the retained woodland (this may be combined with the aforementioned silt fencing) and should be clearly marked as the construction boundary to prevent encroachment into the VPZ.
- Carry out invasive species management as detailed in Section 7.4 to prevent further spread into the woodland and its VPZ.

Post-Construction

- As with the wetland, reduced use of salts, fertilizers and herbicides in vicinity of the woodland and VPZ is recommended.
- Snow removal/piling operations are to be directed away from the woodland and its VPZ so that plants are not crushed by large snow piles and salt does not build up at the edge of the woodland.

7.4. INVASIVE SPECIES MANAGEMENT

Priority invasive species within the Site, including Common Reed, Japanese Knotweed, and Glossy and Common Buckthorn, should be removed from the Site following Best Management Practices (Ontario Invasive Plant Council, 2025). Likewise, invasive species on Hydro One lands in the encroached area (see Appendix B, Figure 5) should be removed conditional on Hydro One approving this work.

- Common Reed was abundant along the north and south edges of the Site abutting neighbouring industrial properties.
    - Large, expansive populations (greater than 1000 plants) can be most effectively controlled using an approved systemic herbicide.
    - Apply herbicide late summer to early fall. Targeting only a portion of a Common Reed with herbicide is not recommended as it can be ineffective, waste resources and over the long-term will increase the need for herbicide.
- A large patch of Japanese Knotweed beyond the south corner of the Site was primarily on Hydro One lands. Should Hydro One be amendable to restoration/invasive species management, this area is a priority for control.
    - Large patches (greater than 15 plants) are most effectively controlled using a systemic herbicide.
- Glossy Buckthorn was abundant on Hydro One lands in the first 25 m of the woodland interior from the Site edge (with Common Buckthorn present as well). Eradication at this stage is unlikely. Removal of mature individuals is recommended to reduce spread. To control Glossy Buckthorn, follow guidelines for Common Buckthorn.
    - Large trees (greater than 5 cm in diameter) should be cut at the base and stump-treated with a systemic herbicide.

7.5. WOODLAND VEGETATION PROTECTION ZONE ENHANCEMENT PLAN

Often, the goal of restoration is to mimic a reference site (e.g., extend the existing Dry – Fresh Sugar Maple Deciduous Forest and plant more Sugar Maple); however, based on the extent of the disturbed soils, recreating a forest is an unlikely outcome. So, instead the goal of the woodland VPZ is to reduce indirect impacts of the proposed development, primarily edge effects of noise, light, wind and dust, by providing a barrier. Secondarily, the goal is to eliminate future potential encroachments.

The proposed steps (and recommended seasonal timing) of the woodland VPZ enhancement plan should be:

1. Remove/control invasive species (spring/summer; or late summer to early fall of the year prior if using herbicide).
2. Remove existing gravel, or other hardscaped surface (e.g., asphalt, lime screenings etc.) and other debris (spring/summer) and then amend the remaining soil with topsoil or organic material as needed (summer).
3. Plant vegetation (fall).
4. Monitor for survival.

7.5.1. Remove Invasive Species

See section 7.4 regarding invasive species control throughout the Site.

7.5.2. Remove Existing Substrate and Amend Soil

Soil amendment details will be developed at a later stage and should generally follow the Healthy Soils Guideline for the Natural Heritage System (CVC, 2017). The following principles should be considered in developing a detailed soil restoration plan:

- Reconnaissance of existing soil conditions under the current layer of gravel should be undertaken to determine the depth, level of compaction, and soil texture type (e.g., sandy, silty, clayey, loamy etc.).
- Likewise, the soil conditions of the adjacent woodland should be sampled to use as a reference target for soil amendment.
- It is anticipated that the existing soils are dry-fresh based on the woodland vegetation. Species selected are based on dry-fresh soils, but this may be refined.
- Existing gravel is to be removed and replaced with new topsoil.
    - For all excavation or soil installation, low ground pressure machinery is to be used (e.g., rated to less than 4 pounds per square inch (PSI).
    - Within the Tree Protection Zone (TPZ), gravel is to be removed using a technique that would not impact the critical root zone (e.g., air-spading, hand removal). Soils beneath the gravel are not to be disturbed further.
    - Within the VPZ (i.e., tree TPZ to VPZ outer limit) subsoils should be tilled to a depth of 45 cm to reduce compaction during dry, non-frozen conditions. Alternatively, test soil for non-compaction using Bulk Density or Penetration-Resistance tests (acceptable

parameters for which are listed in Appendix A, Table 2 of Healthy Soils Guideline for the Natural Heritage System [CVC, 2017]).
    - In both areas, topsoil should be replaced to bring the substrate to the existing topographic surface level (import and install 30 to 45 cm of topsoil).
- Cover crops (e.g., Winter Wheat [*Triticum aestivum*]) should be applied if there is any delay between amending soil and planting. Cover crops act to stabilize soil, prevent erosion, suppress weed species and providing nutrient supply to the soil for future planted species.

7.5.3. Planting

Species lists of native vegetation and planting arrangements will be developed at a later stage. The following principles should be considered in developing a detailed planting plan:

- Layer 1: To reduce noise, light, wind and dust from entering the woodland, tall dense vegetation should be planted directly abutting the woodland where soils have the greatest potential to still support tree species. The recommended tree species for this purpose is Eastern White Cedar (*Thuja occidentalis*). White spruce (*Picea glauca*), though often planted for this purpose and native to Ontario, is not typical of Mississauga. Eastern White Cedar are to be planted in staggered formation 1.45 m to 2.2 m on centre or about 5 to 10 trees for every 10 m length of VPZ. A lesser amount of Eastern White Pine (*Pinus strobus*) should be interplanted with the Eastern White Cedar with larger spacing of 3 m on centre. Trees installed are to be 1.5 m to 2.5 m in height and bareroot or container grown.
- Layer 2: Fast and colonially growing, early successional, mid sized species should be planted in front of the conifer layer. Hardy species with this growth habit such as Poplars (*Populus* tremuloides, *P. grandidentata*), White Birch (*Betula papyrifera*), Staghorn Sumac (*Rhus typhina*) and Grey Dogwood (*Cornus racemosa*) should be a focus of planting to succeed in adverse conditions while performing their function as a barrier. Trees and shrubs installed in Layer 2 are to be 1.5 m to 2.5 m tall for whips and 60 cm for shrubs.
- Layer 3: To further prevent potential human encroachment, thorny species should be planted at the outermost edge of the VPZ. Raspberry and Blackberry species (*Rubus idaeus, R. occidentalis, R. allegheniensis*.), Prickly Gooseberry (*Ribes cynosbati*), Rose (*Rosa* spp.) and Prickly Ash (*Zanthoxylum americanum;* native, but not typical of the area) are good options for this purpose. Shrubs installed in Layer 3 are to be 0.4 m to 1.0 m in height.
- All layers: Seed (drill planting preferred to broadcast seeding) a mix of cover crops (e.g., Winter Wheat) applied at 15kg/ha with CVC 1 – Upland Mix (CVC, 2018) applied at 22 kg/ha to 25 kg/ha. This ensures that the ground layer of the VPZ is dominated by native meadow flora which will prevent non-native or invasive species from taking hold of the disturbed soils. If seeded in fall, Winter Wheat will germinate in fall covering the area and prevent erosion and supress weeds; it goes dormant over winter and continues growth in spring. However, as an annual, it does not outcompete the target CVC upland seed mix.
- Planting should generally occur in April to May or September to October.
- Mow one to two times in late June or in July of the first growing season (i.e., the year following fall planting, or the year of spring planting) to 15 cm to 25 cm to control aggressive weeds species and to provide trees and shrubs space to grow.

- Coir mats and/or mulch 0.5 m in diameter are to be installed around all trees and large shrubs to ensure competing vegetation is suppressed until trees and shrubs achieve a free to grow height.
- Tree guards are to be installed for all trees and single stem shrubs and removed at the end of the plant warranty period.
- Watering is to be scheduled as needed.

7.5.4. Monitoring

Monitoring and/or plant survival warranties of the VPZ are recommended for two growing seasons post-planting. Considering the level of existing disturbance, it is recommended that a best-efforts approach be implemented rather than strict survival percentages which may be unreasonable to implement (i.e., the overall function should be assessed as opposed to a strict species survival count). Recommendations for adaptive remediation will be made, if required, on a yearly basis until the completion of the monitoring period. A final report at the end of the monitoring period would be submitted to the City for approval.

7.6. BIRD FRIENDLY BUILDING DESIGN

Building design shall follow the design standards set out in Bird Friendly Building Design CSA A460:19 (Canadian Standards Association [CSA], 2019) which is a National Standard of Canada. The standard is intended to reduce bird collisions with buildings. In consideration of the adjacent woodland to the south-west which is candidate SWH for birds, the Site design is potentially considered high risk, and therefore, should exceed the minimum requirements of the standard. The candidate SWH types for birds in the Study Area are:

- Special Concern and Rare Wildlife;
    - Where four birds species have potential to occur in the Study area: Tufted Titmouse, Eastern Wood-pewee, Black-crowned Night-heron, and Purple Martin.
- Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs);
- Landbird Migratory Stopover Areas; and,
- Waterfowl Nesting Area.

The following bird collision mitigation strategy is to be applied to a height of 25 m, the approximate maximum height of the canopy of woodland to the south-west:

- Woodland facing windows are to be glazed (infill material such as glass or plastic) with 90% surface coverage, or preferably, windows should be excluded from the south-west side of Building B to completely remove the potential for collisions with glass panes resulting from fly through conditions/the black hole effect of glass windows adjacent to the woodland.
- The standards offer a series of visual markers (e.g., UV markers, film, decals etc.) and building integrated structures (e.g., shades, shutters, grills etc.) that provide effective mitigation toward bird collisions. The most effective strategy is to create visual markers on the glass elements of the building which appear to birds as solid objects to be avoided. The less effective strategy is to

mute the reflective properties of glass by means other than glazing treatments. Refer to the standards for more detailed information.

- Exterior lighting shall be dark sky compliant (i.e., will minimize glass and light trespass by using fixtures that are fully shielded and only emit light toward the ground and have reduced blue light emission).
- For exterior lighting in areas facing the woodland (i.e., south-west face of Building B), exterior lighting may be motion sensor activated so it is activated only when necessary.
- General building interior lighting should be reduced after business hours, especially from sunset to sunrise, or task lighting should be used.

If applied, these standards should reduce the number of bird window collisions and effectively mitigate the potential negative effects of the building placement near the woodland.

7.7. GENERAL MITIGATION MEASURES

The following general recommendations are proposed to reduce impacts to local wildlife, potential SWH and the Significant Natural Area as a whole south-west of the Site. This should not be considered a comprehensive list as recommendations of other technical specialties and planning approval and/or permitting associated with these works may result in additional requirements.

- Temporarily store, handle, and dispose of materials used or generated (e.g., organics, soils, woody debris, temporary stockpiles) during site preparation and construction in a manner that prevents their entry into naturalized areas. It is recommended that materials temporarily stored on-site are to be stockpiled as far away from the tree driplines and wetland areas, to mitigate negative impacts.
- Work areas will be clearly delineated on construction drawings and in the field to minimize the potential for unnecessary encroachment into natural areas.
- Maintenance, cleaning, or refuelling work on machinery should be completed a minimum of 30 m from sensitive NHF (i.e., the woodland).
- The contractor shall not destroy active nest, or wound or kill birds, of species protected under the MBCA (1994) and/or Regulations under the MBCA (1994). When active nests are encountered the contractor shall contact a qualified Biologist and/or the MNR for direction.
- Should vegetation or trees need to be removed from within the Site, it is recommended that trees or vegetation be removed between October 1 and March 31 to avoid impacts to nesting birds (and roosting bats, if present).
- Tree removals are addressed through the Arborist Report and Tree Preservation Plan, 580 Hazelhurst Road (EnVision, 2025), which identifies trees required for removals, protection measures for retained trees and any required compensation. Tree removal should conform to local, municipal, or regional by-laws, and should be performed by properly trained and accredited individuals.
- Wildlife incidentally encountered during construction shall not be knowingly harmed and shall be allowed to move away from construction on its own.
- In the event wildlife encountered during construction does not move from the construction zone, the Contractor shall contact the MNR to move the animal to a safe area.

- If SAR are encountered within or adjacent to the construction site, the MECP SAR Branch is to be contacted immediately.

8. CONCLUSIONS

A recyclable materials/waste processing facility is currently proposed for the Site. This EIS was prepared due to the presence of NHF including the woodland adjacent to the Site. A variable vegetated setback to this feature has been incorporated into the proposed plan to mitigate impacts to this feature and a wetland further setback within this feature.

A review of available background data and a screening exercise indicate that most SAR species and SWH types have limited potential to be present within the Site, though potential habitat may be present in the woodland and wetland adjacent to the Site. The woodland is proposed to be protected with a VPZ and therefore, no impacts to SAR or SWH are anticipated. No other NHF were present within the Study Area.

Overall, through appropriate mitigation, the proposed recycling facility development of the Site is not anticipated to negatively impact identified NHF or their associated functions within and adjacent to the Site. Nonetheless, the potential adverse effects towards associated NHF were assessed, and corresponding mitigation measures were identified to minimize these effects.

9. SIGNATURES

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9.1. QUALIFIER

EnVision prepared this report solely for the use of the intended recipient in accordance with the professional services agreement. In the event a contract has not been executed, the parties agree that the EnVision General Terms and Conditions, which were provided prior to the preparation of this report, shall govern their business relationship.

The report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings in the assessment. The conclusions presented in this report are based on work performed by trained, professional and technical staff, in accordance with their reasonable interpretation of current and accepted engineering and scientific practices at the time the work was performed.

The content and opinions contained in the report are based on the observations and/or information available to EnVision at the time of preparation, using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by EnVision and other engineering/scientific practitioners working under similar conditions, and subject to the same time, financial and physical constraints applicable to this project.

EnVision disclaims any obligation to update this report if, after the date of this report, any conditions appear to differ significantly from those presented in this report; however, EnVision reserves the right to amend or supplement this report based on additional information, documentation or evidence.

EnVision makes no other representations whatsoever concerning the legal significance of its findings. The intended recipient is solely responsible for the disclosure of any information contained in this report. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. EnVision does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report.

EnVision has provided services to the intended recipient in accordance with the professional services agreement between the parties and in a manner consistent with that degree of care, skill and diligence normally provided by members of the same profession performing the same or comparable services in respect of projects of a similar nature in similar circumstances. It is understood and agreed by EnVision and the recipient of this report that EnVision provides no warranty, express or implied, of any kind. Without limiting the generality of the foregoing, it is agreed and understood by EnVision and the recipient of this report that EnVision makes no representation or warranty whatsoever as to the sufficiency of its scope of work for the purpose sought by the recipient of this report.

In preparing this report, EnVision has relied in good faith on information provided by others, as noted in the report. EnVision has reasonably assumed that the information provided is correct and EnVision is not responsible for the accuracy or completeness of such information.

Unless otherwise agreed in writing by EnVision, the report shall not be used to express or imply warranty as to the suitability of the site for a particular purpose. EnVision disclaims any responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions/or costs.

This limitations statement is considered an integral part of this report.

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APPENDIX A:

Email Correspondences

Joseph Mentlik

From: Jeffrey Driscoll <Jeffrey.Driscoll@mississauga.ca>
Sent: Wednesday, October 15, 2025 9:20 AM
To: Alex Stettler
Cc: Christian Buchanan-Fraser; Davin McCully; Katrina Munshaw; Jim Greenfield; Angela Zhou; Jacob Leach; Kate Allan; Joseph Mentlik
Subject: RE: [EXTERNAL] 580 Hazelhurst Road -Proposed Recyclable Materials/Waste Processing Facility - DARC 24-58 W2 comments
Attachments: 20251015_580 Hazelhurst Rd_EIS TOR_CMS Forestry NHS Comments_Final.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Good Morning Alex,

I hope you had a lovely long weekend!

Apologies for the delay in getting back to you. Please see the attached memo outlining Community Services – Forestry's comments from a natural heritage perspective on the prepared Environmental Impact Study (EIS) Terms of Reference (TOR). I also want to flag that after internal discussions with colleagues from Park Assets, given that the encroachment into Significant Natural Area SD1 has occurred on private property, while I have included a recommendation to re-naturalize the encroachment area, the City will not be requiring it as part of the application.

If you have any questions regarding the memo, please don't hesitate to reach out.

Cheers,

Jeff

MISSISSAUGA

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City of Mississauga | Community Services Department,
Parks, Forestry & Environment Division

From: Alex Stettler <astettler@envisionconsultants.ca>
Sent: Monday, October 6, 2025 11:49 AM
To: Jeffrey Driscoll <Jeffrey.Driscoll@mississauga.ca>
Cc: Christian Buchanan-Fraser <cbuchanan@envisionconsultants.ca>; Davin McCully <davin@armstrongplan.ca>; Katrina Munshaw <katrina@armstrongplan.ca>; Jim Greenfield <Jim.Greenfield@mississauga.ca>; Angela Zhou <Angela.Zhou@mississauga.ca>; Jacob Leach <Jacob.Leach@mississauga.ca>; Kate Allan <Kate.Allan@mississauga.ca>; Joseph Mentlik <jmentlik@envisionconsultants.ca>
Subject: RE: [EXTERNAL] 580 Hazelhurst Road -Proposed Recyclable Materials/Waste Processing Facility - DARC 24-58 W2 comments

Hi Jeff,

Hope you are well.
Just following up on the status of the EIS ToR comments and if you have had a chance to connect with your colleagues from Parks to get their input.

If you need anything from us, please reach out.

Thanks,
alex

ENVISION

Alex Stettler, H.B.Sc., PMP, CAN-CISEC

Project Manager- Ecology

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From: Jeffrey Driscoll <Jeffrey.Driscoll@mississauga.ca>
Sent: September 17, 2025 11:41 AM
To: Alex Stettler <astettler@envisionconsultants.ca>; Joseph Mentlik <jmentlik@envisionconsultants.ca>
Cc: Christian Buchanan-Fraser <cbuchanan@envisionconsultants.ca>; Davin McCully <davin@armstrongplan.ca>; Katrina Munshaw <katrina@armstrongplan.ca>; Jim Greenfield <Jim.Greenfield@mississauga.ca>; Angela Zhou <Angela.Zhou@mississauga.ca>; Jacob Leach <Jacob.Leach@mississauga.ca>; Kate Allan <Kate.Allan@mississauga.ca>
Subject: RE: [EXTERNAL] 580 Hazelhurst Road -Proposed Recyclable Materials/Waste Processing Facility - DARC 24-58 W2 comments

Hi Alex & Joseph,

Thank you again for the productive site visit yesterday! I just wanted to follow up to provide an update on the timing of our EIS TOR comments, which during our site visit I had identified would be circulated this week. Given that our colleagues from Park Assets could not attend the site visit, City staff are coordinating an internal debrief meeting prior to circulating our comment memo. With this in mind, circulation of our memo will be delayed until next week – apologies for this timing delay.

In the meantime, if you have any follow up questions, please feel free to reach out!

Cheers,

Jeff

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City of Mississauga | Community Services Department,
Parks, Forestry & Environment Division

From: Alex Stettler <astettler@envisionconsultants.ca>
Sent: Tuesday, September 16, 2025 9:37 AM
To: Jeffrey Driscoll <Jeffrey.Driscoll@mississauga.ca>
Cc: Christian Buchanan-Fraser <cbuchanan@envisionconsultants.ca>; Joseph Mentlik <jmentlik@envisionconsultants.ca>; Kate Allan <Kate.Allan@mississauga.ca>; Jacob Leach <Jacob.Leach@mississauga.ca>; Davin McCully <davin@armstrongplan.ca>; Katrina Munshaw <katrina@armstrongplan.ca>; Kate Cockburn <kate.cockburn@oakville.ca>; Jim Greenfield <Jim.Greenfield@mississauga.ca>; Angela Zhou <Angela.Zhou@mississauga.ca>
Subject: RE: [EXTERNAL] 580 Hazelhurst Road -Proposed Recyclable Materials/Waste Processing Facility - DARC 24-58 W2 comments

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Hi Jeffrey,

I'm sorry , but I will not be attending the meeting today on site due to other commitments. However, Joseph, our terrestrial ecologist will be leading the site walk and dripline staking. If you have any follow-up questions or comments based on todays site walk, please reach out and I'd be happy to discuss.

As for PPE, I would suggest the minimum PPE would be a high-vis vest, steel toe boots and helmet.

Thanks
alex

Alex Stettler H.B.Sc., PMP, CAN-CISEC
Senior Project Manager - Ecology

ENVISION
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6415 Northwest Drive U37-40,
Mississauga, ON, L4V1X1
Cell / 647-222-1420
Office/ 905-677-0202
Email / astettler@envisionconsultants.ca
Website / www.envisionconsultants.ca

From: Jeffrey Driscoll <Jeffrey.Driscoll@mississauga.ca>
Sent: September 16, 2025 9:00 AM
To: Alex Stettler <astettler@envisionconsultants.ca>
Cc: Christian Buchanan-Fraser <cbuchanan@envisionconsultants.ca>; Joseph Mentlik <jmentlik@envisionconsultants.ca>; Kate Allan <Kate.Allan@mississauga.ca>; Jacob Leach <Jacob.Leach@mississauga.ca>; Davin McCully <davin@armstrongplan.ca>; Katrina Munshaw <katrina@armstrongplan.ca>; Kate Cockburn <kate.cockburn@oakville.ca>; Jim Greenfield <Jim.Greenfield@mississauga.ca>; Angela Zhou <Angela.Zhou@mississauga.ca>
Subject: RE: [EXTERNAL] 580 Hazelhurst Road -Proposed Recyclable Materials/Waste Processing Facility - DARC 24-58 W2 comments

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Good Morning Alex,

I hope your week is going well!

I'm looking forward to meeting you on site today for the dripline staking at 580 Hazelhurst Rd. I'm just reaching out to check-in about a few logistical items for the site visit:

- Are we able to park on the property? Or will we need to park along Hazelhurst Rd?
- What level of PPE will be required while on site?

Thanks in advance!

Cheers,

Jeff

Jeffrey Driscoll, MSc., MEnvSc.
Natural Heritage Specialist
Forestry Section
T 905-615-3200 ext. 4345
jeffrey.driscoll@mississauga.ca
Pronouns: he / him / his

City of Mississauga | Community Services Department,
Parks, Forestry & Environment Division

From: Kate Cockburn <kate.cockburn@oakville.ca>
Sent: Friday, September 5, 2025 1:45 PM
To: Alex Stettler <astettler@envisionconsultants.ca>; Jim Greenfield <Jim.Greenfield@mississauga.ca>
Cc: Christian Buchanan-Fraser <cbuchanan@envisionconsultants.ca>; Joseph Mentlik <jmentlik@envisionconsultants.ca>; Kate Allan <Kate.Allan@mississauga.ca>; Katie Henley <Katie.Henley@mississauga.ca>; Jeffrey Driscoll <Jeffrey.Driscoll@mississauga.ca>; Jacob Leach <Jacob.Leach@mississauga.ca>; Davin McCully <davin@armstrongplan.ca>; Katrina Munshaw <katrina@armstrongplan.ca>
Subject: RE: [EXTERNAL] 580 Hazelhurst Road -Proposed Recyclable Materials/Waste Processing Facility - DARC 24-58 W2 comments

---

Hello Alex,

I believe that you have included an additional ‘Kate’ on this thread (I know, more Kate’s and Katie’s on a team are always better!).

As this is a City of Mississauga file, the Town of Oakville would only provide comments through the City’s circulation process, if required.

Thanks,
Kate (Oakville)

Kate Cockburn, (She/Her), MCIP, RPP
Manager -Current Planning-East District
Planning & Development
Town of Oakville | 905-845-6601, ext. 3124 | www.oakville.ca

From: Alex Stettler <astettler@envisionconsultants.ca>
Sent: Thursday, September 4, 2025 2:04 PM
To: james.greenfield@mississauga.ca
Cc: Christian Buchanan-Fraser <cbuchanan@envisionconsultants.ca>; Joseph Mentlik <jmentlik@envisionconsultants.ca>; kate.allan@mississauga.ca; katie.henley@mississauga.ca; Jeffrey.Driscoll@mississauga.ca; Kate Cockburn <kate.cockburn@oakville.ca>; Jacob.Leach@mississauga.ca; Davin McCully <davin@armstrongplan.ca>; Katrina Munshaw <katrina@armstrongplan.ca>
Subject: [EXTERNAL] 580 Hazelhurst Road -Proposed Recyclable Materials/Waste Processing Facility - DARC 24-58 W2 comments

Hello Jim,

My name is Alex Stettler and I work for EnVision Consultants Ltd. along with Christian, whom you have been in contact with, and our firm has been retained by the owners of 580 Hazelhurst Road as their Natural Heritage consultants. Our project is represented by the Planner, Davin McCully at Armstrong Planning.

Please find attached our Terms of Reference and Checklist Review for the Environmental Impact Study (EIS) required to address the proposed Recyclable Materials/Waste Processing Facility at 580 Hazelhurst Road. This submission is required as a result of the DARC 24-87 WC comments received from yourself, Kate and Katie (City of Mississauga).

Further, as noted by comment 63, we would also like to invite the City and/or Town representatives to the site to confirm the woodland dripline to facilitate the discussion regarding a potential woodland buffer. The proposed site meeting will be held on the afternoon of September 16, 2025. We have extended this invitation to the CVC; however, they have declined their participation in this meeting as the site is not located within a CVC Regulated Area and does not contain any features of concern from their perspective.

If the September 16 date is not suitable for the Town and/or City, please provide alternative dates. Please be advised that site access to the adjacent Hydro One property has been secured for the 16th.

If there are any further questions, please reach out and I look forwards to meeting you on September 16, 2025.

Thanks,
alex

Alex Stettler H.B.Sc., PMP, CAN-CISEC
Senior Project Manager - Ecology

ENVISION
CONSULTANTS LTD

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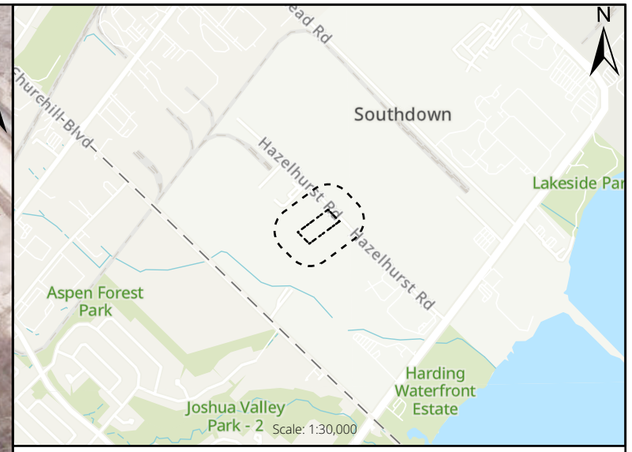
APPENDIX B:

Figures

Prepared By: TanyaPeterson



LEGEND

- SITE BOUNDARY
- 120 m STUDY AREA

TITLE

SITE LOCATION

PROJECT

ENVIRONMENTAL IMPACT STUDY
580 HAZELHURST ROAD
MISSISSAUGA, ONTARIO

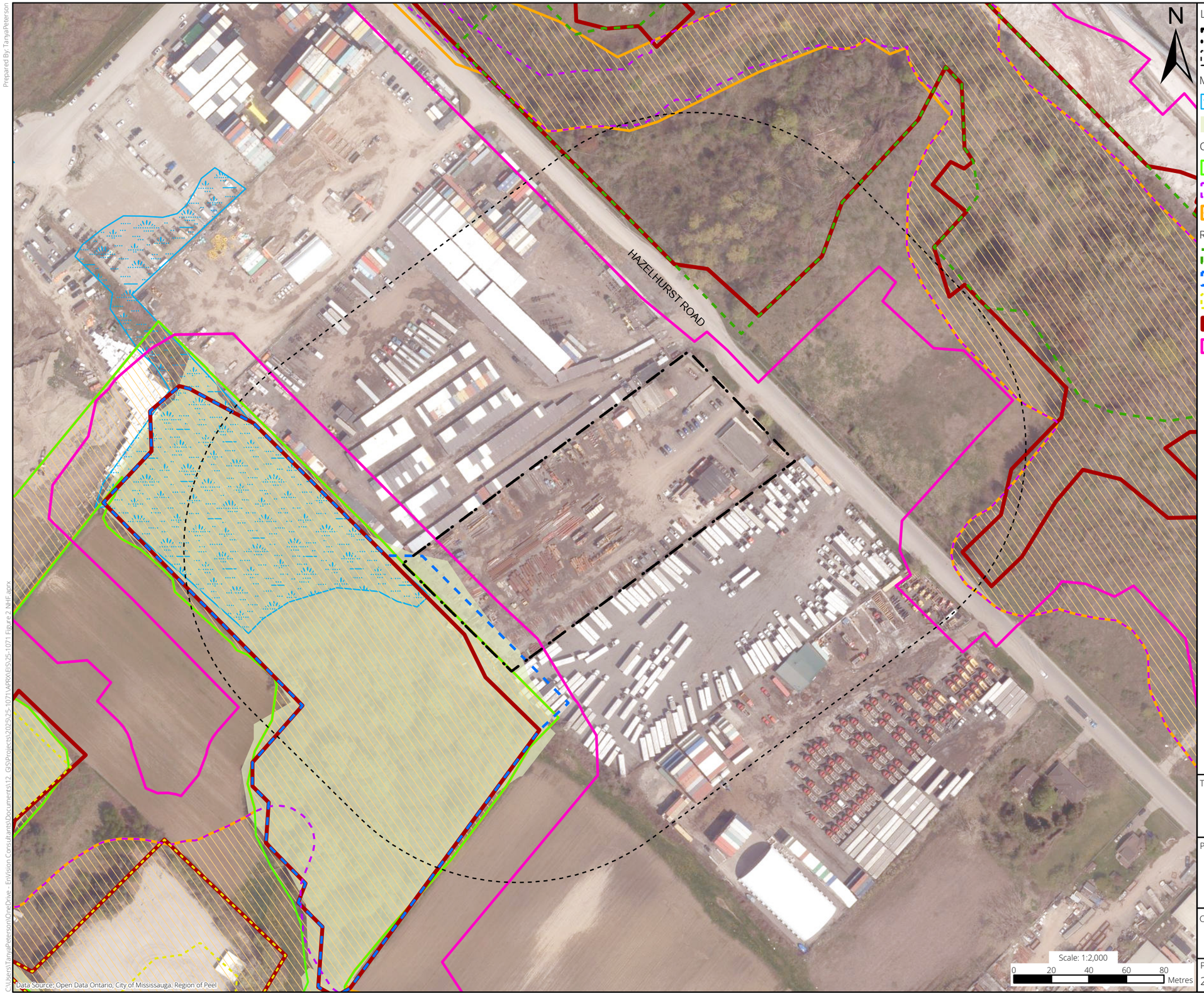
CLIENT

YORK1 ENVIRONMENTAL WASTE SOLUTIONS LTD.

PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
25-1071	OCTOBER 2025	TP	AS	1

C:\Users\TanyaPeterson\OneDrive - EnVision Consultants\Documents\12. GIS\Projects\2025\25-1071\APRX\ES\25-1071 Figure 1 Site Location.aprx

Prepared By: TanyaPeterson



LEGEND

- SITE BOUNDARY
- 120 m STUDY AREA

MNRF:

- UNEVALUATED WETLAND
- WOODED AREA

CITY OF MISSISSAUGA OFFICIAL PLAN:

- SIGNIFICANT NATURAL AREAS AND NATURAL GREEN SPACES
- NATURAL HAZARDS
- GREEN SYSTEM

REGION OF PEEL OFFICIAL PLAN:

- CORE AREAS OF THE GREENLANDS SYSTEM
- NATURAL AREAS AND CORRIDORS
- POTENTIAL NATURAL AREAS AND CORRIDORS
- EXISTING NATURAL COVER
- POTENTIAL ENHANCEMENT AREA

TITLE

NATURAL HERITAGE FEATURES

PROJECT

ENVIRONMENTAL IMPACT STUDY
580 HAZELHURST ROAD
MISSISSAUGA, ONTARIO

CLIENT

YORK1 ENVIRONMENTAL WASTE SOLUTIONS LTD.

PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
25-1071	OCTOBER 2025	TP	AS	2

C:\Users\TanyaPeterson\OneDrive - EnVision Consultants\Documents\12 GIS\Projects\2025\25-1071\APRX\EIS\25-1071 Figure 2 NHF.aprx

Prepared By: TanyaPeterson

LEGEND

- SITE BOUNDARY
- 120 m STUDY AREA
- VEGETATION COMMUNITIES

CUM1-1 - Dry-Moist Old field Meadow Type
CUW1 - Mineral Cultural Woodland Ecosite
CVC - Commercial and Institutional
FOD5-2 - Dry – Fresh Sugar Maple – Beech Deciduous Forest Type
SWD2-2 - Green Ash Mineral Deciduous Swamp Type

TITLE

ECOLOGICAL LAND CLASSIFICATION

PROJECT

ENVIRONMENTAL IMPACT STUDY
580 HAZELHURST ROAD
MISSISSAUGA, ONTARIO

CLIENT

YORK1 ENVIRONMENTAL WASTE SOLUTIONS LTD.

PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
25-1071	OCTOBER 2025	TP	AS	3

C:\Users\TanyaPeterson\OneDrive - EnVision Consultants\Documents\12_GIS\Projects\2025\25-1071\APRX\ES\25-1071 Figure 3 ELC.aprx

Prepared By: TanyaPeterson

LEGEND

- SITE BOUNDARY
- 120 m STUDY AREA
- WOODLAND
- WETLAND
- 10 m WOODLAND SETBACK
- 15 m WETLAND SETBACK

TITLE

NATURAL HERITAGE OPPORTUNITIES AND CONSTRAINTS

PROJECT

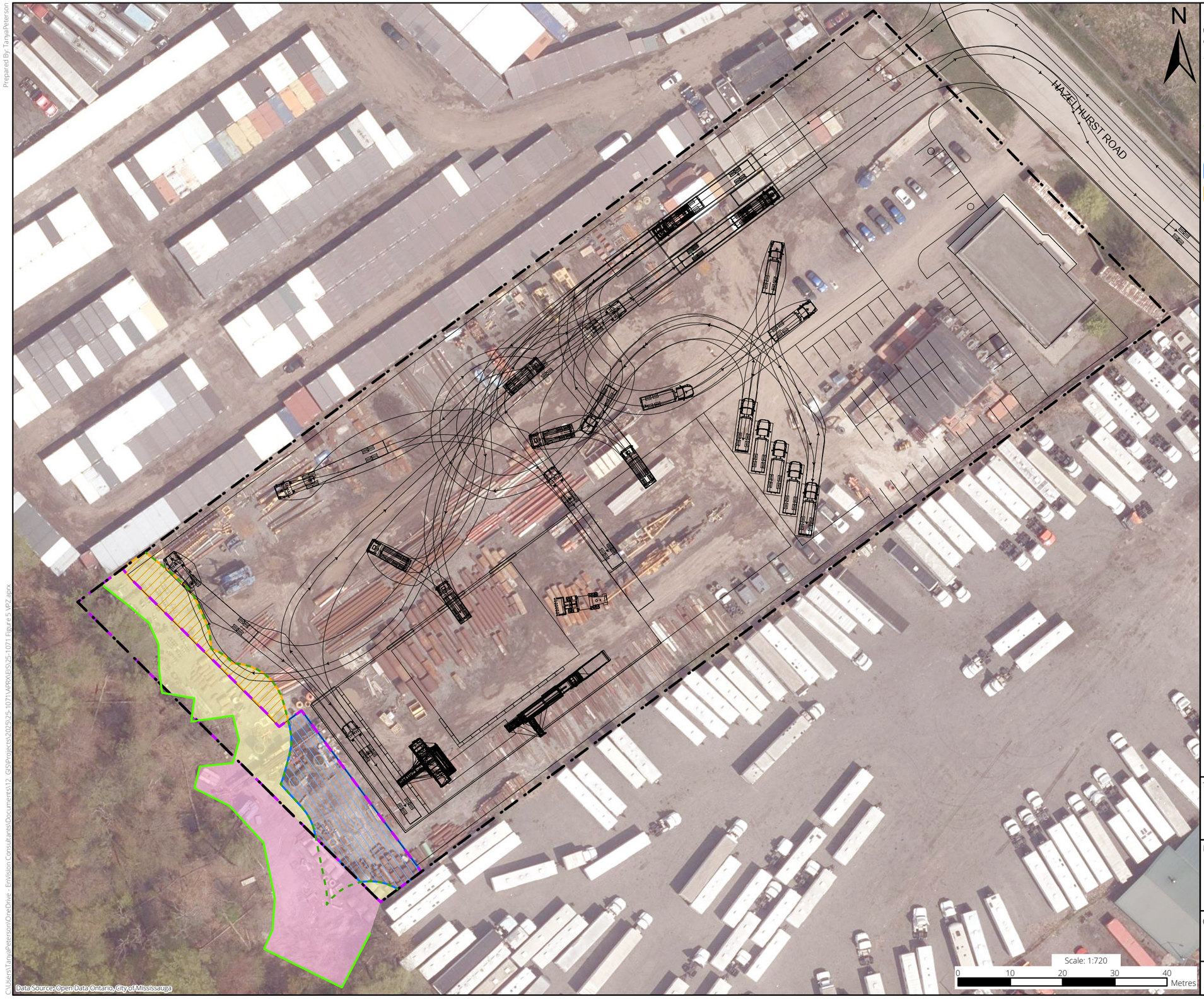
ENVIRONMENTAL IMPACT STUDY
580 HAZELHURST ROAD
MISSISSAUGA, ONTARIO

CLIENT

YORK1 ENVIRONMENTAL WASTE SOLUTIONS LTD.

PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
25-1071	NOVEMBER 2025	TP	AS	4

C:\Users\TanyaPeterson\OneDrive - EnVision Consultants\Documents\12_GISProjects\2025\25-1071\APRX\EIS\25-1071 Figure 4 Constraints.aprx



LEGEND

- SITE BOUNDARY
- PROPOSED DEVELOPMENT
- PROPOSED FENCE
- 10 m WOODLAND SETBACK
- STAKED DRIPLINE
- WOODLAND VPZ (592.0 sq.m.)
- VARIABLE WOODLAND VPZ (373.1 sq.m.)
- TRUCK TURNING RADIUS ENCROACHMENT (189.7 sq.m.)
- HISTORICALLY ENCROACHED AREA (HYDRO ONE LANDS) (583.3 sq.m.)

TITLE

VEGETATION PROTECTION ZONE

PROJECT

ENVIRONMENTAL IMPACT STUDY
580 HAZELHURST ROAD
MISSISSAUGA, ONTARIO

CLIENT

YORK1 ENVIRONMENTAL WASTE SOLUTIONS LTD.

PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
25-1071	NOVEMBER 2025	TP	AS	5

Prepared By: TanyaPeterson

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Prepared By: TanyaPeterson

LEGEND

- SITE BOUNDARY
- PROPOSED DEVELOPMENT
- PROPOSED FENCE AND DEVELOPMENT LIMIT

TITLE

SITE PLAN

PROJECT

ENVIRONMENTAL IMPACT STUDY
580 HAZELHURST ROAD
MISSISSAUGA, ONTARIO

CLIENT

YORK1 ENVIRONMENTAL WASTE SOLUTIONS LTD.

PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
25-1071	NOVEMBER 2025	TP	AS	6

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APPENDIX C:

Vegetation Species List

Scientific Name	Common Name	Coefficient of Conservatism	Coefficient of Wetness	SARO Status	COSSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	Carolinian Zone Status (Oldham 2017)	Carolinian Zone Restricted (Oldham 2017)	Ecodistrict 7E4 (Oldham 2017)	Background Screening	City of Mississauga's Natural Areas Survey	Unit 1 FOD5-2	Unit 2 SWS2-2	Unit 3 CUM1-1	Unit 4 CUW1	Unit 5 CVC
Acer negundo	Manitoba Maple	0	0					G5	N5	S5	C		IC	X	X					
Acer negundo var. negundo	Manitoba Maple	0	0					G5T5	NU	SU				X	X					
Acer platanoides	Norway Maple		5					GNR	NNA	SNA	IU		IC	X	X					
Tsuga canadensis	Eastern Hemlock	7	3					G4G5	N5	S5	C		C			X				
Acer saccharinum	Silver Maple	5	-3					G5	N5	S5	C		X	X	X		X			
Actaea pachypoda	White Baneberry	6	5					G5	N5	S5	C		C	X	X	X				
Achillea millefolium	Common Yarrow		3					G5	NNR	SNA	IX		IX	X	X					
Epifagus virginiana	Beechdrops	6	5					G5	N5	S5	C		U			X				
Actaea rubra	Red Baneberry	6	3					G5	N5	S5	C		C	X	X					
Actaea rubra ssp. rubra	Red Baneberry	6	3					G5T5	N5	S5				X	X					
Aesculus hippocastanum	Horse Chestnut		5					GNR	NNA	SNA	IR		IU	X	X					
Agrimonia gryposepala	Hooked Agrimony	2	3					G5	N5	S5	C		C	X	X					
Agrostis stolonifera	Creeping Bentgrass		-3					G5	N5	SNA	IC		IC	X	X					
Ailanthus altissima	Tree-Of-Heaven		5					GNR	NNA	SNA	IR		IR	X	X					
Ajuga reptans	Creeping Bugleweed		5					GNR	NNA	SNA	IR		IR	X	X					
Alliaria petiolata	Garlic Mustard		0					GNR	NNA	SNA	IC		IC	X	X					
Allium tricoccum var. tricoccum	Wild Leek	7	3					G5T5	N4	S4	C		C			X				
Alnus glutinosa	European Black Alder		-3					GNR	NNA	SNA	IU		IC	X	X					
Ambrosia artemisiifolia	Common Ragweed	0	3					G5	N5	S5	C		C							X
Anemonastrum canadense	Canada Anemone	3	-3					G5	N5	S5	C		C	X	X					
Anemone virginiana	Tall Anemone	4	3					G5	N5	S5	C		C	X	X					
Anemone virginiana var. virginiana	Tall Anemone	4	3					G5T5	N5?	S5?				X	X					
Angelica sylvestris	Woodland Angelica		0					G5?	NNA	SNA	IR		IR	X	X					
Arctium minus	Common Burdock		3					GNR	NNA	SNA	IC		IC	X	X					
Fagus grandifolia	American Beech	6	3					G5	N4	S4	C		C			X				
Arisaema triphyllum ssp. triphyllum	Jack-In-The-Pulpit	5	-3					G5T5	N5	S5				X	X					
Artemisia biennis	Biennial Wormwood		-3					G5	N5	SNA	IR		IX	X	X					
Artemisia vulgaris	Common Wormwood		5					GU	NNA	SNA	IX		IR	X	X					
Asclepias syriaca	Common Milkweed	0	5					G5	N5	S5	C		C	X	X					
Asparagus officinalis	Garden Asparagus		3					G5?	NNA	SNA	IC		IC	X	X					
Quercus rubra	Northern Red Oak	6	3					G5	N5	S5	C		C	X	X	X				
Arisaema triphyllum	Jack-In-The-Pulpit	5	-3					G5	N5	S5	C		C	X	X	X				
Berberis thunbergii	Japanese Barberry		3					GNR	NNA	SNA	IX		IC	X	X					
Betula alleghaniensis	Yellow Birch	6	0					G5	N5	S5	C		C	X	X					
Carex pedunculata	Long-Stalked Sedge	5	3					G5	N5	S5	C		C			X				
Betula pendula	Weeping Birch		0					GNR	NNA	SNA	IR		IR	X	X					
Bidens cernua	Nodding Beggarticks	2	-5					G5	N5	S5	C		C	X	X					
Bidens frondosa	Devil's Beggarticks	3	-3					G5	N5	S5	C		C	X	X		X			
Bidens tripartita	Three-Parted Beggarticks	5	-3					G5	N5	S5	C		R	X	X					
Bromus inermis	Smooth Brome		5					G5T5	NNA	SNA	IC		IC	X	X					
Buglossoides arvensis	Corn Gromwell		5					GNR	NNA	SNA	IU		IR	X	X					
Calystegia sepium	Hedge False Bindweed	2	0					G5	N5	S5	C		C	X	X					
Campanula rapunculoides	Creeping Bellflower		5					GNR	NNA	SNA	IU		IX	X	X					
Cardamine diphylla	Two-Leaved Toothwort	7	3					G5	N5	S5	C		U	X	X					
Carduus nutans	Nodding Thistle		3					GNR	NNA	SNA	IX		IR	X	X					
Carduus nutans ssp. nutans	Nodding Thistle		3					GNRTNR	NNA	SNA				X	X					
Carex crinita	Fringed Sedge	6	-5					G5	N5	S5	C		R				X			
Carex cristatella	Crested Sedge	3	-3					G5	N5	S5	C		C	X	X					
Carex gracillima	Graceful Sedge	4	3					G5	N5	S5	C		C	X	X					
Carex lupulina	Hop Sedge	6	-5					G5	N5	S5	C		U				X			
Matteuccia struthiopteris	Ostrich Fern	5	0					G5	N5	S5	C		C	X	X	X				
Carex pensylvanica	Pennsylvania Sedge	5	5					G5	N5	S5	C		C	X	X					
Carex radiata	Eastern Star Sedge	4	0					G5	N5	S5	C		C				X			
Carex rosea	Rosy Sedge	2	5					G5	N5	S5	C		C	X	X					
Carya ovata	Shagbark Hickory	6	3					G5	N5	S5	C		U	X	X					
Carya ovata var. ovata	Shagbark Hickory	6	3					G5	N5	S5				X	X					
Catalpa speciosa	Northern Catalpa		3					G4?	NNA	SNA	IR		IR	X	X					
Chelidonium majus	Greater Celandine		5					GNR	NNA	SNA	IU		IU	X	X					
Chenopodium album	Common Lamb'S-Quarters		3					G5	NNA	SNA	IC		IC	X	X					
Cichorium intybus	Wild Chicory		5					GNR	NNA	SNA	IC		IC	X	X					
Nabalus altissimus	Tall Rattlesnakeroot	5	3					G5	N5	S5	U		U			X				
Circaea canadensis ssp. canadensis	Canada Enchanter'S Nightshade	2	3					G5T5	N5	S5				X	X					
Cirsium arvense	Canada Thistle		3					G5	NNA	SNA	IC		IC	X	X					
Cirsium vulgare	Bull Thistle		3					GNR	NNA	SNA	IC		IC	X	X					
Convallaria majalis	European Lily-Of-The-Valley		5					G5	NNA	SNA	IX		IC	X	X					
Convallaria majalis var. majalis	European Lily-Of-The-Valley		5					G5	NNA	SNA				X	X					
Convolvulus arvensis	Field Bindweed		5					GNR	NNA	SNA	IC		IC	X	X					
Cornus alternifolia	Alternate-Leaved Dogwood	6	3					G5	N5	S5	C		C	X	X					
Cornus racemosa	Grey Dogwood	2	0					G5	N5	S5	C		C	X	X					
Cornus rugosa	Round-Leaved Dogwood	6	5					G5	N5	S5	C		C	X	X					
Cornus sericea	Red-Osier Dogwood	2	-3					G5	N5	S5	C		C	X	X					X

Appendix C: Vascular Plant List

Scientific Name	Common Name	Coefficient of Conservatism	Coefficient of Wetness	SARO Status	COSSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	Carolinian Zone Status (Oldham 2017)	Carolinian Zone Restricted (Oldham 2017)	Ecodistrict 7E4 (Oldham 2017)	Background Screening	City of Mississauga's Natural Areas Survey	Unit 1 FOD5-2	Unit 2 SWS2-2	Unit 3 CUM1-1	Unit 4 CUW1	Unit 5 CVC
Corylus cornuta	Beaked Hazelnut	5	3					G5	N5	S5	U		U	X	X					
Cyperus odoratus	Rusty Flatsedge	4	-5					GNR	NNR	S4	U		R	X	X					
Dactylis glomerata	Orchard Grass		3					GNR	NNA	SNA	IC		IC	X	X					
Daucus carota	Wild Carrot		5					GNR	NNA	SNA	IC		IC	X	X					X
Diervilla lonicera	Northern Bush-Honeysuckle	5	5					G5	N5	S5	C		U	X	X					
Digitaria ischaemum	Smooth Crabgrass		3					GNR	NNA	SNA	IC		IC							X
Dipsacus fullonum	Common Teasel		3					GNR	NNA	SNA	IC		IC	X	X					
Dryopteris carthusiana	Spinulose Wood Fern	5	-3					G5	N5	S5	C		C	X	X					
Dryopteris intermedia	Evergreen Wood Fern	5	0					G5	N5	S5	C		C	X	X					
Echinocystis lobata	Wild Cucumber	3	-3					G5	N5	S5	C		C	X	X					
Echium vulgare	Common Viper'S Bugloss		5					GNR	NNA	SNA	IC		IC	X	X					
Elaeagnus angustifolia	Russian Olive		3					GNR	NNA	SNA	IU		IC	X	X					
Elaeagnus umbellata	Autumn Olive		3					GNR	NNA	SNA	IU		IU	X	X					
Elymus repens	Quackgrass		3					GNR	NNA	SNA	IC		IC	X	X					
Elymus riparius	Eastern Riverbank Wildrye	7	-3					G5	N4	S4	U	cz	U	X	X					
Endotropis alnifolia	Alder-Leaved Buckthorn	7	-5					G5	N5	S5	U		R	X	X					
Acer rubrum	Red Maple	4	0					G5	N5	S5	C		C	X	X	X				
Epilobium coloratum	Purple-Veined Willowherb	3	-5					G5	N5	S5	C		C	X	X					
Epilobium hirsutum	Hairy Willowherb		-3					GNR	NNA	SNA	IU		IC	X	X					
Acer saccharum	Sugar Maple	4	3					G5	N5	S5	C		C	X	X	X				
Athyrium filix-femina var. angustum	Northeastern Lady Fern	4	0					G5T5	N5	S5	C		C			X				
Equisetum pratense	Meadow Horsetail	8	-3					G5	N5	S5	R		R	X	X					
Erigeron annuus	Annual Fleabane	0	3					G5	N5	S5	C		C	X	X					
Erigeron canadensis	Canada Horseweed	0	3					G5	N5	S5	C		U	X	X					
Erigeron philadelphicus	Philadelphia Fleabane	1	-3					G5	N5	S5	C		C	X	X					
Erigeron philadelphicus var. philadelphicus	Philadelphia Fleabane	1	-3					G5T5	N5	S5				X	X					
Erigeron strigosus	Rough Fleabane	4	3					G5	N5	S5	C		X	X	X					
Erythronium americanum	Yellow Trout-Lily	5	5					G5	N5	S5	C		C	X	X					
Eupatorium perfoliatum	Common Boneset	2	-3					G5	N5	S5	C		C	X	X					
Euphorbia virgata	Leafy Spurge		5					GNR	NNA	SNA	IU		IU	X	X					
Euthamia graminifolia	Grass-Leaved Goldenrod	2	0					G5	N5	S5	C		C	X	X					
Fraxinus americana	White Ash	4	3					G4	N4	S4	C		C	X	X	X				
Fallopia dumetorum	Hedge Bindweed							GU	NNA	SNA	IH			X	X					
Forsythia viridissima	Green-Stemmed Forsythia		5					GNR	NNA	SNA	IR		IR	X	X					
Fragaria vesca	Woodland Strawberry	4	3					G5	N5	S5				X	X					
Fragaria vesca ssp. vesca	Woodland Strawberry		3					G5T4T5	NNA	SNA				X	X					
Fragaria virginiana	Wild Strawberry	2	3					G5	N5	S5				X	X					
Onoclea sensibilis	Sensitive Fern	4	-3					G5	N5	S5	C		C	X	X	X	X			
Parthenocissus vitacea	Thicket Creeper	4	3					G5	N5	S5	C		C	X	X	X				
Fraxinus excelsior	European Ash		3					GNR	NNA	SNA	IR		IR	X	X					
Fraxinus pennsylvanica	Red Ash	3	-3					G4	N5	S4	C		C	X	X		X			
Galium aparine	Common Bedstraw	4	3					G5	N5	S5	C		U	X	X					
Galium palustre	Common Marsh Bedstraw	5	-5					G5	N5	S5	R		C				X			
Geranium maculatum	Spotted Geranium	6	3					G5	N5	S5	C		C	X	X					
Geum canadense	Canada Avens	3	0					G5	N5	S5	C		C	X	X	X	X			
Geum aleppicum	Yellow Avens	2	0					G5	N5	S5	C		X	X	X					
Prunus serotina	Black Cherry	3	3					G5	N5	S5	C		C	X	X	X				
Geum urbanum	Wood Avens		5					G5	NNA	SNA	IX		IX	X	X					
Glechoma hederacea	Ground-Ivy		3					GNR	NNA	SNA	IC		IC	X	X					
Gleditsia triacanthos	Honey Locust	8	0					G5	N2?	S2?	R	CZ	IR	X	X					
Glyceria striata	Fowl Mannagrass	3	-5					G5	N5	S5	C		C	X	X		X			
Hamamelis virginiana	American Witch-Hazel	6	3					G5	N5	S4S5	C		C	X	X					
Hemerocallis fulva	Orange Daylily		5					GNA	NNA	SNA	IU		IC	X	X					
Heracleum maximum	American Cow Parsnip	3	-3					G5	N5	S5	U		C	X	X					
Hesperis matronalis	Dame'S Rocket		3					G4G5	NNA	SNA	IC		IC	X	X					
Hypericum perforatum	Common St. John'S-Wort		5					GNR	NNA	SNA	IC		IC	X	X					
Impatiens capensis	Spotted Jewelweed	4	-3					G5	N5	S5	C		C	X	X		X			
Impatiens glandulifera	Purple Jewelweed		-3					GNR	NNA	SNA	IR		IC	X	X					
Juglans cinerea	Butternut	6	3	END		END	END	G3	N2?	S2?	U		U	X	X					
Juglans nigra	Black Walnut	5	3					G5	N4?	S4?	C		C	X	X				X	
Juncus articulatus	Jointed Rush	5	-5					G5	N5	S5	U		C	X	X					
Juncus articulatus ssp. articulatus	Jointed Rush	5	-5					G5TNR	N5	S5				X	X					
Juncus compressus	Compressed Rush		-3					G5	NNA	SNA	IR		IR	X	X					
Juncus dudleyi	Dudley'S Rush	1	-3					G5	N5	S5	C		C	X	X					
Juncus tenuis	Path Rush	0	0					GNR	N5	S5	C		C	X	X					
Lactuca serriola	Prickly Lettuce		3					GNR	NNA	SNA	IC		IC	X	X					
Lapsana communis	Common Nipplewort		3					GNR	NNA	SNA	IX		IU	X	X					
Larix laricina	Tamarack	7	-3					G5	N5	S5	U		R	X	X					
Leersia oryzoides	Rice Cutgrass	3	-5					G5	N5	S5	C		C	X	X					
Leonurus cardiaca	Common Motherwort		5					GNR	NNA	SNA	IC		IC	X	X					
Leucanthemum vulgare	Oxeye Daisy		5					GNR	NNA	SNA	IC		IC	X	X					

Scientific Name	Common Name	Coefficient of Conservatism	Coefficient of Wetness	SARO Status	COSSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	Carolinian Zone Status (Oldham 2017)	Carolinian Zone Restricted (Oldham 2017)	Ecodistrict 7E4 (Oldham 2017)	Background Screening	City of Mississauga's Natural Areas Survey	Unit 1 FOD5-2	Unit 2 SWS2-2	Unit 3 CUM1-1	Unit 4 CUW1	Unit 5 CVC
Ulmus americana	White Elm	3	-3					G4	N5	S5	C		C	X	X	X				
Linaria vulgaris	Butter-And-Eggs		5					GNR	NNA	SNA	IC		IC	X	X					
Lonicera dioica	Limber Honeysuckle	5	3					G5	N5	S5	C		U	X	X					
Lonicera maackii	Maack'S Honeysuckle		5					GNR	NNA	SNA	IR		IU	X	X					
Lonicera morrowii	Morrow'S Honeysuckle		3					GNR	NNA	SNA	IR		IX	X	X					
Lonicera tatarica	Tatarian Honeysuckle		3					GNR	NNA	SNA	IC		IC	X	X					
Betula papyrifera	Paper Birch	2	3					G5	N5	S5	C		C	X	X	X				
Lycopus americanus	American Water-Horehound	4	-5					G5	N5	S5	C		C	X	X					
Lycopus uniflorus	Northern Water-Horehound	5	-5					G5	N5	S5	C		C	X	X					
Lysimachia ciliata	Fringed Yellow Loosestrife	4	-3					G5	N5	S5	C		C	X	X					
Lythrum salicaria	Purple Loosestrife		-5					G5	NNA	SNA	IC		IC	X	X		X			X
Maianthemum canadense	Wild Lily-Of-The-Valley	5	3					G5	N5	S5	C		C	X	X					
Maianthemum racemosum	Large False Solomon'S Seal	4	3					G5T5	N5	S5				X	X					
Malus pumila	Common Apple		5					G5	NNA	SNA	IC		IC	X	X					
Circaea canadensis	Broad-Leaved Enchanter's Nightshade	2	3					G5	N5	S5	C		C	X	X	X	X			
Matteuccia struthiopteris var. pensylvanica	Ostrich Fern	5	0					G5T5	N5	S5				X	X					
Mentha canadensis	Canada Mint	3	-3					G5	N5	S5	C		C	X	X					
Mentha x piperita	Peppermint		-5					GNA	NNA	SNA	hyb		hyb	X	X					
Mimulus ringens	Square-Stemmed Monkeyflower	6	-5					G5	N5	S5	C		X	X	X					
Morus alba	White Mulberry		0					GNR	NNA	SNA	IC		IC	X	X					
Myosotis laxa	Small Forget-Me-Not	6	-5					G5	N5	S5	C		C	X	X					
Myosotis scorpioides	True Forget-Me-Not		-5					G5	NNA	SNA	IX		IC	X	X					
Geranium robertianum	Herb-Robert	2	3					G5	N5	S5	C		C	X	X	X				
Nepeta cataria	Catnip		3					GNR	NNA	SNA	IC		IC	X	X					
Oenothera biennis	Common Evening-Primrose	0	3					G5	N5	S5	C		U	X	X					X
Prunus virginiana	Chokecherry	2	3					G5	N5	S5	C		C	X	X	X				
Oxalis stricta	Upright Yellow Wood-Sorrel		3					G5	N5	SNA	C		C	X	X					
Parthenocissus quinquefolia	Virginia Creeper	6	3					G5	N4?	S4?	U	cz	R	X	X					
Equisetum arvense	Field Horsetail	0	0					G5	N5	S5	C		C	X	X	X				
Pastinaca sativa	Wild Parsnip		5					GNR	NNA	SNA	IU		IC	X	X					
Persicaria amphibia	Water Smartweed	5	-5					G5	N5	S5	C		R	X	X					
Persicaria lapathifolia	Pale Smartweed	2	-3					G5	N5	S5	C		C	X	X					
Persicaria maculosa	Spotted Lady'S-Thumb		-3					G3G5	NNA	SNA	IC		IC	X	X					
Phalaris arundinacea	Reed Canarygrass	0	-3					G5	N5	S5	C		C	X	X					
Philadelphus inodorus	Scentless Mock-Orange		5					G4G5	NNA	SNA	IR			X	X					
Phleum pratense	Common Timothy		3					GNR	NNA	SNA	IC		IC	X	X					
Phlox divaricata	Wild Blue Phlox	7	3					G5	N4	S4	C		R	X	X					
Phragmites australis	Common Reed	0	-3					G5	N5	SU				X	X					
Picea abies	Norway Spruce		5					G5	NNA	SNA	IX		IX	X	X				X	
Picea glauca	White Spruce	6	3					G5	N5	S5	U		U	X	X					
Picea pungens	Blue Spruce		3					G5	NNA	SNA	IR			X	X					
Pilea pumila	Dwarf Clearweed	5	-3					G5	N5	S5	C		U				X			
Pinus banksiana	Jack Pine	5	3					G5	N5	S5	IR		IX	X	X					
Pinus nigra	Austrian Pine		5					GNR	NNA	SNA	IR			X	X					
Pinus resinosa	Red Pine	8	3					G5	N5	S5	R		R	X	X					
Pinus strobus	Eastern White Pine	4	3					G5	N5	S5	C		C	X	X					
Pinus sylvestris	Scots Pine		3					GNR	NNA	SNA	IX		IC	X	X				X	
Plantago lanceolata	English Plantain		3					G5	NNA	SNA	IC		IC	X	X					
Plantago major	Common Plantain		3					G5	NNR	SNA	IC		IC	X	X					
Plantago rugelii	Rugel'S Plantain	1	0					G5	N5	S5	C		C	X	X					
Platanus occidentalis	Sycamore	8	-3					G5	N4	S4	C	cz	R	X	X					
Poa iconia	Bluegrass		3					GNR	NNA	SNA				X	X					
Poa iconia var. iconia	Bluegrass		3					GNRTNR	NNA	SNA				X	X					
Poa nemoralis	Eurasian Woodland Bluegrass		3					G5TU	NNA	SNA	IX		IC	X	X					
Poa pratensis	Kentucky Bluegrass	0	3					G5	N5	S5				X	X					
Poa pratensis ssp. pratensis	Kentucky Bluegrass		3					G5T5	N5	SNA	IC		IC	X	X					
Podophyllum peltatum	May-Apple	5	3					G5	N5	S5	C		C	X	X					
Populus balsamifera	Balsam Poplar	4	-3					G5	NNR	S5	U		C	X	X					
Populus deltoides	Eastern Cottonwood	4	0					G5	N5	S5				X	X					X
Populus grandidentata	Large-Toothed Aspen	5	5					G5	N5	S5	C		C	X	X					
Populus tremuloides	Trembling Aspen	2	0					G5	N5	S5	C		C	X	X					
Potentilla anserina	Silverweed	5	-3					G5	NNR	S5				X	X					
Potentilla norvegica	Rough Cinquefoil	0	0					G5	N5	S5	C		C	X	X					
Potentilla recta	Sulphur Cinquefoil		5					GNR	NNA	SNA	IC		IC	X	X					
Prunella vulgaris	Common Self-Heal	0	0					G5	N5	S5				X	X					
Prunus avium	Sweet Cherry		5					GNR	NNA	SNA	IR		IX	X	X					
Prunus pensylvanica	Pin Cherry	3	3					G5	N5	S5	C		R	X	X					
Vitis riparia	Riverbank Grape	0	0					G5	N5	S5	C		C	X	X	X				X
Prunus serotina var. serotina	Black Cherry	3	3					G5T5	N5	S5				X	X					
Barbarea vulgaris	Bitter Wintercress		0					GNR	NNA	SNA	IC		IC			X				
Quercus alba	White Oak	6	3					G5	N5	S5	C		C	X	X					

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Epipactis helleborine	Broad-Leaved Helleborine		3					GNR	NNA	SNA	IC		IC	X	X	X				
Ranunculus abortivus	Kidney-Leaved Buttercup	2	0					G5	N5	S5	C		C	X	X					
Ranunculus acris	Common Buttercup		0					G5	NNA	SNA	IC		IC	X	X					
Ranunculus sceleratus	Cursed Buttercup	2	-5					G5	N5	S5				X	X					
Ranunculus sceleratus var. multifidus	Cursed Buttercup	2	-5					G5T5	N5	SU	C		X	X	X					
Ranunculus sceleratus var. sceleratus	Cursed Buttercup		-5					G5T5	NNA	SNA				X	X					
Reynoutria japonica	Japanese Knotweed		3					GNR	NNA	SNA	IX		IC							X
Frangula alnus	Glossy Buckthorn		0					GNR	NNA	SNA	IU		IR	X	X	X	X			
Rhus typhina	Staghorn Sumac	1	3					G5	N5	S5	C		C	X	X					X
Ribes americanum	American Black Currant	4	-3					G5	N5	S5	C		C	X	X					
Ribes cynosbati	Eastern Prickly Gooseberry	4	3					G5	N5	S5	C		C	X	X					
Ribes rubrum	European Red Currant		5					G4G5	NNA	SNA	IX		IC	X	X					
Robinia pseudoacacia	Black Locust		3					G5	NNA	SNA	IC		IC	X	X				X	
Rorippa palustris	Marsh Yellowcress	3	-5					G5	N5	S5	C		U	X	X					
Rosa canina	Dog Rose		5					GNR	NNA	SNA	IX		IR	X	X					
Rosa multiflora	Multiflora Rose		3					GNR	NNA	SNA	IC		IC	X	X					
Rosa sp.	Rose sp.													X	X					
Rubus allegheniensis	Allegheny Blackberry	2	3					G5	N5	S5	C		C	X	X					
Rubus idaeus	Red Raspberry	2	3					G5	N5	S5				X	X					
Rubus occidentalis	Black Raspberry	2	5					G5	N5	S5	C		C	X	X					
Rubus odoratus	Purple-Flowering Raspberry	3	5					G5	N5	S5	C		C	X	X					
Rudbeckia hirta	Black-Eyed Susan	0	3					G5	N5	S5	C		U	X	X					
Rudbeckia hirta var. pulcherrima	Black-Eyed Susan	0	3					G5T5	N5	S5				X	X					
Rumex crispus	Curled Dock		0					GNR	NNA	SNA	IH		IH	X	X					
Salix alba	White Willow		-3					G5	NNA	SNA	IX		IC	X	X				X	
Salix cordata	Heart-Leaved Willow	9	0					G4	N4	S4	R		R	X	X					
Salix eriocephala	Cottony Willow	4	-3					G5	N5	S5	C		C	X	X					
Salix euxina	Crack Willow		0					GNR	NNA	SNA	IC		IC	X	X					
Salix interior	Sandbar Willow	1	-3					G5	N5	S5	C		C	X	X					
Salix petiolaris	Meadow Willow	3	-3					G5	N5	S5	C		C	X	X					
Salix vestita	Hairy Willow		0					G5	N5	S4				X	X					
Sambucus canadensis	Common Elderberry	5	-3					G5T5	N5	S5	C		C	X	X					
Sanguinaria canadensis	Bloodroot	5	3					G5	N5	S5	C		C	X	X					
Setaria pumila	Yellow Foxtail		0					GNR	NNA	SNA	IC		IX	X	X					
Solanum dulcamara	Bittersweet Nightshade		0					GNR	NNA	SNA	IC		IC	X	X		X			
Solanum nigrum	Black Nightshade		0					GNR	NNA	SNA	IR		IR	X	X					
Solidago altissima	Tall Goldenrod	1	3					G5	N5	S5				X	X					
Solidago altissima var. altissima	Eastern Tall Goldenrod	1	3					G5T5	NNR	S5	C		C					X		X
Solidago canadensis	Canada Goldenrod	1	3					G5	N5	S5				X	X					
Solidago canadensis var. canadensis	Canada Goldenrod	1	3					G5T5	N5	S5	C		C	X	X					
Solidago flexicaulis	Zigzag Goldenrod	6	3					G5	N5	S5	C		C	X	X					
Solidago gigantea	Giant Goldenrod	4	-3					G5	N5	S5	C		C	X	X					
Solidago rugosa	Rough-Stemmed Goldenrod	4	0					G5	N5	S5	C		U	X	X					
Sonchus arvensis	Field Sow-Thistle		3					GNR	NNA	SNA	IC		IC	X	X					
Sonchus oleraceus	Common Sow-Thistle		3					GNR	NNA	SNA	IX		IU	X	X					
Sorbus aucuparia	European Mountain-Ash		5					G5	NNA	SNA	IX		IC	X	X					
Spiraea alba	White Meadowsweet	3	-3					G5	N5	S5	C		R	X	X					
Symphyotrichum ericoides	White Heath Aster	4	3					G5	N5	S5				X	X					
Symphyotrichum ericoides var. ericoides	White Heath Aster	4	3					G5T5	N5	S5	C		C	X	X					
Symphyotrichum lanceolatum	Panicled Aster	3	-3					G5	N5	S5	C		C	X	X					
Symphyotrichum lateriflorum	Calico Aster	3	0					G5	N5	S5	C		C	X	X		X			
Symphyotrichum lateriflorum var. lateriflorum	Calico Aster	3	0					G5T5	N5	S5				X	X					
Symphyotrichum novae-angliae	New England Aster	2	-3					G5	N5	S5	C		C	X	X					X
Symphyotrichum puniceum	Purple-Stemmed Aster	6	-5					G5	NNR	S5	C		C	X	X					
Symphyotrichum puniceum var. puniceum	Purple-Stemmed Aster	6	-5					G5T5	NNR	S5				X	X					
Syringa vulgaris	Common Lilac		5					GNR	NNA	SNA	IX		IC	X	X					
Tanacetum vulgare	Common Tansy		5					GNR	NNA	SNA	IX		IU	X	X					X
Taraxacum officinale	Common Dandelion		3					G5	N5	SNA	IC		IC	X	X					
Taxus canadensis	Canada Yew	7	3					G5	N5	S4	U		U	X	X					
Thuja occidentalis	Eastern White Cedar	4	-3					G5	N5	S5	C		C	X	X					
Tilia americana	Basswood	4	3					G5	N5	S5	C		C	X	X					
Tilia cordata	Little-Leaved Linden		5					GNR	NNA	SNA	IR		IR	X	X					
Toxicodendron radicans	Poison Ivy	2	0					G5	N5	S5				X	X					
Toxicodendron radicans var. rydbergii	Western Poison Ivy	2	0					G5	N5	S5	C		C	X	X					
Trifolium aureum	Yellow Clover		5					GNR	NNA	SNA	IX		IR	X	X					
Trifolium hybridum	Alsike Clover		3					GNR	NNA	SNA	IC		IC							X
Trifolium repens	White Clover		3					GNR	NNA	SNA	IC		IC	X	X					
Trillium erectum	Red Trillium	6	3					G5	N5	S5	C		C	X	X					
Trillium grandiflorum	White Trillium	5	3					G5	N5	S5	C		C	X	X					
Ligustrum vulgare	European Privet		3					GNR	NNA	SNA	IX		IU	X	X	X				
Lonicera x bella	Showy Fly-Honeysuckle		3					GNA	NNA	SNA	hyb		hyb			X				

Appendix C: Vascular Plant List

Scientific Name	Common Name	Coefficient of Conservatism	Coefficient of Wetness	SARO Status	COSSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	Carolinian Zone Status (Oldham 2017)	Carolinian Zone Restricted (Oldham 2017)	Ecodistrict 7E4 (Oldham 2017)	Background Screening	City of Mississauga's Natural Areas Survey	Unit 1 FOD5-2	Unit 2 SWS2-2	Unit 3 CUM1-1	Unit 4 CUW1	Unit 5 CVC
Typha latifolia	Broad-Leaved Cattail	1	-5					G5	N5	S5	C		C	X	X					
Rhamnus cathartica	European Buckthorn		0					GNR	NNA	SNA	IC		IC	X	X	X	X			
Ulmus pumila	Siberian Elm		3					GNR	NNA	SNA	IX		IC	X	X					
Urtica dioica	Stinging Nettle		0					G5	NNR	SNA				X	X					
Verbascum thapsus	Common Mullein		5					GNR	NNA	SNA	IC		IC	X	X					
Verbena hastata	Blue Vervain	4	-3					G5	N5	S5	C		C	X	X					
Verbena stricta	Hoary Vervain	7	5					G5	N4	S4	R		R	X	X					
Veronica anagallis-aquatica	Water Speedwell		-5					GNR	NNA	SNA	IX		IU	X	X					
Viburnum acerifolium	Maple-Leaved Viburnum	6	5					G5	N5	S5	C		C	X	X					
Viburnum lantana	Wayfaring Viburnum		5					GNR	NNA	SNA	IX		IC	X	X					
Viburnum lantanoides	Hobblebush	8	0					G5	N5	S5	R		R	X	X					
Viburnum lentago	Nannyberry	4	0					G5	N5	S5	C		C	X	X					
Viburnum opulus	Cranberry Viburnum	5	-3					G5	N5	S5				X	X					
Viburnum opulus var. americanum	Highbush Cranberry	5	-3					G5T5	N5	S5				X	X					
Tussilago farfara	Coltsfoot		3					GNR	NNA	SNA	IC		IC	X	X	X				
Vicia cracca	Tufted Vetch		5					GNR	NNA	SNA	IX		IC	X	X					
Vinca minor	Lesser Periwinkle		5					GNR	NNA	SNA	IX		IC	X	X					
Viola pubescens	Yellow Violet	5	3					G5	N5	S5	C		C	X	X					
Viola pubescens var. pubescens	Downy Yellow Violet	5	3					G5T5	N5	S5				X	X					
Viburnum opulus var. opulus	Cranberry Viburnum		-3					G5TNR	NNA	SNA	IX		IC			X				
Xanthium strumarium	Rough Cockleburr	2	0					G5	N5	S5	C		C	X	X					

APPENDIX D:

Wildlife Species List

Appendix D: Wildlife List

Taxon Group	Scientific Name	Common Name	SARO Status	COSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	MBCA Protected Birds	Background Screening	City of Mississauga's Natural Areas Survey	Incidentals
Amphibians	*Anaxyrus americanus*	American Toad					G5	N5	S5		X		
Amphibians	*Lithobates clamitans*	Green Frog					G5	N5	S5		X	X	
Amphibians	*Plethodon cinereus*	Eastern Red-backed Salamander					G5	N5	S5		X	X	
Birds	*Accipiter cooperii*	Cooper's Hawk	NAR			NAR	G5	N5B,N5N	S4		X	X	
Birds	*Accipiter striatus*	Sharp-shinned Hawk	NAR			NAR	G5	N5B,N5N	S5		X	X	
Birds	*Actitis macularius*	Spotted Sandpiper					G5	N5B,N3N	S5B	X	X	X	
Birds	*Agelaius phoeniceus*	Red-winged Blackbird					G5	N5B,N5N	S5		X	X	
Birds	*Aix sponsa*	Wood Duck					G5	N5B,N4N	S5B,S3N	X	X	X	
Birds	*Anas crecca*	Green-winged Teal					G5	N5B,N5N	S4B,S4N,S5M	X	X	X	
Birds	*Anas platyrhynchos*	Mallard					G5	N5B,N5N	S5	X	X	X	
Birds	*Anas rubripes*	American Black Duck					G5	N5B,N5N	S4	X	X	X	
Birds	*Archilochus colubris*	Ruby-throated Hummingbird					G5	N5B	S5B	X	X	X	
Birds	*Ardea herodias*	Great Blue Heron					G5	N5B,N4N	S4	X	X	X	
Birds	*Aythya affinis*	Lesser Scaup					G5	N5B,N5N	S4B,S4N,S5M	X	X	X	
Birds	*Aythya americana*	Redhead					G5	N5B,N5N	S2B,S4N	X	X	X	
Birds	*Aythya marila*	Greater Scaup					G5	N5B,N5N	S4B,S4N,S5M	X	X	X	
Birds	*Baeolophus bicolor*	Tufted Titmouse					G5	N4	S3	X	X	X	
Birds	*Bombycilla cedrorum*	Cedar Waxwing					G5	N5B,N5N	S5	X	X	X	
Birds	*Branta bernicla*	Brant					G5	N5B,N3N	S4M	X	X	X	
Birds	*Branta canadensis*	Canada Goose					G5	N5B,N5N	S5	X	X	X	
Birds	*Bubo virginianus*	Great Horned Owl					G5	N5	S4		X	X	
Birds	*Bucephala albeola*	Bufflehead					G5	N5B,N5N	S5	X	X	X	
Birds	*Bucephala clangula*	Common Goldeneye					G5	N5B,N5N	S5	X	X	X	
Birds	*Bucephala islandica*	Barrow's Goldeneye					G5	N5B,N4N,N4N5M	S2N	X	X	X	
Birds	*Buteo jamaicensis*	Red-tailed Hawk	NAR			NAR	G5	N5B,N5N	S5		X	X	X
Birds	*Butorides virescens*	Green Heron					G5	N4B	S4B	X	X	X	
Birds	*Calidris pusilla*	Semipalmated Sandpiper					G5	N3N5B,N4M	S2B,S4M	X	X	X	
Birds	*Cardinalis cardinalis*	Northern Cardinal					G5	N5	S5	X	X	X	X
Birds	*Cathartes aura*	Turkey Vulture					G5	N5B,N3N	S5B,S3N		X	X	
Birds	*Catharus guttatus*	Hermit Thrush					G5	N5B,N4N	S5B,S4N	X	X	X	
Birds	*Centronyx henslowii*	Henslow's Sparrow	END		END	END	G4	N1B	S1B	X	X		
Birds	*Certhia americana*	Brown Creeper					G5	N5B,N5N	S5	X	X	X	
Birds	*Chaetura pelagica*	Chimney Swift	THR		THR	THR	G4G5	N3B,N4M	S3B	X	X	X	
Birds	*Charadrius vociferus*	Killdeer					G5	N5B,N4N5N	S4B	X	X	X	
Birds	*Chordeiles minor*	Common Nighthawk	SC		SC	SC	G5	N4N5B,N5M	S4B	X	X	X	
Birds	*Cistothorus palustris*	Marsh Wren					G5	N5B,N5N	S4B,S3N	X	X		
Birds	*Clangula hyemalis*	Long-tailed Duck					G5	N5B,N5N	S3B,S5N	X	X	X	
Birds	*Coccyzus americanus*	Yellow-billed Cuckoo					G5	N4B	S4B	X	X		
Birds	*Colaptes auratus*	Northern Flicker					G5	N5B,N5N	S5	X	X	X	X
Birds	*Columba livia*	Rock Pigeon					G5	NNA	SNA		X	X	
Birds	*Contopus virens*	Eastern Wood-pewee	SC		SC	SC	G5	N4B	S4B	X	X	X	
Birds	*Corthylio calendula*	Ruby-crowned Kinglet					G5	N5B,N5N	S5B,S3N	X	X	X	
Birds	*Corvus brachyrhynchos*	American Crow					G5	N5B,N5N	S5		X	X	X
Birds	*Cyanocitta cristata*	Blue Jay					G5	N5	S5		X	X	

Taxon Group	Scientific Name	Common Name	SARO Status	COSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	MBCA Protected Birds	Background Screening	City of Mississauga's Natural Areas Survey	Incidentals
Birds	*Cygnus buccinator*	Trumpeter Swan	NAR			NAR	G4	N4N5B,N5N	S4	X	X	X	
Birds	*Cygnus olor*	Mute Swan					G5	NNA	SNA		X	X	
Birds	*Dolichonyx oryzivorus*	Bobolink	THR		THR	SC	G5	N5B,N4N5M	S4B	X	X		
Birds	*Dryobates pubescens*	Downy Woodpecker					G5	N5	S5	X	X	X	X
Birds	*Dryobates villosus*	Hairy Woodpecker					G5	N5	S5	X	X	X	
Birds	*Dryocopus pileatus*	Pileated Woodpecker					G5	N5	S5	X	X		X
Birds	*Dumetella carolinensis*	Gray Catbird					G5	N5B,N3N	S5B,S3N	X	X	X	
Birds	*Empidonax minimus*	Least Flycatcher					G5	N5B	S5B	X	X	X	
Birds	*Empidonax traillii*	Willow Flycatcher					G5	N5B	S4B	X	X	X	
Birds	*Falco peregrinus*	Peregrine Falcon	SC			NAR	G4	N3N4B,N2N,N3N4M	S4		X	X	X
Birds	*Falco sparverius*	American Kestrel					G5	N5B,N4N	S4		X	X	
Birds	*Gavia immer*	Common Loon	NAR			NAR	G5	N5B,N5N	S5	X	X	X	
Birds	*Geothlypis philadelphia*	Mourning Warbler					G5	N5B	S5B	X	X	X	
Birds	*Geothlypis trichas*	Common Yellowthroat					G5	N5B,N3N	S5B,S3N	X	X	X	
Birds	*Haemorhous mexicanus*	House Finch					G5	N5	SNA		X	X	
Birds	*Hirundo rustica*	Barn Swallow	SC		THR	SC	G5	N4N5B	S4B	X	X	X	
Birds	*Hydroprogne caspia*	Caspian Tern	NAR			NAR	G5	N3N4B,N5M	S3B,S5M	X	X	X	
Birds	*Icterus galbula*	Baltimore Oriole					G5	N5B	S4B	X	X	X	
Birds	*Junco hyemalis*	Dark-eyed Junco					G5	N5B,N5N	S5	X	X	X	
Birds	*Larus argentatus*	Herring Gull					G5	N5B,N5N	S4B,S5N	X	X	X	
Birds	*Larus delawarensis*	Ring-billed Gull					G5	N5B,N5N	S5	X	X	X	
Birds	*Larus marinus*	Great Black-backed Gull					G5	N5B,N5N	S1B,S4N	X	X	X	
Birds	*Leiothlypis ruficapilla*	Nashville Warbler					G5	N5B	S5B	X	X	X	
Birds	*Mareca americana*	American Wigeon					G5	N5B,N5N	S4B,S4N,S5M	X	X	X	
Birds	*Mareca strepera*	Gadwall					G5	N5B,N5N	S4B,S4N,S5M	X	X	X	
Birds	*Megaceryle alcyon*	Belted Kingfisher					G5	N5B,N4N	S5B,S4N		X	X	
Birds	*Megascops asio*	Eastern Screech-Owl	NAR			NAR	G5	N4	S4		X		
Birds	*Melanerpes carolinus*	Red-bellied Woodpecker					G5	N5	S5	X	X		
Birds	*Melanitta deglandi*	White-winged Scoter					G5	N5B,N5N	S4B,S5N	X	X	X	
Birds	*Meleagris gallopavo*	Wild Turkey					G5	N5	S5		X		
Birds	*Melospiza melodia*	Song Sparrow					G5	N5B,N5N	S5	X	X	X	X
Birds	*Mergus merganser*	Common Merganser					G5	N5B,N5N	S5	X	X	X	
Birds	*Mergus serrator*	Red-breasted Merganser					G5	N5B,N5N	S5	X	X	X	
Birds	*Mimus polyglottos*	Northern Mockingbird					G5	N4B,N4N	S4	X	X	X	
Birds	*Mniotilta varia*	Black-and-white Warbler					G5	N5B	S5B	X	X	X	
Birds	*Molothrus ater*	Brown-headed Cowbird					G5	N5B,N5N	S5		X	X	
Birds	*Myiarchus crinitus*	Great Crested Flycatcher					G5	N5B	S5B	X	X	X	
Birds	*Nannopterum auritum*	Double-crested Cormorant	NAR			NAR	G5	N5B,N4N	S5B,S4N		X	X	
Birds	*Nycticorax nycticorax*	Black-crowned Night-heron					G5	N4B,N2N	S3B,S2N,S4M	X	X	X	
Birds	*Oxyura jamaicensis*	Ruddy Duck					G5	N5B,N5N	S3B,S4N,S5M	X	X	X	
Birds	*Parkesia noveboracensis*	Northern Waterthrush					G5	N5B	S5B	X	X	X	
Birds	*Passer domesticus*	House Sparrow					G5	NNA	SNA		X	X	
Birds	*Passerculus sandwichensis*	Savannah Sparrow					G5	N5B,N4N	S5B,S3N	X	X	X	
Birds	*Passerella iliaca*	Fox Sparrow					G5	N5B,N4N	S5B,S3N	X	X	X	

Taxon Group	Scientific Name	Common Name	SARO Status	COSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	MBCA Protected Birds	Background Screening	City of Mississauga's Natural Areas Survey	Incidentals
Birds	*Passerina cyanea*	Indigo Bunting					G5	N5B	S5B	X	X	X	
Birds	*Petrochelidon pyrrhonota*	Cliff Swallow					G5	N5B	S4S5B	X	X	X	
Birds	*Pheucticus ludovicianus*	Rose-breasted Grosbeak					G5	N5B	S5B	X	X	X	
Birds	*Pinicola enucleator*	Pine Grosbeak					G5	N5	S4B,S5N	X	X	X	
Birds	*Pluvialis squatarola*	Black-bellied Plover					G5	N3N4B,N5N	S4M	X	X	X	
Birds	*Podiceps auritus*	Horned Grebe	SC			SC	G5	N5B,N4N5N	S1B,S3N,S4M	X	X	X	
Birds	*Podiceps grisegena*	Red-necked Grebe	NAR			NAR	G5	N5B,N5N	S3	X	X	X	
Birds	*Podilymbus podiceps*	Pied-billed Grebe					G5	N5B,N4N	S4B,S2N	X	X	X	
Birds	*Poecile atricapillus*	Black-capped Chickadee					G5	N5	S5	X	X	X	
Birds	*Polioptila caerulea*	Blue-gray Gnatcatcher					G5	N4B	S4B	X	X	X	
Birds	*Progne subis*	Purple Martin					G5	N5B	S3B	X	X		
Birds	*Protonotaria citrea*	Prothonotary Warbler	END		END	END	G5	N1B	S1B	X	X	X	
Birds	*Quiscalus quiscula*	Common Grackle					G5	N5B,N5N	S5	X	X	X	X
Birds	*Rallus limicola*	Virginia Rail					G5	N5B,NUN	S4S5B	X	X		
Birds	*Regulus satrapa*	Golden-crowned Kinglet					G5	N5B,N5N	S5	X	X	X	
Birds	*Riparia riparia*	Bank Swallow	THR		THR	THR	G5	N4B,N5M	S4B	X	X	X	
Birds	*Sayornis phoebe*	Eastern Phoebe					G5	N5B	S5B	X	X	X	
Birds	*Scolopax minor*	American Woodcock					G5	N5B	S4B	X	X	X	
Birds	*Seiurus aurocapilla*	Ovenbird					G5	N5B	S5B	X	X	X	
Birds	*Setophaga caerulescens*	Black-throated Blue Warbler					G5	N5B	S5B	X	X	X	
Birds	*Setophaga coronata*	Yellow-rumped Warbler					G5	N5B,N4N	S5B,S4N	X	X	X	
Birds	*Setophaga magnolia*	Magnolia Warbler					G5	N5B	S5B	X	X	X	
Birds	*Setophaga palmarum*	Palm Warbler					G5	N5B	S5B	X	X	X	
Birds	*Setophaga palmarum hypochrysea*	Eastern Palm Warbler					G5TU	N5B	S1B	X	X	X	
Birds	*Setophaga pensylvanica*	Chestnut-sided Warbler					G5	N5B	S5B	X	X	X	
Birds	*Setophaga petechia*	Yellow Warbler					G5	N5B	S5B	X	X	X	
Birds	*Setophaga pinus*	Pine Warbler					G5	N5B,N3N	S5B,S3N	X	X	X	
Birds	*Setophaga ruticilla*	American Redstart					G5	N5B	S5B	X	X	X	
Birds	*Setophaga striata*	Blackpoll Warbler					G5	N5B	S5B	X	X	X	
Birds	*Setophaga tigrina*	Cape May Warbler					G5	N5B	S5B	X	X	X	
Birds	*Setophaga virens*	Black-throated Green Warbler					G5	N5B	S5B	X	X	X	
Birds	*Sitta canadensis*	Red-breasted Nuthatch					G5	N5	S5	X	X	X	
Birds	*Sitta carolinensis*	White-breasted Nuthatch					G5	N5	S5	X	X	X	
Birds	*Somateria spectabilis*	King Eider					G5	NUB,NUN,NUM	SHB,S2N	X	X	X	
Birds	*Spatula discors*	Blue-winged Teal					G5	N5B	S3B,S4M	X	X	X	
Birds	*Sphyrapicus varius*	Yellow-bellied Sapsucker					G5	N5B,N3N	S5B,S3N	X	X	X	
Birds	*Spinus pinus*	Pine Siskin					G5	N5B,N5N	S5	X	X	X	
Birds	*Spinus tristis*	American Goldfinch					G5	N5B,N5N	S5	X	X	X	X
Birds	*Spizella passerina*	Chipping Sparrow					G5	N5B	S5B,S3N	X	X	X	
Birds	*Spizella pusilla*	Field Sparrow					G5	N4B	S4B,S3N	X	X	X	
Birds	*Spizelloides arborea*	American Tree Sparrow					G5	N5B,N5N	S5	X	X	X	
Birds	*Stelgidopteryx serripennis*	Northern Rough-winged Swallow					G5	N5B	S4B	X	X	X	
Birds	*Sterna hirundo*	Common Tern	NAR			NAR	G5	N5B,NUN	S4B	X	X	X	
Birds	*Sturnella magna*	Eastern Meadowlark	THR		THR	THR	G5	N4B,NUM	S4B,S3N	X	X	X	

Appendix D: Wildlife List

Taxon Group	Scientific Name	Common Name	SARO Status	COSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	MBCA Protected Birds	Background Screening	City of Mississauga's Natural Areas Survey	Incidentals
Birds	*Sturnus vulgaris*	European Starling					G5	NNA	SNA		X	X	X
Birds	*Tachycineta bicolor*	Tree Swallow					G5	N5B	S4S5B	X	X	X	
Birds	*Thryothorus ludovicianus*	Carolina Wren					G5	N4	S4	X	X	X	
Birds	*Toxostoma rufum*	Brown Thrasher					G5	N5B	S4B	X	X	X	
Birds	*Troglodytes aedon*	House Wren					G5	NNRB	S5B	X	X	X	
Birds	*Troglodytes hiemalis*	Winter Wren					G5	N5B,N4N	S5B,S4N	X	X	X	
Birds	*Turdus migratorius*	American Robin					G5	N5B,N5N	S5	X	X	X	
Birds	*Tyrannus tyrannus*	Eastern Kingbird					G5	N5B	S4B	X	X	X	
Birds	*Vermivora chrysoptera*	Golden-winged Warbler	SC		THR	THR	G4	N3B	S3B	X	X	X	
Birds	*Vermivora cyanoptera*	Blue-winged Warbler					G5	N4B	S4B	X	X	X	
Birds	*Vireo gilvus*	Warbling Vireo					G5	N5B	S5B	X	X	X	
Birds	*Vireo olivaceus*	Red-eyed Vireo					G5	N5B,N5N	S5B	X	X	X	
Birds	*Vireo philadelphicus*	Philadelphia Vireo					G5	N5B	S5B	X	X	X	
Birds	*Zenaida macroura*	Mourning Dove					G5	N5B,N5N	S5	X	X	X	X
Birds	*Zonotrichia leucophrys*	White-crowned Sparrow					G5	N5B,N5N	S5B,S3N	X	X	X	
Fishes	*Scardinius erythrophthalmus*	Rudd					G5	NNA	SNA		X	X	
Insects	*Aetheca wagneri*	a flea					GNR	N5	SU		X	X	
Insects	*Ancyloxypha numitor*	Least Skipper					G5	N5	S5		X		
Insects	*Atyphloceras bishopi*	a flea					GNR	NU	SU		X	X	
Insects	*Battus philenor*	Pipevine Swallowtail					G5	NNA	SNA		X		
Insects	*Catallagia borealis*	a flea					GNR	NU	SU		X	X	
Insects	*Cediopsylla simplex*	a flea					GNR	NNR	SU		X	X	
Insects	*Celastrina lucia*	Northern Azure					G5	N5	S5		X		
Insects	*Celastrina neglecta*	Summer Azure					G5	N5	S5		X		
Insects	*Ceratophyllus celsus*	a flea					GNR	N4	S4		X	X	
Insects	*Ceratophyllus diffinis*	a flea					GNR	NU	SU		X	X	
Insects	*Ceratophyllus gallinae*	a flea					GNR	NNA	SNA		X	X	
Insects	*Ceratophyllus garei*	a flea					GNR	NU	SU		X	X	
Insects	*Ceratophyllus idius*	a flea					GNR	NU	SU		X	X	
Insects	*Ceratophyllus rossittensis*	a flea					GNR	NU	SU		X	X	
Insects	*Ceratophyllus styx*	a flea					GNR	NU	SU		X	X	
Insects	*Ceratophyllus vison*	a flea					GNR	N5	S5		X	X	
Insects	*Cercyonis pegala*	Common Wood-Nymph					G5	N5	S5		X		
Insects	*Chaetopsylla lotoris*	a flea					GNR	NU	SU		X	X	
Insects	*Coenonympha california*	Common Ringlet					G5	N5	S5		X		
Insects	*Colias eurytheme*	Orange Sulphur					G4G5	N5B	S5		X		
Insects	*Colias philodice*	Clouded Sulphur					G5	N5	S5		X		
Insects	*Conorhinopsylla stanfordi*	a flea					GNR	NNR	SU		X	X	
Insects	*Corrodopsylla curvata*	a flea					GNR	N4N5	S4		X	X	
Insects	*Ctenocephalides canis*	a flea					GNR	NNA	SNA		X	X	
Insects	*Ctenocephalides felis*	a flea					GNR	NNA	SNA		X	X	
Insects	*Ctenophthalmus pseudagyrtes*	a flea					GNR	N5	S5		X	X	
Insects	*Cupido comyntas*	Eastern Tailed Blue					G5	N5	S5		X		
Insects	*Danaus plexippus*	Monarch	SC		END	END	G4	N3B,NUM	S4B,S2N		X		

Taxon Group	Scientific Name	Common Name	SARO Status	COSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	MBCA Protected Birds	Background Screening	City of Mississauga's Natural Areas Survey	Incidentals
Insects	*Doratopsylla blarinae*	a flea					GNR	NNR	S4		X	X	
Insects	*Epargyreus clarus*	Silver-spotted Skipper					G5	N5	S4		X		
Insects	*Epitedia faceta*	a flea					GNR	NNR	SU		X	X	
Insects	*Epitedia wenmanni*	a flea					GNR	N5	S5		X	X	
Insects	*Erynnis baptisiae*	Wild Indigo Duskywing					G5	N4	S4		X		
Insects	*Eumolpianus eumolpi*	a flea					GNR	N5	S5		X	X	
Insects	*Euphydryas phaeton*	Baltimore Checkerspot					G4	N4N5	S4		X		
Insects	*Feniseca tarquinius*	Harvester					G5	N5	S4		X		
Insects	*Glaucopsyche lygdamus*	Silvery Blue					G5	N5	S5		X		
Insects	*Heraclides cresphontes*	Giant Swallowtail					G5	N4	S4		X		
Insects	*Hylephila phyleus*	Fiery Skipper					G5	NNA	SNA		X		
Insects	*Hystrichopsylla dippiei*	a flea					GNR	NU	SU		X	X	
Insects	*Hystrichopsylla tahavuana*	a flea					GNR	NNR	SU		X	X	
Insects	*Junonia coenia*	Common Buckeye					G5	NNA	SNA		X		
Insects	*Libytheana carinenta*	American Snout					G5	NNA	SNA		X		
Insects	*Limenitis archippus*	Viceroy					G5	N5	S5		X		
Insects	*Limenitis arthemis astyanax*	Red-spotted Purple					G5T5	N5	S5		X		
Insects	*Megabothris acerbus*	a flea					GNR	NNR	S4		X	X	
Insects	*Megabothris asio*	a flea					GNR	N5	S5		X	X	
Insects	*Megabothris atrox*	a flea					GNR	NU	SU		X	X	
Insects	*Megabothris quirini*	a flea					GNR	N5	S5		X	X	
Insects	*Megisto cymela*	Little Wood-Satyr					G5	N5	S5		X		
Insects	*Myodopsylla insignis*	a flea					GNR	NU	SU		X	X	
Insects	*Nearctopsylla genalis*	a flea					GNR	NU	SU		X	X	
Insects	*Nearctopsylla grahami*	a flea					GNR	NNR	SU		X	X	
Insects	*Nosopsyllus fasciatus*	a flea					GNR	NNA	SNA		X	X	
Insects	*Nymphalis antiopa*	Mourning Cloak					G5	N5	S5		X		
Insects	*Nymphalis l-album*	Compton Tortoiseshell					G5	N5	S5		X		
Insects	*Opisodasys pseudarctomys*	a flea					GNR	N5	SU		X	X	
Insects	*Orchopeas caedens*	a flea					GNR	N5	S5		X	X	
Insects	*Orchopeas howardi*	a flea					GNR	NNR	S5		X	X	
Insects	*Orchopeas leucopus*	a flea					GNR	N5	S5		X	X	
Insects	*Oropsylla arctomys*	a flea					GNR	N5	S5		X	X	
Insects	*Papilio polyxenes*	Black Swallowtail					G5	N5	S5		X		
Insects	*Peromyscopsylla catatina*	a flea					GNR	N4	SU		X	X	
Insects	*Peromyscopsylla hamifer*	a flea					GNR	NU	SU		X	X	
Insects	*Peromyscopsylla hesperomys*	a flea					GNR	NU	SU		X	X	
Insects	*Peromyscopsylla scotti*	a flea					GNR	NNR	SU		X	X	
Insects	*Phyciodes cocyta*	Northern Crescent					G5	N5	S5		X		
Insects	*Phyciodes tharos*	Pearl Crescent					G4G5	N4N5	S4		X		
Insects	*Pieris oleracea*	Mustard White					G5	N5	S4		X		
Insects	*Pieris rapae*	Cabbage White					G5	NNA	SNA		X		
Insects	*Polites themistocles*	Tawny-edged Skipper					G5	N5	S5		X		
Insects	*Polygonia comma*	Eastern Comma					G5	N5	S5		X		

Appendix D: Wildlife List

Taxon Group	Scientific Name	Common Name	SARO Status	COSARO Status	SARA Status	COSEWIC Status	G-Rank	N-Rank	S-Rank	MBCA Protected Birds	Background Screening	City of Mississauga's Natural Areas Survey	Incidentals
Insects	*Polygonia interrogationis*	Question Mark					G5	N5B,N4M	S5		X		
Insects	*Pulex irritans*	a flea					GNR	N4N5	SU		X	X	
Insects	*Satyrium calanus*	Banded Hairstreak					G5	N4N5	S4		X		
Insects	*Stenoponia americana*	a flea					GNR	N5	SU		X	X	
Insects	*Tamiophila grandis*	a flea					GNR	NNR	S5		X	X	
Insects	*Tarsopsylla octodecimdentata*	a flea					GNR	N4	SU		X	X	
Insects	*Thymelicus lineola*	European Skipper					G5	NNA	SNA		X		
Insects	*Vanessa atalanta*	Red Admiral					G5	N5B	S5B		X		
Insects	*Vanessa cardui*	Painted Lady					G4G5	N5B	S5B		X		
Insects	*Vanessa virginiensis*	American Lady					G5	N5B	S5		X		
Insects	*Xenopsylla cheopis*	a flea					GNR	NNA	SNA		X	X	
Mammals	*Canis latrans*	Coyote					G5	N5	S5		X	X	
Mammals	*Castor canadensis*	Beaver					G5	N5	S5		X	X	
Mammals	*Mephitis mephitis*	Striped Skunk					G5	N5	S5		X	X	
Mammals	*Neogale vison*	American Mink					G5	N5	S4		X	X	
Mammals	*Odocoileus virginianus*	White-tailed Deer					G5	N5	S5		X	X	
Mammals	*Pekania pennanti*	Fisher					G5	N5	S5		X	X	
Mammals	*Procyon lotor*	Northern Raccoon					G5	N5	S5		X	X	
Mammals	*Sciurus carolinensis*	Eastern Gray Squirrel					G5	N5	S5		X	X	
Mammals	*Sylvilagus floridanus*	Eastern Cottontail					G5	N5	S5		X	X	
Mammals	*Tamias striatus*	Eastern Chipmunk					G5	N5	S5		X	X	
Mammals	*Tamiasciurus hudsonicus*	Red Squirrel					G5	N5	S5		X	X	
Mammals	*Vulpes vulpes*	Red Fox					G5	N5	S5		X	X	
Molluscs	*Strophitus undulatus*	Creeper					G5	N5	S5		X	X	
Reptiles_Turtles	*Chelydra serpentina*	Snapping Turtle	SC		SC	SC	G4G5	N4	S4		X		
Reptiles_Turtles	*Chrysemys picta marginata*	Midland Painted Turtle			SC	SC	G5T5	N4	S4		X		
Reptiles_Turtles	*Thamnophis sirtalis sirtalis*	Eastern Gartersnake					G5T5	N5	S5		X	X	

APPENDIX E:

Photo Page

PHOTO 1: Facing east from the Site at the eastern half (i.e., front) of the Site with existing building in the distance.

PHOTO 2: Facing south from the Site at the western half (i.e., back) of the Site.

PHOTO 3: Facing southwest at the edge of the Dry-Fresh Sugar Maple-Beech Deciduous Forest Type (FOD5-2) woodland feature adjacent to the Site.

PHOTO 4: Facing west at the edge of the Site where Common Reed (*Phragmites australis*) grows abundantly.

PHOTO 5: Looking downwards near the base of Tree 143 at the gravel at the edge of the FOD5-2 woodland feature.

PHOTO 6: Facing southwest from within the FOD5-2 woodland. Sugar Maple (*Acer saccharum*) dominant but with higher abundance of Eastern Hemlock (*Tsuga canadensis)* in south end of woodland.

PHOTO 7: Facing west from the FOD5-2 woodland at a 75 cm diameter at breast height (DBH) Red Maple (*Acer rubrum*).

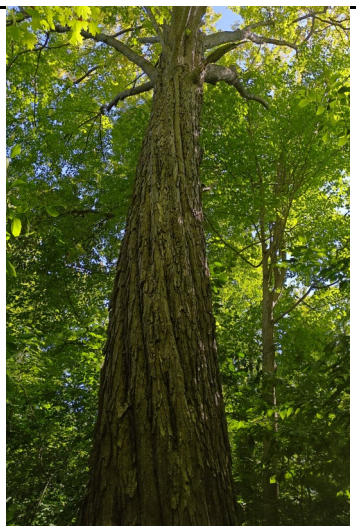

PHOTO 8: Looking upwards at a 1 m DBH Sugar Maple (*Acer saccharum*), not open grown; however, has minimal canopy competition.

PHOTO 9: Facing northeast at an 80 cm DBH fallen American Beech (*Fagus grandifolia*).

PHOTO 10: Facing north at a 1 m DBH fallen Sugar Maple and abundant garbage dumping.

PHOTO 11: Looking southwest near the Site adjacent edge of the woodland dominated by Glossy Buckthorn (*Frangula alnus*) and European Buckthorn (*Rhamnus cathartica*).

PHOTO 12: Looking west at the abundant snags found within the FOD5-2 woodland. Beech and Ash trees appeared to have Beach Bark Disease and Emerald Ash Borer damage.

PHOTO 13: Facing northeast at a disturbed open area found at the edge of the FOD5-2 woodland near the encroachment area.

PHOTO 14: Evidence of spring flooding and moss line in the Green Ash Mineral Deciduous Swamp Type (SWD2-2) community.

PHOTO 15: Facing northeast from the SWD2-2 swamp with abundant fallen/downed Green Ash (*Fraxinus pennsylvanica*) trees.

APPENDIX F:

Species at Risk and Species of Conservation Concern Screening

Species at Risk Screening Table

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
BIRDS	*Centronyx henslowii*	Henslow's Sparrow	S1B	END	END	The Henslow's Sparrow has also been found in abandoned farm fields, pastures, and wet meadows. It tends to avoid fields that have been grazed or are crowded with trees and shrubs. It prefers extensive, dense, tall grasslands where it can more easily conceal its small ground nest. In Ontario, the Henslow's Sparrow lives in open fields with tall grasses, flowering plants, and a few scattered shrubs. It was once fairly common in scattered areas of suitable habitat south of the Canadian Shield. However, steep declines since the 1960s have all but wiped this bird out as a breeding species in Ontario. A few are still seen each spring at migration hotspots such as Point Pelee National Park, and a few may breed at selected locations (MECP, 2021).	Moderate	None	Low Species not observed during field investigation. No open fields or meadow habitats within the Site. A cultural old field meadow is present on the east side Hazelhurst Road, within the Study Area which may provide suitable habitat for this species.	None anticipated Species are not anticipated to be present within the Site, and the Site lacks suitable meadow habitats. Potential suitable meadow habitat is present within the Study Area. As the proposed development is limited to the Site, it is anticipated potential habitat within the Study Area will not be impacted. Thus, this species will not be discussed further.
	Chaetura pelagica	Chimney Swift	S3B	THR	THR	Found in and around urban settlements where they nest and roost in chimneys and other manmade structures (MECP, 2024).	Low	Low	Low The existing vacant building was examined for nests or suitable nest structures. None were observed.	None anticipated The existing vacant building was examined for nests or suitable nest structures. None were observed. The building is anticipated to be retained on the Site.

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
	Dolichonyx oryzivorus	Bobolink	S4B	THR	THR	Bobolinks nest in large, open grasslands such as hayfields, meadows, and fallow fields, preferring patches at least 10 ha in size, with optimal densities in fields greater than 20 ha and best success in those greater than 50 ha (OMNR, 2000; MECP, 2024). They select areas with dense ground cover, grass heights of 25 to 50 cm, moderate litter depth (2 to 5 cm), minimal shrub cover (greater than 25%), and prefer high grass-to-forb ratios, avoiding fields within 25 to 75 m of forest edges. Nesting success is highest in older hayfields (at least 8 years) cut after mid-July (MECP, 2024). Though they avoid row crops, Bobolinks may nest in large winter wheat or rye fields in southwestern Ontario when underplanted with clover or alfalfa or bisected by grassy wet sections (McCracken et al., 2013). Found throughout southern Ontario, from Windsor to Sault Ste. Marie and east to Cornwall. Also present in Timiskaming, Cochrane, Thunder Bay, and Rainy River districts (MECP, 2024).	Low	None	Low Species not observed during field investigation. No open grassland habitats within the Site. While meadowed habitat is present within the Study Area, no large patches 10 ha or larger in size of meadow in the vicinity of the Study Area. Cultural meadow in the Study Area is approximately 1.5 ha, thus lowering this species' habitat potential and presence.	None anticipated Species are not anticipated to be present within the Site, and the Site lacks suitable meadow habitats. Species are not anticipated to be present within the Study Area as meadow habitat of appropriate size is not present. Thus, species will not be discussed further.
	Protonotaria citrea	Prothonotary Warbler	S1B	END	END	Area sensitive species preferring 100 ha of flooded or swampy woodlands with standing or flowing water and more than 25% canopy cover with numerous stumps and snags; stream borders or flooded bottomlands; soft, dead trees with DBH greater than 10 cm; Carolinian species. A very rare breeding species restricted to a small handful (less than ten) sites in the Carolinian Zone. Current population has remained relatively stable since the 1990s at around 25 to 50 individuals. Historically, this species was apparently more abundant but was never thought to be common in Ontario (MNRF, n.d.).	Low	None	Low Habitat area of swamp not close to sufficient size of 100 ha. Species record is not recognized by NHIC.	None anticipated Likelihood of species presence is low and the Unit 2 swamp is not anticipated to be impacted.

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	Hirundo rustica	Bank Swallow	S4B	THR	THR	Bank Swallows nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits or former ones where the banks remain suitable. They breed in colonies ranging from several to a few thousand pairs (MNRF, 2014).	None	None	None Species not observed during field investigation. No vertical faces in silt or sand deposits were observed. Further, no river or lakes are present within the Site or Study Area to provide suitable banks for colonies.	None anticipated Species are not anticipated to be present within the Site or Study Area. Suitable habitat is not considered present. Thus, species will not be discussed further.
	Sturnella magna	Eastern Meadowlark	S4B,S3N	THR	THR	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches (MNRF, 2014).	None	None	None No grasslands present.	None anticipated No grasslands present.
VASCULAR PLANTS	*Juglans cinerea*	Butternut	S2?	END	END	In Ontario, Butternut is usually associated with deciduous forests, establishing under canopy openings or along forest edges. It is also found in treed fence lines. It prefers moist, well-drained soil and frequently occurs within the floodplains of streams or small rivers. It is also found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade, and often grows in sunny openings and near forest edges. In Ontario, this species is found throughout the southwest, north to the Bruce Peninsula, and south of the Canadian Shield (MECP, 2024).	Moderate	Low	Low Species not observed during field investigation. The Sugar Maple deciduous forest may provide suitable habitat for this species.	None anticipated Species was not observed within the Site nor along the edges of the deciduous forest on and adjacent to the Site. Species may be present within the adjacent forest further into the interior of the forest or its edges not abutting the Site; however, Butternut not anticipated to be impacted as the proposed development is limited to the Site. Thus, the species will not be discussed further.

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MAMMALS	*Lasiurus borealis*	Eastern Red Bat	S3	END		Roosts solitarily in foliage of deciduous and coniferous trees, often near forest edges. Prefers tall trees with overhead cover and open flight space. Forages in forests, meadows, and fields. Hibernates under leaf litter in winter. Found throughout southern, central, and northern Ontario, including areas north to James Bay (MNRF, n.d.).	Moderate	Low	Low to Moderate A few snags were observed along the edge of the adjacent forest edge on Site. Existing building on Site does not contain roosting habitat potential. Species may be a foraging visitant within the Site. Occasional snags were observed within the adjacent upland Sugar Maple deciduous forest and an abundance of snags were observed within the associated swamp. As such these areas located within the Study Area may provide suitable potential roosting habitat for forest roosting bats.	None anticipated While there may be select removals of observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the active period for bats, it is anticipated that bat species will not be negatively impacted. Abundant bat habitat present within the Study Area will be maintained and not anticipated to be impacted by the proposed development. As such, this species will not be discussed further.

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	Myotis leibii	Eastern Small-footed Myotis	S2S3	END		In the spring and summer, Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. In the winter, these bats hibernate, most often in caves and abandoned mines that remain above zero degrees Celsius. They seem to choose colder and drier sites than similar bats and will return to the same spot each year. Restricted to southern Ontario, with records from Bruce Peninsula, Espanola, Lake Superior Provincial Park, and Pembroke. Limited known hibernation sites (MECP, 2021).	Moderate	Low	Low to Moderate No outcrops or rocky areas were observed. A few snags were observed along the edge of the adjacent forest edge on Site. Existing building on Site does not contain roosting habitat potential. Species may be a foraging visitant within the Site. Occasional snags were observed within the adjacent upland Sugar Maple deciduous forest and an abundance of snags were observed within the associated swamp. As such these areas located within the Study Area may provide suitable potential roosting habitat for forest roosting bats.	None anticipated While there may be select removals of observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the active period for bats, it is anticipated that bat species will not be negatively impacted. Abundant bat habitat present within the Study Area will be maintained and not anticipated to be impacted by the proposed development. As such, this species will not be discussed further.

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	Myotis lucifugus	Little Brown Myotis	S3	END	END	During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Bats can squeeze through very tiny spaces (as small as 6 mm across) and this is how they access many roosting areas. Little Brown Myotis hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing. Widespread across Ontario, from southern regions to the northern boreal forest and Hudson Bay Lowlands. Occupies a variety of forested and built environments (MECP, 2021).	Moderate	Low	Low to Moderate A few snags were observed along the edge of the adjacent forest edge on Site. Existing building on Site does not contain roosting habitat potential. Species may be a foraging visitant within the Site. Occasional snags were observed within the adjacent upland Sugar Maple deciduous forest and an abundance of snags were observed within the associated swamp. As such these areas located within the Study Area may provide suitable potential roosting habitat for forest roosting bats.	None anticipated While there may be select removals of observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the active period for bats, it is anticipated that bat species will not be negatively impacted. Abundant bat habitat present within the Study Area will be maintained and not anticipated to be impacted by the proposed development. As such, this species will not be discussed further.

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	Lasiurus cinereus	Northern Hoary Bat	S3	END		Roosts near tops of coniferous and deciduous trees along forest edges. Forages in clearings near water. Migrates south in fall; some evidence of overwintering in southern Ontario. Widespread across Ontario, from southern regions to the southern tip of James Bay (MNRF, n.d.).	Moderate	Low	Low to Moderate A few snags were observed along the edge of the adjacent forest edge on Site. Existing building on Site does not contain roosting habitat potential. Species may be a foraging visitant within the Site. Occasional snags were observed within the adjacent upland Sugar Maple deciduous forest and an abundance of snags were observed within the associated swamp. As such these areas located within the Study Area may provide suitable potential roosting habitat for forest roosting bats.	None anticipated While there may be select removals of observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the active period for bats, it is anticipated that bat species will not be negatively impacted. Abundant bat habitat present within the Study Area will be maintained and not anticipated to be impacted by the proposed development. As such, this species will not be discussed further.

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	Myotis septentrionalis	Northern Myotis	S3	END	END	Northern Myotis are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines. The Northern Myotis is found throughout forested areas in southern Ontario, to the north shore of Lake Superior and occasionally as far north as Moosonee, and west to Lake Nipigon. Found throughout forested regions of Ontario, including southern, central, and northern areas. Most common in mature deciduous and mixed forests (MECP, 2021).	Moderate	Low	Low to Moderate A few snags were observed along the edge of the adjacent forest edge on Site. Existing building on Site does not contain roosting habitat potential. Species may be a foraging visitant within the Site. Occasional snags were observed within the adjacent upland Sugar Maple deciduous forest and an abundance of snags were observed within the associated swamp. As such these areas located within the Study Area may provide suitable potential roosting habitat for forest roosting bats.	None anticipated While there may be select removals of observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the active period for bats, it is anticipated that bat species will not be negatively impacted. Abundant bat habitat present within the Study Area will be maintained and not anticipated to be impacted by the proposed development. As such, this species will not be discussed further.

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	Lasionycteris noctivagans	Silver-haired Bat	S3	END		Roosts under loose bark or in tree cavities, often in forested areas near water. Forages along forest edges and riparian zones. Some individuals overwinter in southern Ontario. Found throughout forested regions of Ontario, including southern, central, and northern areas. Most common in mature deciduous and mixed forests (MNRF, n.d.).	Moderate	Low	Low to Moderate A few snags were observed along the edge of the adjacent forest edge on Site. Existing building on Site does not contain roosting habitat potential. Species may be a foraging visitant within the Site. Occasional snags were observed within the adjacent upland Sugar Maple deciduous forest and an abundance of snags were observed within the associated swamp. As such these areas located within the Study Area may provide suitable potential roosting habitat for forest roosting bats.	None anticipated While there may be select removals of observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the active period for bats, it is anticipated that bat species will not be negatively impacted. Abundant bat habitat present within the Study Area will be maintained and not anticipated to be impacted by the proposed development. As such, this species will not be discussed further.

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	Perimyotis subflavus	Tri-colored Bat	S3?	END	END	During the summer, the Tri-colored Bat is found in a variety of forested habitats. It forms day roosts and maternity colonies in older forests and occasionally in barns or other structures. They forage over water and along streams in forests. Tri-colored Bats eat flying insects and spiders gleaned from webs. At the end of the summer, they travel to a location where they swarm; it is generally near the cave or underground location where they will overwinter. They overwinter in caves where they typically roost by themselves rather than part of a group. Primarily found in southern Ontario, including Niagara, southwestern Ontario, and eastern regions. Rare and declining, with few known hibernation sites (MNRF, 2016).	Moderate	Low	Low to Moderate A few snags were observed along the edge of the adjacent forest edge on Site. Existing building on Site does not contain roosting habitat potential. Species may be a foraging visitant within the Site. Occasional snags were observed within the adjacent upland Sugar Maple deciduous forest and an abundance of snags were observed within the associated swamp. As such these areas located within the Study Area may provide suitable potential roosting habitat for forest roosting bats.	None anticipated While there may be select removals of observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the active period for bats, it is anticipated that bat species will not be negatively impacted. Abundant bat habitat present within the Study Area will be maintained and not anticipated to be impacted by the proposed development. As such, this species will not be discussed further.

Glossary

Endangered Species Act (ESA)

Extirpated (EXT) – a species that no longer exists in the wild in Ontario but still occurs elsewhere.

Endangered (END) – a species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.

Threatened (THR) – a species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

Special Concern (SC) – a species with characteristics that make it sensitive to human activities or natural events.

Species at Risk Act (SARA)

Extirpated (EXT) – a wildlife species that no longer exists in the wild in Canada but exists elsewhere in the wild.

Endangered (END) – a wildlife species that is facing imminent extirpation or extinction.

Threatened (THR) – a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

Special Concern (SC) – a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Schedule 1 – the official list of wildlife species at risk that are classified as extirpated, endangered, threatened and of special concern.

Schedule 2 – species that have been designated as endangered or threatened and have to be re-assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) using revised criteria.

Schedule 3 – a list of species that were designated as at risk by COSEWIC before SARA came into force in 2003, but which had not yet been reassessed using the updated SARA criteria at that time.

Sub-national Conservation Status Rank (S-rank)

Presumed Extirpated (SX) – species or ecosystem is believed to be extirpated from the jurisdiction (i.e., nation, or state/province). Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered. [equivalent to "Regionally Extinct" in IUCN Red List terminology].

Possibly Extirpated (SH) – Known from only historical records but still some hope of rediscovery. There is evidence that the species or ecosystem may no longer be present in the jurisdiction, but not enough to state this with certainty. Examples of such evidence include (1) that a species has not been documented in approximately 20-40 years in human-dominated landscapes despite some searching and/or some evidence of significant habitat loss or degradation; (2) that a species or ecosystem has been searched for unsuccessfully, but not thoroughly enough to presume that it is no longer present in the jurisdiction.

Critically Imperiled (S1) – at very high risk of extirpation in the jurisdiction due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.

Imperiled (S2) – at high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.

Vulnerable (S3) – at moderate risk of extirpation in the jurisdiction due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

Apparently Secure (S4) – at a fairly low risk of extirpation in the jurisdiction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.

Secure (S5) – at very low or no risk of extirpation in the jurisdiction due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.

Variant S-ranks

Range Rank (S#) – a numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).

Unrankable (SU) – currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

Unranked (SNR) – sub-national conservation status not yet assessed.

Not Applicable (SNA) – a conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., long distance aerial and aquatic migrants, hybrids without conservation value, and non-native species or ecosystems; see Master et al. 2012, Appendix A, pg. 49 for further details).

Not Provided – Species or ecosystem is known to occur in this nation or state/province. Contact the appropriate NatureServe network program for assignment of conservation status.

Breeding Status Qualifiers

Breeding (B) – conservation status refers to the breeding population of the species in the nation or state/province.

Non-breeding (N) – conservation status refers to the non-breeding population of the species in the nation or state/province.

Migrant (M) – migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the nation or state/province.

Species of Special Concern Screening Table

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
BIRDS	*Aythya americana*	Redhead	S2B,S4N	-	-	Shallow cattail/bulrush marshes, lakes and ponds and fens; preferred nesting usually close to shallow water (most within 2 m), but can be found as far as 266 m from water's edge (MNR, n.d.).	None	None	None No cattail marshes present in the Study Area	None anticipated No cattail marshes present in the Study Area
	Baeolophus bicolor	Tufted Titmouse	S3	-	-	Mixed or deciduous forests; moist bottomlands and swamps, orchards; agricultural or urban forested areas, often near birdfeeders; Carolinian forest; nest in natural cavities or woodpecker holes in live or soft dead trees greater than 10 cm DBH; area sensitive, requiring at least 4 ha of shrub and sapling growth near water (MNR, n.d.).	Moderate	None	Moderate The woodland south-west of the site is a suitable deciduous forest with woodpecker cavities. However, the woodland is less than 4 ha in size.	Low The woodland south-west of the site is a suitable, but will be retained in full and therefore habitat is not anticipated to be substantially affected. There is no change in land use that would suggest an increased level of disturbance as compared to previous conditions. Regardless, generally bird friendly design will be implemented as part of mitigation.
	Calidris pusilla	Semipalmated Sandpiper	S2B,S4M	-	-	Rare transient and winter resident in southern Ontario, primarily on Lake Ontario and the Ottawa River. Much rarer in northern Ontario (MNR, n.d.).	None	None	None Lacustrine species restricted to Lake Ontario in the area.	None anticipated Lacustrine species restricted to Lake Ontario in the area.
	Clangula hyemalis	Long-tailed Duck	S3B,S5N	-	-	Very common winter resident on Lake Ontario and less common elsewhere in the province during that season. Fairly common migrant throughout the province, though prefers larger bodies of water (MNR, n.d.).	None	None	None Lacustrine species restricted to Lake Ontario in the area.	None anticipated Lacustrine species restricted to Lake Ontario in the area.

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
	Contopus virens	Eastern Wood-pewee	S4B	SC	SC	Eastern Wood-pewee live in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in intermediate-age mature forest stands with little understory vegetation (MNRF, 2014). The Eastern Wood-pewee is found across most of southern and central Ontario, and in northern Ontario as far north as Red Lake, Lake Nipigon and Timmins (MECP, 2021).	Moderate	None	Moderate Species not observed during field investigation. No forest habitats are present within the Site. Adjacent deciduous forest present within the Study Area may provide suitable habitat for this species.	None anticipated As potential suitable habitat is not considered present, species are not anticipated to be present within the Site. Abundant woodland habitat present within the Study Area is to be maintained and largely unaltered. As such this species' potential habitat within the Study Area is not anticipated to be negatively impacted by the proposed development. Thus, species will not be discussed further.
	Falco peregrinus	Peregrine Falcon	S4	SC	-	Peregrine Falcons usually nest on tall, steep cliff ledges close to large bodies of water. Although most people associate Peregrine Falcons with rugged wilderness, some of these birds have adapted well to city life. Urban Peregrine Falcons raise their young on ledges of tall buildings, even in busy downtown areas. Cities offer the species a good year-round supply of pigeons and starlings to feed on. Although Peregrine Falcons now nest in and around Toronto and several other southern Ontario cities, the majority of Ontario's breeding population is found around Lake Superior in northwestern Ontario (MECP, 2022).	None	None	Observed One Peregrine Falcon was observed flying over the Site. Though no stick nests were observed during field investigation. The Site is situated within an industrial area with no ledges or tall buildings are present within the Site or Study Area. To the north-east, beyond the Study Area, tall cranes and other structures are present that may support nests.	None anticipated Suitable nesting habitat is not considered present within the Site or Study Area. Observation appeared to be a flyover/passerby individual. Therefore, the species will not be discussed further.

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
	Hirundo rustica	Barn Swallow	S4B	SC	THR	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. The species is attracted to open structures that include ledges where they can build their nests, which are often re-used from year to year. They prefer unpainted, rough-cut wood, since the mud does not adhere as well to smooth surfaces (MECP, 2021).	Low	Low	Low Species and associated cup-nests were not observed during field investigation. No unpainted, rough-cut wood areas were observed on the existing building within the Site to provide potential nesting areas for this species. Existing buildings and structures within the general vicinity may provide potential habitat for this species.	None anticipated Species not anticipated to be present within the Site. The building within the Site is to be retained. Abundant habitat within the Study Area is not anticipated to be negatively impacted by the proposed development. Thus, this species will not be discussed further.
	Hydroprogne caspia	Caspian Tern	S3B,S5M	-	-	Open habitat near large lakes or rivers, beaches, shorelines, rocky or sandy beaches, offshore islands; negatively affected by elevated water levels during nesting season; feeds on fish; found in association with Ring-billed Gulls (MNR, n.d.).	None	None	None Restricted to Lake Ontario	None anticipated Restricted to Lake Ontario
	Larus marinus	Great Black-backed Gull	S1B,S4N	-	-	Flat rocky coastal islands, moorlands, rocky beaches, cliffs; nest is solitary or in small (rarely large) colonies (MNR, n.d.).	None	None	None Lacustrine species restricted to Lake Ontario in the area.	None anticipated Lacustrine species restricted to Lake Ontario in the area.

	Nycticorax nycticorax	Black-crowned Night-heron	S3B,S2N,S4M	-	-	Deciduous woodland swamps, cattail marshes, islands, wooded river and lake banks, coastal wetlands. Black-crowned Night-herons breeding in Michigan primarily use habitats associated with the shores of Lakes Huron and Erie and prefer to nest in shrubs and small trees from 6 to 18 feet in height (2 to 6 m). Most nesting colonies are located on islands, in swamps, or overwater, suggesting that site selection may be related to predator avoidance. Shallow, weedy pond margins, creeks, and marshes are preferred foraging habitats (Monfils, 2004).	Moderate	None	Moderate This species may nest in the Unit 2 Green Ash swamp wetland to the west of the Site. Though no features in the Study Area provide preferred foraging habitat of shallow, weedy pond margins, creeks, and marshes. Foraging habitat is likely linked to other areas of the City's Natural Areas Study (NAS) outside of the Study Area including the riparian woodlands (FOD7-3) and pond south of Lakeshore Road (OAO)	Low Black-crowned Night-heron is known to be flexible in selection of nesting and foraging habitats, show tolerance of degraded habitats, and habituates to some forms of disturbance (e.g., vehicular traffic, trains) (Levengood et al, 2007). The Black-crowned Night-heron's diet has magnified its exposure to contaminants such as pesticides as it is an upper trophic level bird that eats fish and other small aquatic animals. However, while some populations continue to accumulate contaminants, these appear to have had minimal effect on breeding success and population levels (Levengood et al, 2007). The wetland is setback from the Site boundary by more than 15 m. It is unlikely that noise disturbance from the recycling facility would alter this species behavior in a measurable way as compared to the neighboring industrial uses. Likewise, harm due to potential industrial contaminants (which are buffered from entering the wetland) is also a low risk to breeding success.

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
	Podiceps auritus	Horned Grebe	S1B,S3N,S4M	SC		Deep water marshes or sloughs with a mix of open water, emergent vegetation; small freshwater ponds or protected bays of larger lakes with emergent vegetation; territories are about 1 ha, but birds are very territorial (MNR, n.d.).	Low	None	None Swamp in the Study Area does not support deep or open waters or ponds.	None anticipated Swamp in the Study Area does not support deep or open waters or ponds.
	Progne subis	Purple Martin	S3B	-	-	Purple Martins forage over towns, cities, parks, open fields, dunes, streams, wet meadows, beaver ponds, and other open areas. In eastern North America they used to breed along forest edges and rivers, where dead snags offered woodpecker holes to nest in. But since humans began supplying nest boxes for them, eastern martins have become urbanites, living almost exclusively near cities and towns (Cornell Lab, 2025).	Moderate	Low	Low Species not observed during field investigation. The edge of the deciduous forest located along the Site may provide potential breeding areas within the Site. However, only a few snags were observed within this area and the Site may lower this species' habitat potential within the Site. The open meadow and swamp with an abundance of snags may provide potential suitable habitat for this species. The species may forage within the general vicinity.	None anticipated Species not anticipated to be present. While there may be select removals of trees and observed snags along the forest edge within the Site. As tree removals are proposed to occur outside of the sensitive breeding bird window, it is anticipated that Purple Martins will not be negatively impacted. The open meadow and swamp within the Study Area are to be maintained and not anticipated to be negatively impacted by the proposed development. Thus, this species will not be discussed further.

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
	Vermivora chrysoptera	Golden-winged Warbler	S3B	SC	-	Nesting and foraging habitat for the Golden-winged Warbler throughout their Canadian range includes a variety of early successional forest types (or habitats that exhibit early successional characteristics) that include extensive patches of dense shrubby growth, interspersed with dense herbaceous growth and are adjacent to a forested edge (Confer and Knapp 1981; Frech and Confer 1987; Confer 1992; Dunn and Garrett 1997). It is the shared edge component between the forest and open/shrub habitat that is particularly important habitat for Golden-winged Warblers (Cornell Lab, 2025).	Low	None	Low No extensive patches of dense shrubby growth or early successional shrubby/young forest habitat are present in the Study Area. Edges of the woodland have an immediate transition to agricultural or industrial use.	None anticipated The woodland edge that abuts the Site does not contain a shrubby early successional edge and further is anticipated to be maintained.
INSECTS	*Danaus plexippus*	Monarch	S4B,S2N	SC	END	Throughout their life cycle, Monarchs use three different types of habitat. Only the caterpillars feed on milkweed plants and are confined to meadows and open areas where milkweed grows. Adult butterflies can be found in more diverse habitats where they feed on nectar from a variety of wildflowers. Monarchs spend the winter in Oyamel Fir forests found in central Mexico (MECP, 2022).	Moderate	None	High Species not observed during field investigation. No Milkweed plants were observed within the Site. Adults may use the meadow north of Hazelhurst Drive for foraging or laying eggs.	None anticipated Species and/or habitat are not anticipated nor considered to be present within the Site except for transient foraging which is not protected habitat under the ESA. The Study Area cultural meadow may also provide transient foraging areas but will not be impacted by the proposed development. Thus, the species will not be discussed further.

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
REPTILES	*Chelydra serpentina*	Snapping Turtle	S4	SC	SC	Snapping Turtles spend most of their lives in water. They prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. During the nesting season, from early to mid-summer, females travel overland in search of a suitable nesting site, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits. In Ontario, this species is primarily limited to the southern part of Ontario (MECP, 2021).	Low	None	Low Species not observed during field investigation. No swamps or areas of shallow water are present within the Site. While the swamp west of the Site may provide potential habitat for this species, given its location bounded by agricultural field and industrial areas, species migration and habitat potential within the Study Area is limited, moreover the swamp does not appear to have deep enough waters for overwintering.	None anticipated Species not anticipated to be present as suitable habitat is not considered present within the Site. The swamp within the Study Area will be maintained and not anticipated to be negatively impacted by the proposed development. Thus, this species will not be discussed further.

TAXON GROUP	SCIENTIFIC NAME	COMMON NAME	S-RANK	ESA STATUS	SARA STATUS	HABITAT DESCRIPTION	POTENTIAL HABITAT SUITABILITY WITHIN THE STUDY AREA	POTENTIAL HABITAT SUITABILITY WITHIN THE SITE	LIKELIHOOD OF SPECIES PRESENCE BASED ON FIELD INVESTIGATION	LIKELIHOOD AND MAGNITUDE OF IMPACT TO SPECIES OR HABITAT
	Chrysemys picta marginata	Midland Painted Turtle	S4	-	SC	Midland Painted Turtles occupy slow moving, relatively shallow, and well-vegetated wetlands and waterbodies with abundant basking sites and organic substrate. These turtles can be found primarily in swamps, marshes, ponds, fens, and bogs. In addition, lakes, rivers, oxbows, and creeks are frequented, but large, open, and deep bodies of water are avoided (MNR, n.d.).	Low	None	Low Species not observed during field investigation. No swamps or areas of shallow water are present within the Site. While the swamp may provide potential habitat for this species, given its location bounded by agricultural field and industrial areas, limit the species migration and habitat potential within the Study Area. Further, the swamp lacks suitable basking areas for turtles. No lakes or large bodies of water are present within the Study Area.	None anticipated Species not anticipated to be present as suitable habitat is not considered present within the Site. The swamp within the Study Area will be maintained and not anticipated to be negatively impacted by the proposed development. Thus, this species will not be discussed further.

Glossary

Endangered Species Act (ESA)

Extirpated (EXT) – a species that no longer exists in the wild in Ontario but still occurs elsewhere.

Endangered (END) – a species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.

Threatened (THR) – a species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

Special Concern (SC) – a species with characteristics that make it sensitive to human activities or natural events.

Species at Risk Act (SARA)

Extirpated (EXT) – a wildlife species that no longer exists in the wild in Canada but exists elsewhere in the wild.

Endangered (END) – a wildlife species that is facing imminent extirpation or extinction.

Threatened (THR) – a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

Special Concern (SC) – a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Schedule 1 – the official list of wildlife species at risk that are classified as extirpated, endangered, threatened and of special concern.

Schedule 2 – species that have been designated as endangered or threatened and have to be re-assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) using revised criteria.

Schedule 3 – a list of species that were designated as at risk by COSEWIC before SARA came into force in 2003, but which had not yet been reassessed using the updated SARA criteria at that time.

Sub-national Conservation Status Rank (S-rank)

Presumed Extirpated (SX) – species or ecosystem is believed to be extirpated from the jurisdiction (i.e., nation, or state/province). Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered. [equivalent to "Regionally Extinct" in IUCN Red List terminology].

Possibly Extirpated (SH) – Known from only historical records but still some hope of rediscovery. There is evidence that the species or ecosystem may no longer be present in the jurisdiction, but not enough to state this with certainty. Examples of such evidence include (1) that a species has not been documented in approximately 20-40 years in human-dominated landscapes despite some searching and/or some evidence of significant habitat loss or degradation; (2) that a species or ecosystem has been searched for unsuccessfully, but not thoroughly enough to presume that it is no longer present in the jurisdiction.

Critically Imperiled (S1) – at very high risk of extirpation in the jurisdiction due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.

Imperiled (S2) – at high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.

Vulnerable (S3) – at moderate risk of extirpation in the jurisdiction due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

Apparently Secure (S4) – at a fairly low risk of extirpation in the jurisdiction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.

Secure (S5) – at very low or no risk of extirpation in the jurisdiction due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.

Variant S-ranks

Range Rank (S#) – a numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).

Unrankable (SU) – currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

Unranked (SNR) – sub-national conservation status not yet assessed.

Not Applicable (SNA) – a conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., long distance aerial and aquatic migrants, hybrids without conservation value, and non-native species or ecosystems; see Master et al. 2012, Appendix A, pg. 49 for further details).

Not Provided – Species or ecosystem is known to occur in this nation or state/province. Contact the appropriate NatureServe network program for assignment of conservation status.

Breeding Status Qualifiers

Breeding (B) – conservation status refers to the breeding population of the species in the nation or state/province.

Non-breeding (N) – conservation status refers to the non-breeding population of the species in the nation or state/province.

Migrant (M) – migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the nation or state/province.

APPENDIX G:

Significant Wildlife Habitat Evaluation

SCHEDULE 7E: IDENTIFICATION OF SIGNIFICANT WILDLIFE HABITAT

This schedule is designed to provide the recommended criteria for identifying SWH within Ecoregion 7E[ccxvi]. Tables 1.1 through 1.4 within the Schedules provide guidance for SWH designation for the four categories of SWH outlined in the Significant Wildlife Habitat Technical Guide and its Appendices [cxlviii, cxlix]. Table 1.5 contains and provides descriptions for exceptions criteria for ecoregional SWH which will be identified at an ecodistrict scale[ccxvi]. Exceptions occur when criteria for a specific habitat are different within an ecodistrict compared to the remainder of an ecoregion or if a habitat only occurs within a restricted area of the ecoregion.

The schedules, including description of wildlife habitat, wildlife species, and the criteria provided for determining SWH, are based on science and expert knowledge. The ELC ecosite codes are described using the ELC for Southern Ontario [lxxviii]. The information within these schedules will require periodic updating to keep pace with changes to wildlife species status in the SARO List, or as new scientific information pertaining to wildlife habitats becomes available. Therefore, the MNR will occasionally need to review and update these schedules and provide addenda. A reference document for all SWH is found after the schedules and includes citations for all ecoregional schedules. Each citation used to assist with the criteria for SWH will be indicated by a roman numeric symbol. Where no reference exists, MNR expert opinion was used for determination of criteria, this symbol "Ⓔ" represents when MNR expert opinion was utilized to develop defining criteria.

Criteria For Significant Wildlife Habitat in Ecoregion 7E

1.1 Seasonal Concentration Areas of Animals

Seasonal concentration areas are areas where wildlife species occur annually in aggregations at certain times of the year. Such areas are sometimes highly concentrated with members of a given species, or several species, within relatively small areas. In spring and autumn, migratory wildlife species will concentrate where they can rest and feed. Other wildlife species require habitats where they can survive winter. Examples of seasonal concentration areas include deer wintering areas, breeding bird colonies and hibernation sites for reptiles, amphibians and some mammals [cxlviii]. Table 1.1 outlines the wildlife habitats and defining criteria that are considered for seasonal concentration areas within Ecoregion 7E.

Table 1.1: Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Candidate Criteria	Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria			
Waterfowl Stopover and Staging Areas (Terrestrial) **Rationale: Habitat important to migrating waterfowl.**	American Black Duck Northern Pintail Gadwall Blue-winged Teal Green-winged Teal American Wigeon Northern Shoveler Tundra Swan	CUM1, CUT1 • Plus evidence of annual spring flooding from melt water or run-off within these ecosites. • Fields with seasonal flooding and waste grains in Long Point, Rondeau, Lake St. Clair, Grand	Fields with sheet water during spring (mid-March to May). • Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. • Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available [cxlviii] Information Sources • Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining	Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi] • Any mixed species aggregations of 100 or more individuals required. • The flooded field ecosite habitat plus a 100 to 300 m radius area, dependant on local site conditions and adjacent land use is the SWH[cxlviii] • Annual use of habitat is documented from information sources or field	Recommended that sites that support annual aggregations (observed on a single day) of 100 individuals or more of the listed species in any combination qualify for identification as SWH in the Region of Peel and Town of Caledon. Listed species include: Wood Duck, Gadwall, American Wigeon, American Black Duck, Blue-winged	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE Cultural meadow is present within the Study Area. However, the meadow did not appear to have vegetation indicative of spring flooding. Aggregations of waterfowl not observed during field investigation.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Candidate Criteria	Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria			
		Bend and Point Pelee areas may be important to Tundra Swans.	occurrence. • Reports and other information available from Conservation Authorities. • Sites documented through waterfowl planning processes (e.g., EHJV implementation plan). • Field naturalist clubs • Ducks Unlimited Canada • NHIC Waterfowl Concentration Area	studies (annual use can be based on studies or determined by past surveys with species numbers and dates). • SWH MIST[cxlix] Index #7 provides development effects and mitigation measures.	Teal, Northern Shoveler, Northern Pintail, Green-winged Teal, or Ring-necked Duck.		
Waterfowl Stopover and Staging Areas (Aquatic) **<u>Rationale:</u> Important for a long history of use. local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the ecodistrict.**	Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked Duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	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 stormwater management ponds do not qualify as a SWH; however, a reservoir managed as a large wetland or pond/lake does qualify. • These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water). <u>Information Sources</u> • Environment Canada • Naturalist clubs often are aware of staging/stopover areas. • MNR wetland evaluations indicate presence of locally and regionally significant waterfowl staging. • Sites documented through waterfowl planning processes (e.g., EHJV implementation plan). • Ducks Unlimited projects • Element occurrence specification by Nature Serve: http://www.natureserve.org. • NHIC Waterfowl Concentration Area	Studies carried out and verified presence of: • Aggregations of 100 or more of listed species for 7 days, results in greater than 700 waterfowl use days. Areas with annual staging of Ruddy Ducks, Canvasbacks, and Redheads are SWH [cxlix]. • The combined area of the ELC ecosites and a 100 m radius area is the SWH [cxlviii]. • Wetland area and shorelines associated with sites identified within the SWHTG [cxlviii] Appendix K [cxlix] are SWH. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi]. • Annual use of habitat is documented from information sources or field studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). • SWH MIST[cxlix] Index #7 provides development effects and mitigation measures.	ORMCP TP2 (Queen's Printer for Ontario 2007a) thresholds are recommended for mainland portions of the Region of Peel and Town of Caledon (i.e., annual minimum aggregations of 100 individuals, in any combination, included on the Mainland species list). However, for nearshore waters of Lake Ontario, all areas included within "The West End of Lake Ontario" Important Bird Area (IBA) should automatically be identified as SWH. For nearshore waters of Lake Ontario east of the IBA, it is recommended that areas that support annual minimum aggregations of 250 individuals, in any combination, be considered SWH.	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE A swamp (SWD2) is present within the Study Area. However, no large open pools were observed within the swamp to provide suitable staging areas.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Candidate Criteria	Site Assessment	Study Area Assessment
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					Mainland species list: Wood Duck, Gadwall, American Wigeon, American Black Duck, Blue-winged Teal, Northern Shoveler, Northern Pintail, Green-winged Teal, Ring-necked Duck, Lesser Scaup, Bufflehead, Common Goldeneye, Hooded Merganser, Common Merganser.		
Shorebird Migratory Stopover Area **Rationale:** **High quality shorebird stopover habitat is extremely rare and typically has a long history of use.**	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin	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, are extremely important for migratory shorebirds in May to mid-June and early July to October. • Sewage treatment ponds and stormwater ponds do not qualify as a SWH. Information Sources • Western hemisphere shorebird reserve network • Canadian Wildlife Service (CWS) Ontario Shorebird Survey • Bird Studies Canada • Ontario Nature • Local birders and naturalist clubs • NHIC Shorebird Migratory Concentration Area	Studies confirming: • Presence of 3 or more of listed species and greater than 1000© shorebird use days during spring or fall migration period (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period). • Whimbrel stop briefly (less than 24 hrs) during spring migration, any site with greater than 100© Whimbrel used for 3 years or more is significant. • The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100 m radius area [cxlviii] • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi]. • SWH MIST[cxlix] Index #8 provides development effects and mitigation measures.	N/A	NOT CANDIDATE ELC Ecosites not present within the Site.	NOT CANDIDATE ELC Ecosites not present within the Study Area.

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Raptor Wintering Area **<u>Rationale:</u>** **Sites used by multiple species, a high number of individuals and used annually are, most significant**	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl <u>Special Concern:</u> Short-eared Owl Bald Eagle	<u>Hawks/Owls</u>: Combination of ELC Community Series; need to have present one Community Series from each land class. Forest: FOD, FOM, FOC Upland: CUM, CUT, CUS, CUW <u>Bald Eagle</u>: Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).	• The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Raptor wintering sites (hawk/owl) need to be greater than 20 ha [cxlviii, cxlix] with a combination of forest and upland. • Least disturbed sites, idle/fallow or lightly grazed field/meadow (greater than 15 ha) with adjacent woodlands [cxlix]. • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • Eagle sites have open water, large trees and snags available for roosting [cxlix]. <u>Information Sources</u>: • MNR Ecologist or Biologist • Field naturalist clubs • NHIC Raptor Winter Concentration Area • Data from Bird Studies Canada • Results of Christmas Bird Counts • Reports and other information available from Conservation Authorities.	Studies confirm the use of these habitats by: • One or more Short-eared Owls or; one or more Bald Eagles or; at least 10 individuals and two of the listed hawk/owl species. • To be significant a site must be used regularly (3 in 5 years) [cxlix] for a minimum of 20 days by the above number of birds. • The habitat area for an eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi]. • SWH MIST[cxlix] Index #10 and #11 provides development effects and mitigation measures.	Same as MNR criteria	NOT CANDIDATE No forested areas within the Site.	NOT CANDIDATE Forest and meadow areas present in the Study Area and Red-tailed Hawk and American Kestrel known from background screening. However, agricultural areas appear to be actively used for row crops rather than idle/fallow or lightly grazed field/meadow.
Bat Hibernacula **<u>Rationale:</u>** **Bat hibernacula are rare habitats in all Ontario landscapes.**	Big Brown Bat Tri-coloured Bat	Bat Hibernacula may be found in these ecosites: CCR1, CCR2, CCA1, CCA2 (Note: buildings are not considered to be SWH).	• Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. • Active mine sites should not be considered as SWH. • The locations of bat hibernacula are relatively poorly known. <u>Information Sources</u> • MNR for possible locations and contact for local experts NHIC Bat hibernaculum. • Ministry of Northern Development and Mines for location of mine shafts.	• All sites with confirmed hibernating bats are SWH. • The habitat area includes a 200 m radius around the entrance of the hibernaculum[cxlviii, ccvii] for most development types and 1000 m for wind farms[ccv]. • Studies are to be conducted during the peak swarming period (August to September). Surveys should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind	Similar to MNR criteria	NOT CANDIDATE No crevices, caves, mine shafts, karsts, underground foundations are present within the Site.	NOT CANDIDATE No crevices, caves, mine shafts, karsts, underground foundations are present in the Study Area.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Candidate Criteria	Site Assessment	Study Area Assessment
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			• Clubs that explore caves (e.g., Sierra Club). • University Biology Departments with bat experts.	Power Projects[ccv] SWH MIST[cxlix] Index #1 provides development effects and mitigation measures.			

Bat Maternity Colonies
 	
<u>Rationale:</u> Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.
	Big Brown Bat
	Silver-haired Bat
		Maternity colonies considered SWH are found in forested ecosites.
		
		All ELC ecosites in ELC Community Series:
		FOD, FOM, SWD, SWM.
			• Maternity colonies can be found in tree cavities, vegetation and often in buildings[xxii, xxv, xxvi, xxvii, xxxi] (buildings are not considered to be SWH).
			• Maternity roosts are not found in caves and mines in Ontario[xxii].
			• Maternity colonies located in mature deciduous or mixed forest stands[ccix, ccx,ccv] with greater than 10/ha large diameter (greater than 25 cm dbh) wildlife trees[ccvii].
			• Female Bats prefer wildlife tree (snags) in early stages of decay, class 1 to 3[ccxiv] or class 1 or 2[ccxii].
			• Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred[ccx,lxiv].
			<u>Information Sources</u>
			• MNR for possible locations and contact for local experts.
			• University Biology Departments with bat experts.
				• Maternity Colonies with confirmed use by;
				  • Greater than 10 Big Brown Bats.
				  • Greater than 5 Adult Female Silver-haired Bats.
				• The area of the habitat includes the entire woodland or a forest stand ELC ecosite or an eco-element containing the maternity colonies.
				• Evaluation methods for maternity colonies should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind Power Projects"[ccv].
				• SWH MIST[cxlix] Index #12 provides development effects and mitigation measures.
					Until more specific information becomes available, it is recommended that the provincial guidelines provided in Appendix Q of the Significant Wildlife Habitat Technical Guide (OMNR 2000) be used in both jurisdictions. Accordingly, the following numbers of bats should be considered significant at maternity colonies and winter roosts in the Region of Peel and Town of Caledon respectively:
					Big Brown Bat - 30, 30;
					Little Brown Bat - 100, 50;
					Eastern Pipistrelle - 10, 20;
					Silver-haired Bat - 10, N/A;
					Long-eared Bat - 10, 20;
					Small-footed Bat - 10, all sites.
					
					However, with the discovery of White-Nose Syndrome in neighbouring New York State in 2007, a mysterious condition that has resulted in over 10,000 bat deaths, MNR staff should be contacted to see if more restrictive thresholds are warranted. If so, these should supersede those in the Significant Wildlife Habitat Technical
						NOT CANDIDATE
						
						While a few snags were found along the edge of the adjacent woodland feature within the Site, no mature deciduous or mixed forest stands are present within the Site.
							CANDIDATE
							
							Mature deciduous or mixed forest stands are present within the Study Area and may support bat maternity colonies for Big Brown Bat. It is not anticipated that the proposed works would impact these woodlands or candidate SWH. Further, Big Brown Bat are known to be adaptable to human changes to the environment (NHIC, 2013) and are known to thrive even in urban and rural settings (MNR, 2019).
							
							Silver-haired Bat is listed as Endangered under the ESA and is further discussed in other sections of this EIS.
							
							As species and relative abundance related to the adjacent forested area is unknown to confirm SWH based on

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					Guide (OMNR 2000).		Peel – Caledon criteria, this feature is considered candidate SWH.
Turtle Wintering Areas **<u>Rationale:</u> Generally, sites are the only known sites in the area. Sites with the highest number of individuals are most significant.**	Midland Painted Turtle <u>Special Concern:</u> Northern Map Turtle Snapping Turtle	Snapping and Midland Painted Turtles: ELC Community Classes - SW, MA, OA and SA; ELC Community Series - FEO and BOO. Northern Map Turtle: Open water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.	• For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. • Over-wintering sites are permanent waterbodies, large wetlands, and bogs or fens with adequate dissolved oxygen [cix, cx, cxi, cxii]. • Man-made ponds such as sewage lagoons or stormwater ponds should not be considered SWH. <u>Information Sources</u> • EIS studies carried out by Conservation Authorities. • Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites. • MNR Ecologist or Biologist • Field naturalist clubs • NHIC	• Presence of 5 over-wintering Midland Painted Turtles is significant. • One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. • The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH. • Over wintering areas may be identified by searching for congregations (basking areas) of turtles on warm, sunny days during the fall (September to October) or spring (March to May)[cvii]. • Congregation of turtles is more common where wintering areas are limited and therefore significant [cix, cx, cxi, cxii]. • SWH MIST[cxlix] Index #28 provides development effects and mitigation measures for turtle wintering habitat.	Similar criteria to MNR. Includes nests, not just pairs.	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE A swamp is present within the Study Area. However, no open bodies of water are present within the swamp. Further, given its location and size turtle migration to the Site is unlikely and the ground would likely freeze over-winter.
Reptile Hibernaculum **<u>Rationale:</u> Generally, sites are the only known sites in the area. Sites with the highest**	<u>Snakes:</u> Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake <u>Special Concern:</u> Eastern Milksnake	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, rock barren, crevice, cave, and alvar sites may be directly related to these habitats.	• For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. • Areas of broken and fissured rock are	Studies confirming: • Presence of snake hibernacula used by a minimum of five individuals of a snake species <u>or</u>; individuals of two or more snake species. • Congregations of a minimum of five individuals of a snake species or individuals of two or more snake species near potential hibernacula	Similar criteria as MNR with specific species counts.	NOT CANDIDATE Suitable habitat of talus, rock barren, crevice, etc. are not present within the Site.	NOT CANDIDATE Suitable habitat of talus, rock barren, crevice, etc. was not identified within the Study Area.

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number of individuals are most significant.	Eastern Ribbonsnake Lizard: Special Concern: Five-lined Skink (Southern Shield population)	Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator. For Five-lined Skink, ELC Community Series of FOD and FOM and ecosites FOC1 and FOC3.	particularly valuable since they provide access to subterranean sites below the frost line[xliv, l, li, lii, cxii]. • Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. • Five-lined Skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures [cciii]. Information Sources • In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g., old dug wells). • Reports and other information available from Conservation Authorities. • Field naturalists clubs • University herpetologists • NHIC • MNR ecologist or biologist may be aware of locations of wintering skinks.	(e.g., foundation or rocky slope) on sunny warm days in Spring (April/May) and Fall (September/October). • Note: If there are special concern species present, then site is SWH. • Note: Sites for hibernation possess specific habitat parameters (e.g., temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e., strong hibernation site fidelity). Other critical life processes (e.g., mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH. • SWH MIST[cxlix] Index #13 provides development effects and mitigation measures for snake hibernacula. • Presence of any active hibernaculum for skink is significant. • SWH MIST[cxlix] Index #37 provides development effects and mitigation measures for Five- lined Skink wintering habitat.			
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff) **Rationale:** **Historical use and number of nests in a colony make this habitat**	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, and barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1	• Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. • Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. • Does not include a licensed/permitted Mineral Aggregate Operation. Information Sources	Studies confirming: • Presence of 1 or more nesting sites with 8[cxlix] or more Cliff Swallow pairs and/or Rough- winged Swallow pairs during the breeding season. • A colony identified as SWH will include a 50 m radius habitat area from the peripheral nests[ccvii]. • Field surveys to observe and count swallow nests are to be completed during the breeding	Similar criteria as MNR with specific species counts.	NOT CANDIDATE Habitat (banks, cliffs, barns, etc.) are not present within the Site.	NOT CANDIDATE Habitat (banks, cliffs, barns, etc.) not present in the Study Area.

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significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.		BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	• Reports and other information available from Conservation Authorities. • Ontario Breeding Bird Atlas • Bird Studies Canada; *NatureCounts* http://www.birdscanada.org/birdmon/ • Field naturalist clubs	season. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi]. • SWH MIST[cxlix] Index #4 provides development effects and mitigation measures.			
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs) **<u>Rationale:</u>** **Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.**	Great Blue Heron Black-crowned Night-heron Great Egret Green Heron	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. <u>Information Sources</u> • Ontario Breeding Bird Atlas, colonial nest records. • Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (MNR). • NHIC Mixed Wader Nesting Colony • Aerial photographs can help identify large heronries • Reports and other information available from Conservation Authorities. • MNR District Offices • Field naturalist clubs	Studies confirming: • Presence of 2 or more active nests of Great Blue Heron or other listed species. • The habitat extends from the edge of the colony and a minimum 300 m radius or extent of the forest ecosite containing the colony or any island less than 15 ha with a colony is the SWH[cc, ccvii]. • Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells. • SWH MIST[cxlix] Index #5 provides development effects and mitigation measures.	It is recommended that thresholds be based on the Significant Wildlife Habitat Technical Guide (OMNR 2000) and ORMCP TP2 (Queen's Printer for Ontario 2007a), supplemented by information from: • Atlas of the Breeding Birds of Ontario 2000 – 2005 (Cadman et al., 2007); • Breeding Birds of Ontario Vols. 1 & 2 (Peck and James 1983, 1987); and, • Communications with OMNR staff. It is recommended that any nesting colonies of the following species be considered SWH in the Region of Peel and Town of Caledon: Great Blue Heron, Great Egret, Black-crowned Night-Heron, and Black Tern. It is recommended that habitats that support the	NOT CANDIDATE ELC ecosites not present within the Site.	CANDIDATE While a swamp is present within the Study Area, this area is not a known colony. Further, no colonies, indicator and/or confirmed species or associated nests were observed within the swamp during field investigation. However, three species, Great Blue Heron, Green Heron, and Black-crowned Night-heron are known from the vicinity based on background screening. Therefore, SWH candidacy is not ruled out.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Candidate Criteria	Site Assessment	Study Area Assessment
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					following number of nests/pairs be considered SWH in the Region of Peel and Town of Caledon: Green Heron - 2; Common Tern - 5; Northern Rough-winged Swallow - 5; Bank Swallow - 30; Cliff Swallow - 8; Barn Swallow - 3; Sedge Wren - 3; and, Marsh Wren - 3.		
Colonially - Nesting Bird Breeding Habitat (Ground) **<u>Rationale:</u> Colonies are important to local bird population, typically sites are only known colony in area and are used annually.**	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird). MAM1–6 MAS1–3 CUM CUT CUS	• Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. • Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands. <u>Information Sources</u> • Ontario Breeding Bird Atlas, rare/colonial species records. • Canadian Wildlife Service • Reports and other information available from Conservation Authorities. • NHIC Colonial Waterbird Nesting Area • MNR District Offices • Field naturalist clubs	Studies confirming: • Presence of greater than 25 active nests for Herring Gulls or Ring-billed Gulls, greater than 5 active nests for Common Tern or greater than 2 active nests for Caspian Tern. • Presence of 5 or more pairs for Brewer's Blackbird. • Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant®. • The edge of the colony and a minimum 150 m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island less than 3 ha with a colony is the SWH [cc, ccvii]. • Studies would be done during May/June when actively nesting. Evaluation methods to follow "Birds and Bird Habitats: Guidelines for Wind Power projects"[cxlix]. • SWH MIST[cxlix] Index #6 provides development effects and mitigation measures.	Similar criteria as MNR.	NOT CANDIDATE No rocky island or peninsula present within the Site.	NOT CANDIDATE No rocky island or peninsula present in Study Area.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Candidate Criteria	Site Assessment	Study Area Assessment
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Migratory Butterfly Stopover Areas **<u>Rationale:</u>** **Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.**	Painted Lady Red Admiral <u>Special Concern</u>: Monarch	Combination of ELC Community Series; need to have present one Community Series from each Land class: <u>Field</u>: CUM CUT CUS <u>Forest</u>: FOC FOD FOM CUP Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.	A butterfly stopover area will be a minimum of 5 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario[cxlix]. • The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south [xxxii, xxxiii, xxxiv, xxxv, xxxvi]. • The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat [cxlviii, cxlix]. • Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes [xxxvii, xxxviii, xxxix, xl, xli]. <u>Information Sources</u> • MNR NHIC • Agriculture Canada in Ottawa may have list of butterfly experts. • Field naturalist clubs • Toronto Entomologists Association • Conservation Authorities	Studies confirm: • The presence of Monarch Use Days (MUD) during fall migration (August to October)[xliii]. MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day[xxxvii], significant variation can occur between years and multiple years of sampling should occur [xl, xlii]. • Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. • MUD of greater than 5000 or greater than 3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant. • SWH MIST [cxlix] Index #16 provides development effects and mitigation measures.	Migratory butterfly congregations observed along Lake Ontario Shoreline in Lakeside Park and Rattray Marsh.	NOT CANDIDATE Site does not contain the required ELC types.	CANDIDATE Study Area is located within 5 km of Lake Ontario and contains both CUM and FOD. However, no monarchs or other butterflies were observed during field investigation during the migration period. It is unlikely that a stopover area is present in the Study Area.
Landbird Migratory Stopover Areas **<u>Rationale:</u>** **Sites with a high diversity of species as well as high numbers are most significant.**	All migratory songbirds. Canadian Wildlife Service Ontario website: http://www.ec.gc.ca/nature/default.asp?lang=En&n=421B7A9D-1 All migrant raptors species: MNR: Fish and Wildlife Conservation Act, 1997. Schedule 7: Specially Protected Birds (Raptors).	All ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM SWD	Woodlots need to be greater than 5 ha in size and within 5 km of Lake Ontario. • If multiple woodlands are located along the shoreline those Woodlands less than 2 km from Lake Ontario are more significant [cxlix] • Sites have a variety of habitats; forest, grassland and wetland complexes [cxlix]. • The largest sites are more significant [cxlix] • Woodlots and forest fragments are important habitats to migrating birds[ccxviii], these features located along the shore and located within 5 km of Lake Ontario are	Studies confirm: • Use of the habitat by greater than 200 birds/day and with greater than 35 species with at least 10 bird species. recorded on at least 5 different survey dates. This abundance and diversity of migrant bird species is considered above average and significant. • Studies should be completed during spring (April/May) and fall (August/October) migration using standardized assessment techniques. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind	All natural areas with 2 km of Lake Ontario.	NOT CANDIDATE The Site does not contain the required ELC types.	CANDIDATE All 'natural areas' of the Study Area within 2 km of Lake Ontario are candidate SWH (i.e., the woodlands and wetland).

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Candidate Criteria	Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria			
			Candidate SWH[cxlviii]. Information Sources • Bird Studies Canada • Ontario Nature • Local birders and naturalist club • Ontario Important Bird Areas (IBA) Program	Power Projects"[ccxi]. • SWH MIST[cxlix] Index #9 provides development effects and mitigation measures.			
Deer Winter Congregation Areas **<u>Rationale:</u>** **Deer movement during winter in the southern areas of Ecoregion 7E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions[cxlviii]**	White-tailed Deer	All forested ecosites with these ELC Community Series: FOC FOM FOD SWC SWM SWD Conifer plantations much smaller than 50 ha may also be used.	• Woodlots will typically be greater than 100 ha in size®. Woodlots less than 100 ha may be considered as significant based on MNR studies or assessment. • Deer movement during winter in the southern areas of Ecoregion 7E are not constrained by snow depth; however, deer will annually congregate in large numbers in suitable woodlands [cxlviii]. • If deer are constrained by snow depth refer to the Deer Yarding Area habitat within Table 1.1 of this Schedule. • Large woodlots greater than 100 ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1 to 1.5 deer/ha [ccxxiv]. • Woodlots with high densities of deer due to artificial feeding are not significant. <u>Information Sources</u> • MNR District Offices • LIO/NRVIS	Studies confirm: • Deer management is an MNR responsibility, deer winter congregation areas considered significant will be mapped by MNR[cxlviii]. • Use of the woodlot by White-tailed Deer will be determined by MNR, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNR. • Studies should be completed during winter (January/February) when greater than 20 cm of snow is on the ground using aerial survey techniques[ccxxiv] , ground or road surveys or a pellet count deer density survey[ccxxv]. • If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. • SWH MIST [cxlix] Index #2 provides development effects and mitigation measures.	Mapped by MNR.	NOT CANDIDATE Woodlot of 100 ha in size is not present in the vicinity of Site.	NOT CANDIDATE Woodlot of 100 ha in size is not present in vicinity of the Study Area.

1.2 Rare Vegetation Communities or Specialized Habitat for Wildlife

1.2.1 Rare Vegetation Communities

Rare vegetation communities often contain rare species, particularly plants and small invertebrates, which depend on such habitats for their survival and cannot readily move to or find alternative habitats. When assessing rare vegetation communities, one of the most important criteria is the current representation of the community in the planning area based on its area relative to the total landscape or the number of examples within the planning area. There are a number of criteria used to define rare vegetation communities; however, the NHIC uses a system that considers the provincial rank of a species or community type as a tool to prioritize protection efforts. These ranks are not legal designations but have been assigned using the best available scientific information, and follow a systematic ranking procedure developed by The Nature Conservancy (U.S.). The ranks are based on three factors: estimated number of occurrences, estimated community aerial extent, and estimated range of the community within the province:

S1 Extremely rare - usually 5 or fewer occurrences in the province, or very few remaining hectares.
S2 Very rare - usually between 5 and 20 occurrences in the province, or few remaining hectares.
S3 Rare to uncommon - usually between 20 and 100 occurrences in the province; may have fewer occurrences, but with some extensive examples remaining.

The setting of criteria for SWH has incorporated this ranking system into its process of determining rare vegetation communities and as such, a rare vegetation community is defined to include areas that contain a provincially rare vegetation community and/or areas that contain a vegetation community that is rare within the planning area. SWH Table 1.2.1 contains a listing of rare vegetation communities that are considered SWH for the planning area contained within Ecoregion 7E.

Table 1.2.1: Rare Vegetation Communities.

Rare Vegetation Community	Candidate SWH			Confirmed SWH		Site Assessment	Study Area Assessment
	ELC Ecosite Codes	Habitat Description	Detailed Information and Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Cliffs and Talus Slopes **Rationale:** **Cliffs and Talus Slopes are extremely rare habitats in Ontario.**	Any ELC ecosite within Community Series: TAO CLO TAS CLS TAT CLT	A cliff is vertical to near vertical bedrock greater than 3 m 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. Information Sources • The Niagara Escarpment Commission has detailed information on location of these habitats. • MNR District NHIC has location information available on their website. • Field naturalist clubs • Conservation Authorities	• Confirm any ELC vegetation type for cliffs or talus slopes[lxxviii]. • SWH MIST[cxlix] Index #21 provides development effects and mitigation measures.	ELC based.	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE ELC ecosites not present within the Study Area.

Rare Vegetation Community	Candidate SWH			Confirmed SWH		Site Assessment	Study Area Assessment
	ELC Ecosite Codes	Habitat Description	Detailed Information and Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Sand Barren **<u>Rationale:</u>** **Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry.**	ELC ecosites: 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 less than or equal to 60%.	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%.	A sand barren area greater than 0.5 ha in size. <u>Information Sources</u> • MNR Districts • NHIC has location information available on their website. • Field naturalist clubs • Conservation Authorities	• Confirm any ELC vegetation type for sand barrens[lxxviii]. • Site must not be dominated by exotic or introduced species (less than 50% vegetative cover are exotic species). • SWH MIST[cxlix] Index #20 provides development effects and mitigation measures.	N/A	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE ELC ecosites not present within the Study Area.
Alvar **<u>Rationale:</u>** **Alvars are extremely rare habitats in Ecoregion 7E. Most alvars in Ontario are in Ecoregion 7E. Alvars in 7E are small and highly localized just north of the Palaeozoic-Precambrian contact.**	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 Five Alvar Indicator Species: 1) *Carex crawei* 2) *Panicum philadelphicum* 3) *Eleocharis compressa* 4) *Scutellaria parvula* 5) *Trichostema brachiatum* These indicator species are very specific to Alvars within ecoregion 7E©[cxlix]	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species. Vegetation cover varies from patchy to barren with a less than 60% tree cover[lxxviii].	An Alvar site greater than 0.5 ha in size[lxxv] <u>Information Sources</u> • Alvars of Ontario (2000), Federation of Ontario Naturalists [lxxvi] and Ontario Nature – Conserving Great Lakes Alvars[ccviii]. • NHIC has location information on their website. • MNR Districts • Feld naturalist clubs • Conservation Authorities	• Field studies that identify four of the five© Alvar Indicator Species [lxxv, cxlix] at a candidate alvar site is Significant. • Site must not be dominated by exotic or introduced species (less than 50% vegetative cover are exotic species). • The alvar must be in excellent condition and fit in with surrounding landscape.	N/A	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE ELC ecosites not present within the Study Area.

Rare Vegetation Community	Candidate SWH			Confirmed SWH		Site Assessment	Study Area Assessment
	ELC Ecosite Codes	Habitat Description	Detailed Information and Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Old Growth Forest **<u>Rationale:</u>** **Due to historic logging practices, extensive old growth forest is rare in the Ecoregion 7E. Interior habitat provided by old growth forests is required by many wildlife species.**	Forest Community Series: FOD FOC FOM SWD SWC SWM	Old growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	Woodland area is greater than 0.5 ha <u>Information Sources</u> • MNR Forest Resource Inventory mapping • MNR District • Field naturalist clubs • Conservation Authorities • Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations. • Municipal forestry departments	Field Studies will determine: • If dominant trees species of the are greater than 140 years old, then the area containing these trees is SWH[cxlviii]. • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities[cxlviii] (i.e., cut stumps will not be present). The area of forest ecosites combined or an ecoelement within an ecosite that contains the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest area containing the old growth characteristics[lxxviii]. • SWH MIST[cxlix] Index #23 provides development effects and mitigation measures.	Stands more than 90 years old and greater than 0.5 ha in size.	NOT CANDIDATE ELC ecosites not present within the Site.	CANDIDATE The woodland south-west of Site is present in the 1954 imagery. It is therefore at minimum 71 years old and based on aerial interpretation of 1954 imagery, likely more than 90 years old. However, the dominant trees are not greater than 140 years old based on estimation of tree size and other age characteristics observed during fieldwork.
Savannah **<u>Rationale:</u>** **Savannahs are extremely rare habitats in Ontario.**	TPS1 TPS2 TPW1 TPW2 CUS2	A savannah is a tallgrass prairie habitat that has tree cover between 25 to 60%[lxxix, lxxx, lxxxi, lxxxii, lxxxiii]	No minimum size to the site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u> • NHIC has location information available on their website • MNR Districts • Feld naturalist clubs • Conservation Authorities	Field studies confirm one or more of the Savannah indicator species listed in [cxlix] Appendix N should be present. Note: Savannah plant species list from Ecoregion 7E should be used[cxlviii]. • Area of the ELC ecosite is the SWH. • Site must not be dominated by exotic or introduced species (less than 50% vegetative cover are exotic species). • SWH MIST[cxlix] Index #18 provides development effects and mitigation measures.	N/A	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE ELC ecosites not present within the Study Area.

Rare Vegetation Community	Candidate SWH			Confirmed SWH		Site Assessment	Study Area Assessment
	ELC Ecosite Codes	Habitat Description	Detailed Information and Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Tallgrass Prairie **<u>Rationale:</u>** **Tallgrass Prairies are extremely rare habitats in Ontario.**	TPO1 TPO2	A tallgrass prairie has ground cover dominated by prairie grasses. An open tallgrass prairie habitat has less than 25% tree cover. [lxxix, lxxx, lxxxi, lxxxii, lxxxiii]	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. <u>Information Sources</u> • NHIC has location information available on their website. • MNR Districts • Feld naturalist clubs • Conservation Authorities	Field studies confirm one or more of the prairie indicator species listed in[cxlix] Appendix N should be present. Note: Prairie plant species list from Ecoregion 7E should be used[cxlviii]. • Area of the ELC ecosite is the SWH. Site must not be dominated by exotic or introduced species (less than 50% vegetative cover are exotic species). • SWH MIST[cxlix] Index #19 provides development effects and mitigation measures.	N/A	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE ELC ecosites not present within the Study Area.
Other Rare Vegetation Communities **<u>Rationale:</u>** **Plant communities that often contain rare species which depend on the habitat for survival.**	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG[cxlviii]. Any ELC ecosite code that has a possible ELC vegetation type that is Provincially Rare is candidate SWH.	Rare vegetation communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	ELC ecosite codes that have the potential to be a rare ELC vegetation type as outlined in appendix M [cxlviii] The MNR/NHIC will have up to date listing for rare vegetation communities. <u>Information Sources</u> • NHIC has location information available on their website. • MNR Districts • Feld naturalist clubs • Conservation Authorities	Field studies should confirm if an ELC vegetation type is a rare vegetation community based on listing within Appendix M of SWHTG[cxlviii]. • Area of the ELC vegetation type polygon is the SWH. • SWH MIST [cxlix] Index #37 provides development effects and mitigation measures.	List of communities.	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE ELC ecosites not present within the Study Area.

1.2.2 Specialized Habitat for Wildlife

Some wildlife species require large areas of suitable habitat for their long-term survival. Many wildlife species require substantial areas of suitable habitat for successful breeding. Their populations decline when habitat becomes fragmented and reduced in size[cxlviii]. Specialized habitat for wildlife is a community or diversity-based category, therefore, the more wildlife species a habitat contains, the more significant the habitat becomes to the planning area. The largest and least fragmented habitats within a planning area will support the most significant populations of wildlife. The specialized habitats for wildlife that are considered as SWH are outlined in Table 1.2.2.

Table 1.2.2: Specialized Habitats of Wildlife Considered SWH.

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH		Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Waterfowl Nesting Area **<u>Rationale:</u>** **Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.**	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard	All upland habitats located adjacent to these wetland ELC ecosites are candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4 Note: includes adjacency to PSW.	A waterfowl nesting area extends 120 m [cxlix] from a wetland (greater than 0.5 ha) or a wetland (greater than 0.5 ha) and any small wetlands (0.5 ha) within 120 m or a cluster of 3 or more small (less than 0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur [cxlix]. • Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. • Wood Ducks and Hooded Mergansers utilize large diameter trees (greater than 40 cm dbh) in woodlands for cavity nest sites. <u>Information Sources</u> • Ducks Unlimited staff may know the locations of particularly productive nesting sites. • MNR Wetland Evaluations for indication of significant waterfowl nesting habitat. • Reports and other information available from Conservation Authorities.	Studies confirmed: • Presence of 3 or more nesting pairs for listed species excluding Mallards. • Presence of 10 or more nesting pairs for listed species including Mallards. • Any active nesting site of an American Black Duck is considered significant. • Nesting studies should be completed during the spring breeding season (April to June). Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi]. • A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m [cxlviii] from the wetland and will provide enough habitat for waterfowl to successfully nest. • SWH MIST[cxlix] Index #25 provides development effects and mitigation measures.	Same as MNR criteria	NOT CANDIDATE ELC ecosites not present within the Site.	CANDIDATE SWD2 and adjacent upland habitat are present in Study Area to the south-west. No nesting or waterfowl were observed. The following species are known from the vicinity based on background screening: Wood Duck; Green-winged Teal; Mallard; American Black Duck; Gadwall; and, Blue-winged Teal.

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH		Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat **<u>Rationale:</u>** **Nest sites are fairly uncommon in Ecoregion 7E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.**	Osprey <u>Special Concern</u>: Bald Eagle	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. • Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. • Nests located on man-made objects are not to be included as SWH (e.g., telephone poles and constructed nesting platform). <u>Information Sources</u> • NHIC compiles all known nesting sites for Bald Eagles in Ontario. • MNR values information (LIO/NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat. • Nature Counts, Ontario Nest Records Scheme data. • MNR Districts • Check the Ontario Breeding Bird Atlas [ccv] or Rare Breeding Birds in Ontario for species documented. • Reports and other information available from Conservation Authorities. • Field naturalists clubs	Studies confirm the use of these nests by: • One or more active Osprey or Bald Eagle nests in an area[cxlviii]. • Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. • For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH[ccvii], maintaining undisturbed shorelines with large trees within this area is important[cxlviii]. • For a Bald Eagle the active nest and a 400 to 800 m radius around the nest is the SWH. [cvi, ccvii] Area of habitat from 400 to 800 m is dependant on site lights from the nest to the develop and inclusion of perching and foraging.	Presence of Osprey or Northern Harrier.	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE SWD2 present in Study Area does not support open waters and fish suitable for Osprey or Bald Eagle. No records of Northern Harrier in the vicinity. No nests observed.
Woodland Raptor Nesting Habitat **<u>Rationale:</u>** **Nests sites for these species are rarely identified, these area sensitive habitats and are often used annually**	Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	May be found in all forested ELC ecosites. May also be found in: SWC SWM SWD CUP3	• All natural or conifer plantation woodland/forest stands greater than 30 ha with greater than 10 ha of interior habitat[lxxxviiii, lxxxix, xc, xci, xciii, xciv, xcv,xcvi, cxxxiii]. Interior habitat determined with a 200 m buffer[cxlviii] • Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops	Studies confirm: • Presence of 1 or more active nests from species list is considered significant[cxlviii]. • Red-shouldered Hawk and Northern Goshawk – a 400 m radius around the nest or 28 ha area of habitat is the SWH [ccvii] (the 28 ha habitat area would be applied where optimal habitat is	Similar criteria as MNR with addition of three owl species	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE The woodland present in the Study Area is far less than 30 ha in size and contains no interior habitat.

Specialized Wildlife Habitat	Wildlife Species		Candidate SWH	Confirmed SWH		Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
by these species.			or crotches of trees. Species such as Coopers Hawk nest along forest edges sometimes on peninsulas or small off-shore islands. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. <u>Information Sources</u> • MNR Districts • Check the Ontario Breeding Bird Atlas [ccv] or Rare Breeding Bird in Ontario for species documented. • Check data from Bird Studies Canada. • Reports and other information available from Conservation Authorities.	irregularly shaped around the nest). • Barred Owl – a 200 m radius around the nest is the SWH [ccvii]. • Broad-winged Hawk and Coopers Hawk – a 100 m radius around the nest is the SWH[ccvii]. • Sharp-Shinned Hawk – a 50 m radius around the nest is the SWH[ccvii]. • Conduct field investigations from mid-March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area. • SWH MIST [cxlix] Index #27 provides development effects and mitigation measures.			
Turtle Nesting Areas **<u>Rationale:</u>** **These habitats are rare and when identified will often be the only breeding site for local populations of turtles.**	Midland Painted Turtle <u>Special Concern</u>: Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (less than 100 m)[cxlviii] or within the following ELC ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1	• 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.	Studies confirm: • Presence of 5 or more nesting Midland Painted Turtles. • One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. • The area or collection of sites within an area of exposed mineral soils where turtles nest, plus a radius of 30 to 100 m around the nesting area dependant on slope, riparian vegetation and adjacent land.	Similar criteria to MNR.	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE ELC ecosites not present within the Study Area.
Seeps and Springs **<u>Rationale:</u>** **Seeps/springs are typical of headwater areas and are often at the**	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander species	Seeps/springs are areas where groundwater comes to the surface. Often they are found within headwater areas within forested	Any forested area (with less than 25% meadow/field/pasture) within the headwaters of a stream or river system [cxvii, cxlix]. • Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species [cxix, cxx, cxxi, cxxii, cxiii,	Field studies confirm: • Presence of a site with 2 or more seeps/springs should be considered SWH. • The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area	As candidate SWH is not considered present, Peel – Caledon confirmed criteria will not be discussed.	NOT CANDIDATE Seeps/springs were not observed within the Site.	NOT CANDIDATE Seeps/springs were not observed within the Study Area and no plants observed indicate seeps or springs.

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH		Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
source of coldwater streams.		habitats. Any forested ecosite within the headwater areas of a stream could have seeps/springs.	[cxiv] Information Sources • Topographical map • Thermography • Hydrological surveys conducted by Conservation Authorities and MOE. • Field naturalists clubs and landowners	considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat [cxlviii]. SWH MIST [cxlix] Index #30 provides development effects.			
Amphibian Breeding Habitat (Woodland) **Rationale:** **These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations.**	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	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) greater than 500 m^2 (about 25 m diameter) [ccvii] within or adjacent (within 120 m) to a woodland (no minimum size)[clxxxii, lxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx]. 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 [cxlviii] Information Sources • Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records. • Local landowners may also provide assistance as they may hear springtime choruses of amphibians on their property. • MNR District • MNR wetland evaluations • Field naturalist clubs • Canadian Wildlife Service Amphibian Road Call Survey • Ontario Vernal Pool Association: http://www.ontariovernalpools.org	Studies confirm: • Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses)[lxxi] or 2 or more of the listed frog species with Call Level Codes of 3. • Observational study and call count surveys [cviii] will be required during the spring (March to June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. • The habitat is the wetland area plus a 230 m radius of woodland area[lxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx, lxxi] • If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. • SWH MIST [cxlix] Index #14 provides development effects and mitigation measures.	Similar criteria with lowered threshold for species abundance.	NOT CANDIDATE ELC ecosites not present within the Site.	CANDIDATE The SWD2-2 wetland is over 500 m^2 and is present within the woodland south-west of the Site. No Amphibians observed within the Site.

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH		Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Amphibian Breeding Habitat (Wetlands) **<u>Rationale:</u>** **Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within central Ontario landscapes.**	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	ELC Community Classes SW, MA, FE, BO, OA and SA. Typically these wetland ecosites will be isolated (greater than 120 m) from woodland ecosites; however, larger wetlands containing predominantly aquatic species (e.g., Bullfrog) may be adjacent to woodlands.	• Wetlands greater than 500 m2 (about 25 m diameter)[ccvii], supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNR mapping and could be important amphibian breeding habitats[clxxxii]. • 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 waterbodies with abundant emergent vegetation. <u>Information Sources</u> • Ontario Herpetofaunal Summary Atlas (or other similar atlases) • Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count • MNR Districts and wetland evaluations • Reports and other information available from Conservation Authorities.	• Studies confirm: Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses)[lxxi] or 2 or more of the listed frog/toad species with Call Level Codes of 3© or wetland with confirmed breeding Bullfrogs are significant©. • The ELC ecosite wetland area and the shoreline are the SWH. • A combination of observational study and call count surveys[cviii] will be required during the spring (March to June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. • If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. • SWH MIST[cxlix] Index #15 provides development effects and mitigation measures.	Similar criteria with lowered threshold for species abundance.	NOT CANDIDATE ELC ecosites not present within the Site	NOT CANDIDATE Candidate Breeding habitat in reference to woodland is more applicable.
Woodland Area-Sensitive Bird Breeding Habitat **<u>Rationale:</u>** **Large, natural blocks of mature woodland habitat within the settled areas of southern Ontario are important habitats for area sensitive**	Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird	All ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM SWD	• Habitats where interior forest breeding birds are breeding, typically large mature (greater than 60 years old) forest stands or woodlots greater than 30 ha[cv, cxxxi, cxxxii, cxxxiii, cxxxiv, cxxxv, cxxxvi, cxxxvii, cxxxviii, cxxxix, cxl, cxli, cxlii, cxliii, cxliv, cxlv, cxlvi, cl, cli, clii, cliii, cliv, clv, clvi, clvii, clviii, clix,]. • Interior forest habitat is at least 200 m from forest edge habitat[clxiv]. <u>Information Sources</u> • Local bird clubs • Canadian Wildlife Service (CWS) for the location of forest bird	Studies confirm: • Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. • Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. • Conduct field investigations in spring and early summer when birds are singing and defending their territories. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi].	Forests 60 years old with more than 4 ha interior habitat.	NOT CANDIDATE ELC ecosites not present within the Site	NOT CANDIDATE Woodlands present in the Study Area do not have large areas of interior habitat and do not meet the 30 ha size threshold.

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH		Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
interior forest song birds.	Scarlet Tanager Winter Wren <u>Special Concern:</u> Cerulean Warbler Canada Warbler		monitoring. • Bird Studies Canada conducted a 3 year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species. • Reports and other information available from Conservation Authorities.	• SWH MIST[cxlix] Index #34 provides development effects and mitigation measures.			

1.3 Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Habitats of Species of Conservation Concern include wildlife species that are listed as Special Concern or rare, that are declining or are featured species. Habitats of Species of Conservation Concern do not include habitats of Endangered or Threatened species as identified by the Endangered Species Act 2007. Table 1.3 assists with the identification of SWH for Species of Conservation Concern.

Table 1.3: Habitats of Species of Conservation Concern considered SWH.

Specialized Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH	Confirmed SWH		Site Assessment	Study Area Assessment
			Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Marsh Breeding Bird Habitat **<u>Rationale:</u>** **Wetlands for these bird species are typically productive and fairly rare in southern Ontario landscapes.**	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan <u>Special Concern:</u> Black Tern Yellow Rail	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 [cxxiv]. • 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. <u>Information Sources</u> • MNR District and wetland evaluations • Field naturalist clubs • NHIC Records • Reports and other information available from Conservation Authorities. • Ontario Breeding Bird Atlas	Studies confirm: • Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species. • Note: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. • Area of the ELC ecosite is the SWH. • Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[ccxi] • SWH MIST [cxlix] Index #35 provides development effects and mitigation measures.	N/A	NOT CANDIDATE ELC ecosites not present within the Site.	NOT CANDIDATE No wetlands with sluggish streams, ponds or marshes for Green Heron present within the Stud
Open Country Bird Breeding Habitat **<u>Rationale:</u>** **This wildlife habitat is declining throughout**	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow <u>Special Concern:</u> Short-eared Owl	CUM1 CUM2	• Large grassland areas (includes natural and cultural fields and meadows greater than 30 ha[clx, clxi, clxii, clxiii, clxiv, clxv, clxvi, clxvii, clxviii, clxix] • 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	Field Studies confirm: • Presence of nesting or breeding of 2 or more of the listed species. • A field with 1 or more breeding Short-eared Owls is to be considered SWH. • The area of SWH is the	Open country greater than 10 ha.	NOT CANDIDATE ELC ecosites are not present within the Site.	NOT CANDIDATE Meadow in the Study Area is less than 1.5 ha.

Specialized Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH	Confirmed SWH		Site Assessment	Study Area Assessment
			Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.			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. <u>Information Sources</u> • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs • Ontario Breeding Bird Atlas • Reports and other information available from Conservation Authorities.	contiguous ELC ecosite field areas. • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"[cclxi]. • SWH MIST[cclxii] Index #32 provides development effects and mitigation measures.			
Shrub/Early Successional Bird Breeding Habitat **<u>Rationale:</u>** **This wildlife habitat is declining throughout Ontario and North America.** **The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records [cxcix].**	<u>Indicator Species</u>: Brown Thrasher Clay-coloured Sparrow <u>Common Species:</u> Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher <u>Special Concern:</u> Yellow-breasted Chat Golden-winged Warbler	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 greater than 10 ha[clxiv] 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 live-stock pasturing in the last 5 years). • Shrub thicket habitats (greater than 10 ha) are most likely to support and sustain a diversity of these species[clxxiii]. • Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. <u>Information Sources</u> • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs • Ontario Breeding Bird Atlas	Field Studies confirm: • Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. • A habitat with breeding Yellow- breasted Chat or Golden-winged Warbler is to be considered as SWH. • The area of the SWH is the contiguous ELC ecosite field/thicket area. • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for	N/A	NOT CANDIDATE ELC ecosites are not present within the Site	NOT CANDIDATE CUW1 is present north of Hazelhurst Road, but is generally treed, not thicket

Specialized Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH	Confirmed SWH		Site Assessment	Study Area Assessment
			Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
			• Reports and other information available from Conservation Authorities.	Wind Power Projects"[ccxi]. • SWH MIST [cxlix] Index #33 provides development effects and mitigation measures.			
Terrestrial Crayfish **<u>Rationale:</u>** **Terrestrial Crayfish are only found within southwest Ontario in Canada and their habitats are very rare[ccii]**	Chimney or Digger Crayfish (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish (*Cambarus Diogenes*)	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. • Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. • Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed. <u>Information Sources</u> • Information sources from "Conservation Status of Freshwater Crayfishes" by Dr. Premek Hamr for the WWF and CNF March 1998.	Studies Confirm: • Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites[cci]. • Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH. • Surveys should be done April to August in temporary or permanent water. Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult[cci]. • SWH MIST[cxlix] Index #36 provides development effects and mitigation measures.	N/A	NOT CANDIDATE. ELC ecosites are not present within the Site	NOT CANDIDATE No records of terrestrial crayfish in the vicinity. Habitat in the woodland/wetland southwest of the Site is not appropriate based on professional opinion and lack of burrow observations
Special Concern and Rare Wildlife Species **<u>Rationale:</u>** **These species are quite rare or have experienced significant population declines in**	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the NHIC.	All plant and animal element occurrences within a 1 or 10 km grid. Older element occurrences were recorded prior to GPS being available; therefore, location information may lack accuracy.	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or Provincially Rrare species; linking candidate habitat on the site needs to be completed to ELC ecosites[lxxviii] <u>Information Sources</u> • NHIC will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. • NHIC Website "Get Information":	Studies Confirm: • Assessment/inventory of the site for the identified Special Concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. • The area of the habitat to the finest ELC scale that protects	NOT CANDIDATE The following Species of Conservation Concern (SCC) have records in the vicinity of the Site and Study Area based on background screening sources. They are evaluated individually in the Species of Conservation Concern Screening (Appendix F). All have been evaluated as having no potential or low potential for any impact to the species or their habitat from the proposed work. • Redhead • Tufted Titmouse • Semipalmated Sandpiper		

Specialized Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH	Confirmed SWH		Site Assessment	Study Area Assessment
			Habitat Criteria and Information Sources	Defining Criteria	Peel – Caledon SWH Study Confirmed Criteria		
Ontario.			http://nhic.mnr.gov.on.ca • Ontario Breeding Bird Atlas • Expert advice should be sought as many of the rare species have little information available about their requirements.	the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species (e.g., specific nesting habitat or foraging habitat). • SWH MIST[cxlix] Index #37 provides development effects and mitigation measures.	• Long-tailed Duck • Eastern Wood-pewee • Peregrine Falcon • Barn Swallow • Caspian Tern • Great Black-backed Gull • Black-crowned Night-heron • Horned Grebe • Purple Martin • Golden-winged Warbler • Monarch • Snapping Turtle • Midland Painted Turtle		

1.4 Animal Movement Corridors

Animal Movement Corridors are elongated areas used by wildlife to move from one habitat to another. They are important to ensure genetic diversity in populations, to allow seasonal migration of animals (e.g. deer moving from summer to winter range) and to allow animals to move throughout their home range from feeding areas to cover areas. Animal movement corridors function at different scales often related to the size and home range of the animal. For example, short, narrow areas of natural habitat may function as a corridor between amphibian breeding areas and their summer range, while wider, longer corridors are needed to allow deer to travel from their winter habitat to their summer habitat.

Identifying the most important corridors that provide connectivity across the landscape is challenging because of a lack of specific information on animal movements. There is also some uncertainty about the optimum width and mortality risks of corridors. Furthermore, a corridor may be beneficial for some species but detrimental to others. For example, narrow linear corridors may allow increased access for racoons, cats, and other predators. Also, narrow corridors dominated by edge habitat may encourage invasion by weedy generalist plants and opportunistic species of birds and mammals. Corridors often consist of naturally vegetated areas that run through more open or developed landscapes. However, sparsely vegetated areas can also function as corridors. For example, many species move freely through agricultural land to reach natural areas. Despite the difficulty of identifying exact movement corridors for all species, these landscape features are important to the long-term viability of certain wildlife populations.

Animal Movement Corridors should only be identified as SWH where:

Where a Confirmed or Candidate SWH has been identified by MNR or the planning authority based on documented evidence of a habitat identified within these Criterion Schedules or the Significant Wildlife Habitat Technical Guide. The identified wildlife habitats Table 1.4.1 will have distinct passageways or rely on well-defined natural features for movements between habitats required by the species to complete its life cycle.

Table 1.4.1: Animal Movement Corridors.

Animal Movement Corridors	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Confirmed Criteria	Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	ELC Ecosite Codes			
Amphibian Movement Corridors **Rationale:** **Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.**	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	• Corridors may be found in all ecosites associated with water. • Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1.	Movement corridors between breeding habitat and summer habitat [clxxiv, clxxv, clxxvi, clxxvii, clxxviii, clxxix, clxxx, clxxxi]. Movement corridors must be determined when amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule. Information Sources • MNR District Office and NHIC • Reports and other information available from Conservation	• Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. • Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant[cxlix]. • Corridors should have at least 15 m of vegetation on both sides of waterway[cxlix] or be up to 200 m wide[cxlix] of woodland habitat and with gaps less than 20 m[cxlix]. • Shorter corridors are more	N/A	NOT CANDIDATE Amphibian breeding habitat (wetland) listed as Not Candidate (Table 1.2.2) within the Site.	NOT CANDIDATE Amphibian breeding habitat (wetland) listed as Not Candidate (Table 1.2.2) within the Study Area.

Animal Movement Corridors	Wildlife Species	Candidate SWH		Confirmed SWH	Peel – Caledon SWH Study Confirmed Criteria	Site Assessment	Study Area Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	ELC Ecosite Codes			
			Authorities. • Field naturalist clubs	significant than longer corridors; however, amphibians must be able to get to and from their summer and breeding habitat[cxlix]. • SWH MIST [cxlix] Index #40 provides development effects and mitigation measures.			
Deer Movement Corridors **<u>Rationale:</u>** **Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.**	White-tailed Deer	Corridors may be found in all forested ecosites. A project proposed in Stratum II Deer Wintering Area has potential to contain corridors.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 of this schedule. • A deer wintering habitat identified by the MNR as SWH in Table 1.1 of this Schedule will have corridors that deer use during fall migration and spring dispersion[clxxxii, clxxxiii, cxlix, cxciv]. • Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). <u>Information Sources</u> • MNR District Office and NHIC • Reports and other information available from Conservation Authorities. • Field naturalist clubs	• Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas. • Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. • Corridors should be at least 200 m wide[cxlix] with gaps less than 20 m [cxlix] and if following riparian area with at least 15 m of vegetation on both sides of waterway[cxlix]. Shorter corridors are more significant than longer corridors[cxlix]. • SWH MIST [cxlix] Index #39 provides development effects and mitigation measures.	N/A	NOT CANDIDATE Deer Wintering Habitat listed as Not Candidate (Table 1.1) within the Site. Stratum II Deer Wintering Area is not within Site.	NOT CANDIDATE Deer Wintering Habitat listed as Not Candidate (Table 1.1) in the Study Area. Stratum II Deer Wintering Area is not within the Study Area.

1.5 Exceptions for Ecoregion 7E

Exceptions are candidate wildlife habitats that will have different criteria than what is proposed in the above schedules for an area within the ecoregion. The exceptions will be based on ecodistricts and municipalities can apply the exception for the ecodistrict within their planning area

Table 1.5.1: Significant Wildlife Habitat Exceptions for Ecodistricts within Ecoregion 7E.

Ecodistrict	Wildlife Habitat and Species	Candidate SWH			Confirmed SWH	Site Assessment	Study Area Assessment
		Ecosites	Habitat Description	Habitat Criteria and Information	Defining Criteria		
7E-2	Bat Migratory Stopover Area Rationale: Stopover areas for long distance migrant bats are important during fall migration: Hoary Bat, Eastern Red Bat and Silver-haired Bat.	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. This is the only known bat migratory stopover habitat based on current information. Information Sources: • OMNRF for possible locations and contact for local experts. • University of Waterloo, Biology Department	• Long Point (42°35'N, 80°30'E, to 42°33'N, 80°03'E) has been identified as a significant stop-over habitat for fall migrating Silver-haired Bats, due to significant increases in abundance, activity and feeding that was documented during fall migration[ccxv]. • The confirmation criteria and habitat areas for this SWH are still being determined. • SWH MIST[cxlix] Index #38 All woodlands greater than 30 ha with a 50% composition of these ELC vegetation types are considered significant: FOM1-1, FOM2-1, FOM3-1, FOD1-1, FOD1-2, FOD2-1, FOD2-2, FOD2-3, FOD2-4, FOD4-1, FOD5-2, FOD5-3, FOD5-7, and, FOD6-5. • SWH MIST [cxlix] Index #3 provides development effects and mitigation measures.	NOT CANDIDATE Site is not in ecodistrict 7E-2.	NOT CANDIDATE Study Area is not in ecodistrict 7E-2.

Supplementary Criteria for Significant Wildlife Habitat in Peel-Caledon

Table 2.1 Supplementary Criteria for Significant Wildlife Habitat in Peel-Caledon

SWH Criteria	Description	Site Assessment	Study Area Assessment
B4: Foraging Areas with Abundant Mast	Oak dominant forests (FOD1, 2, and 9)	No forest habit within the Site.	Forest is Sugar Maple dominant (FOD5).
B5: Highly Diverse Areas	Top 5% most diverse habitat patches in the region.	No natural areas within the Site.	Only two ELC types in the woodland/wetland patch to the south-west. No set threshold identified, but the patch is not considered to be highly diverse.

APPENDIX H:

Terms of Reference

ENVISION
CONSULTANTS LTD

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MISSISSAUGA, ON L4V 1X1

ENVISIONCONSULTANTS.CA

September 3, 2025

Project #: 25-1071

City of Mississauga
300 City Centre Drive
Mississauga, ON L5B 3C1

Attention: Jim Greenfield, MPI, MCIP, RPP – Acting Team Lead, Park Assets

SUBJECT: ENVIRONMENTAL IMPACT STUDY - TERMS OF REFERENCE, ARMSTRONG PLANNING, 580 HAZELHURST ROAD, MISSISSAUGA, ONTARIO

EnVision Consultants Ltd. (EnVision) was retained by Armstrong Planning (the 'Client') acting on behalf of the landowner, to complete an Environmental Impact Study (EIS) and Arborist Report to support the development of a recyclable materials/waste processing facility at the property located at 580 Hazelhurst Road, Mississauga, Ontario (the 'Site'). An EIS and Arborist Report will be submitted once field surveys are complete. This document outlines the proposed Terms of Reference (ToR) for the EIS and Arborist Report.

The Site is located in Mississauga Ontario, with Hazelhurst Road to the northwest and industrial lots to the northeast and southwest, as shown on Figure 1. The Site consists of an industrial lot and is rectangular in shape, comprising an area of approximately 1.27 ha (3.13 acres). The Site generally appears to lack mapped natural heritage features; however, adjacent to the Site, a woodland feature abuts the southwest boundary which is the reason for the requirement of the EIS. It should be noted that no other Natural Heritage Feature (NHF) bedside for the noted adjacent woodland is present within the Site.

We will use the Mississauga Official Plan (office consolidation May 15, 2025) and Region of Peel Official Plan (April 2022); as the guiding policy documents to complete the required EIS.

REVIEW OF BACKGROUND INFORMATION

Relevant resources will be reviewed in order to provide information related to provincially significant natural features, significant wildlife habitat (SWH), and Species at Risk (SAR) that have potential to occur on the Site or within the overall Study Area (within 120 m of the Site). The resources to be reviewed are listed below:

- Aerial Photographs and Satellite Imagery;
- Ontario Breeding Bird Atlas (OBBA) internet site (Bird Studies Canada, 2006);
- Ontario Butterfly Atlas (OBA) (Toronto Entomologists' Association, 2025);

- Ontario Geohub: Aquatic Resource Mapping (Ministry of Natural Resources [MNR], 2025);
- Fisheries and Oceans Canada (DFO) Aquatic SAR Mapping Tool (2025);
- Ontario Reptile and Amphibian Atlas (ORAA) internet site (Ontario Nature, 2019);
- Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015b);
- Significant Wildlife Habitat: Technical Guide (OMNR, 2000);
- Natural Heritage Areas Mapping, including Natural Heritage Information Centre (NHIC) data (MNRF, 2024);
- Correspondence with Credit Valley Conservation Authority (CVC) and MNR staff;
- Mississauga Official Plan (office consolidation May 15, 2025;
- Region of Peel Official Plan (April 2022);
- Endangered Species Act, 2007 (Government of Ontario, 2007);
- Fisheries Act, c. F-14 (Government of Canada, 1985);
- Forestry Act, c. F.26 (Government of Ontario, 2009);
- Migratory Birds Convention Act (Government of Canada, 1994);
- Species at Risk Public Registry (Government of Canada, 2015);
- Species at Risk in Ontario (SARO) List, Ontario Regulation 230/08 (Government of Ontario, 2018);
- Provincial Planning Statement (PPS) (OMMAH, 2024); and,
- Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (OMNR, 2010).

FIELD PROGRAM

VEGETATION COMMUNITY DESCRIPTION AND MAPPING

Vegetation on the Site will be assessed, including species composition and frequency of occurrence. Observations will include the presence of any SAR plants, surficial soil types, and signs of human disturbance. Vegetation communities will be recorded, mapped, and classified using *Ecological Land Classification (ELC) for Southern Ontario* (Lee et al. 1998) and its associated vegetation type list (Lee, 2008).

VEGETATION INVENTORY

The Site will be surveyed on one (1) occasion during the fall (September 16, 2025). All plant species observed will be recorded, and the locations of any SAR plants will be documented using a handheld GPS. This data will inform the classification of ELC polygons on the Site.

WOODLAND BOUNDARY DELINEATION

Woodland dripline boundaries will be flagged within the Site and reviewed with the City of Mississauga and/or Town of Oakville Staff on September 16, 2025. Please note that we reached out to the CVC and they declined their involvement due to the lack of CVC Regulated Area and of features of concern within the Site. A hand-held GPS will be used for preliminary marking of the dripline, but a final survey by an Ontario Land Surveyor will be required.

BAT HABITAT ASSESSMENT

The Site will be assessed for any bat habitat and will be visited during leaf-off conditions to conduct a tree snag survey to determine whether the trees onsite have the potential to be utilized as bat habitat.

The survey will be completed in accordance with the MECP's protocol guidance documents including Maternity Roost Surveys (Forest/Woodlands) and Bat Survey Response which are both based off MNRF's Bat and Bat Habitat: Guidelines for Wind Power Projects (2011).

SIGNIFICANT HABITAT ASSESSMENT AND WILDLIFE DOCUMENTATION

The Site will be assessed for SWH and potential habitat for SAR. Findings will be documented, photographed, and georeferenced using a handheld GPS unit. All incidental wildlife observations or evidence of wildlife will be recorded during each site visit.

EIS REPORT

The findings from the field program will be included in an EIS report, along with relevant figures and regulatory communications. Per guidelines stated in the City of Mississauga Environmental Impact Study Checklist (October 2017), the EIS will include an introduction, a background review, planning context for the project, methodology, field results, potential impacts, recommendations for mitigation of impacts and the monitoring of these mitigations, and enhancement opportunities for the Site. The report will be submitted to the City of Mississauga for review.

TREE INVENTORY AND TREE PRESERVATION PLAN

A tree inventory and a Tree Preservation Plan (TPP) will be completed in accordance with the City of Mississauga's Private Tree Protection By-law 0021-2022 and Public Tree Protection By-law 0020-2022 to assess all trees 10 cm diameter at breast height (DBH) or greater within the Site and all trees 6 cm DBH or greater on City property. All trees within 6 m of the Site will be included within the inventory as well. The inventory and TPP will include recommendations for the protection of these trees during Site preparation and construction.

The following characteristics will be obtained for each tree:

- Tree tag number;
- Tree species (common and scientific names – genus and species);
- DBH
- Tree condition (vigour, structure):
  - GOOD – dead branches less than 10%; signs of 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; and,

  - DEAD – tree shows no signs of life.
- Evidence of insect or fungal infection;
- General comments including structural integrity, significant lean, etc.;
- Location of tree (Ontario Land Surveyor to be provided by the Client); and,
- A picture of the tree.

The results from the tree inventory will be used to create a TPP which identifies and details tree protection methodology. The Tree Protection Zone (TPZ) for each tree is defined as the dripline of the tree. The TPP will include details on the appropriate use of the TPZ, tree protection fencing, and general notes on best management practices.

ARBORIST REPORT

The Arborist Report will describe the nature of the arboricultural work recommended to address potential impacts to the tree(s) in question (e.g., pruning, root pruning, tree removal, tree protection measures, etc.) in order to facilitate the proposed works. The Arborist Report will follow the City of Mississauga's Terms of Reference: Arborist Reports, Tree Inventory/Survey & Tree Preservation Plans (2020) as a guide and will include the following information:

- Applicant contact information;
- Location of the inventoried tree(s) within the Site, using a handheld GPS unit by EnVision and by an Ontario Land Surveyor provided by the Client;
- Identification of tree(s) in question (common and scientific names);
- Photographs of each tree;
- Size of tree(s) in question (reported as DBH);
- Condition of the tree(s) in question (based on details obtained during the tree inventory);
- Category for each tree (as specified under appropriate by-law);
- Arborist recommendation for treatment of the tree(s) (e.g., removal, replacement, preservation, etc.);
- Reason for removal (if applicable);
- Tree replacement information (if applicable);
- Tree Appraisal Value using the Trunk Formula Method for City-owned trees; and,
- Signed letter of consent by the adjacent property owner(s) for any trees of shared ownership that are proposed for injury or removal.

CLOSING

This ToR was prepared for the account of Armstrong Planning who are managing this project on behalf of the landowner. EnVision has completed this assessment in accordance with generally accepted professional practises and procedures applicable at the time of preparation. These services are not subject to any express or implied warranties, and none should be inferred. The material in this letter reflects EnVision's judgement in light of the information available at the time of preparation. Any use, which a Third Party not noted above makes of this report, or nay reliance on decisions to be made based on it, are the responsibility of such Third Parties. EnVision accepts no responsibility for damages,

if any, suffered by a Third Party as a result of decisions made or actions based on this letter. Should you have any questions or wish to review the contents of this letter in more detail, please do not hesitate to contact the undersigned.

Yours sincerely,

EnVision Consultants Ltd.

Christian Buchanan-Fraser, B.Sc., MSc.
Ecologist
cbuchanan@envisionconsultants.ca

Alex Stettler, H.B.Sc., PMP, CAN-CISEC
Senior Project Manager - Ecology
astettler@envisionconsultants.ca

APPENDIX A:

Figure

Figure 1: Site Location.

October 15th, 2025

Hi Alex Stettler,

Thank you for including us in the review of documents relating to the 580 Hazelhurst Rd Project (filed under: DARC 24-58 W2).

The following documents were reviewed by Forestry:

Received by Forestry	Document
September 4th, 2025	Environmental Impact Study – Terms of Reference, Envision Consultants Ltd., September 3rd, 2025

I trust that this information aids in the plan review process from a natural heritage perspective and the next steps forward. If you have any questions, please do not hesitate to contact me.

Sincerely,

Jeffrey Driscoll, MSc., MEnv.Sc.
Natural Heritage Specialist
Forestry Section
(tel): 905-615-3200 ext. 4345
(e): jeffrey.driscoll@mississauga.ca

City of Mississauga | Community Services Department,
Parks, Forestry & Environment Division

Table of Contents

1.0 Forestry Comments

Comment 1: Natural Areas Survey (NAS) Data

Given that the project area overlaps directly with features of the City's Natural Heritage System, specifically a Significant Natural Area (known as Site SD1), the background data review should also include reference to the City of Mississauga's Natural Areas Survey (NAS). For detailed species lists of what has been previously found in natural area sites within/adjacent to this site please fill out and return the attached data sharing agreement to Jeffrey Driscoll (Natural Heritage Specialist, jeffrey.driscoll@mississauga.ca) to coordinate data sharing with the City's NAS Data Steward.

Comment 2: Significant Wildlife Habitat

Please ensure that the assessment of Significant Wildlife Habitat (SWH) will be completed according to both the criteria and thresholds of the Significant Wildlife Habitat Schedules for Ecoregion 7E (MNRF, 2015), and the Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009).

Comment 3: General Field Data Requirements

Please ensure the following information relating to data collected during field investigations are included within the EIS report:

- The data cards completed during ecological land classification (ELC) fieldwork for the classification of vegetation communities in September 2025 must be provided both digitally and in an appendix to the EIS report.
- All rare and at-risk flora and fauna species must be geolocated and their locations provided on a map in the EIS report. Any rare and at-risk species that were identified through the background review but not confirmed during field investigations must be addressed within the report.
- Geolocation information for fieldwork survey stations should be provided in a map in the EIS.
- Geo-referenced digital data (e.g., ELC polygons, geolocation of SAR and/or rare species, geolocation of field stations, etc.) should be provided using UTM Zone 17 NAD83 ESRI Native File data (shapefiles)

Comment 4: Natural Heritage Opportunities and Constraints

The EIS should include a figure that depicts all existing natural heritage features and proposed ecological buffers to provide physical separation of the development from the limits of natural heritage features.

Comment 5: Agency Consultation & Approval

Please ensure that all correspondence related to provincial and federal requirements and permits (e.g., Ministry of Environment, Conservation & Parks, Credit Valley Conservation Authority, etc) are appended within the prepared EIS.

Comment 6: Ecological Buffer

A minimum 10m buffer should be applied to the limit of the Significant Natural Area (also known as site SD1). This buffer should be naturalized and planted to the satisfaction of the City. At detailed design a restoration plan will be required. Please refer to Comment 8 for high level information on the City's restoration expectations.

Comment 7: Encroachment into the Significant Natural Area

Air photo interpretation conducted by Community Services – Forestry noted what appears to be a gradual encroachment into the *Significant Woodland* on the neighbouring property. The encroachment area appeared to be ~ 0.06ha in size with clearing of vegetation to store equipment and materials (refer to Appendix 1 for a map of the approximate area). A site visit was conducted on September 16th, 2025, by Community Services – Forestry with consultants representing Envision Consultants Ltd. to delineate the dripline of the *Significant Woodland*, during which City staff confirmed the encroachment into the *Significant Woodland* (refer to Photo Site 1 in Appendix 2). To meet the intent of policy 6.3.24 of the City's Official Plan, which seeks to protect, enhance, restore and expand the NHS, Community Services - Forestry encourages the applicant to engage the private landowner of the adjacent property (i.e., Hydro One) regarding restoration of the encroachment area to woodland conditions. If the applicant pursues restoring the encroachment area, please refer to Comment 8 for further details on the required density targets for tree and shrub plantings.

Comment 8: Restoration Plan

The environmental impact study (EIS) should outline high-level guidance for preparing a restoration plan for any required ecological buffers, enhancement and compensation measures/areas that will be applied to the Natural Heritage System features. The restoration plan should outline how these components will be naturalized, including targeted ecological communities and general planting specifications upon which a more detailed restoration plan can be developed. General requirements for a detailed restoration plan will include:

- The restoration plan should include a planting list that specifies the species to be used, including their size, quantity, and condition (e.g., bareroot, balled and burlapped, potted).
- Seed mixes should be provided, detailing species percent ratios and application rates tailored to the site's expected condition.
- Planting density requirements for the *Significant Woodland* buffer and Encroachment Area:
    - Trees are to be planted at a density of 1,200 trees/ha
    - Low shrubs are to be planted at a density of 11,000 shrubs/ha
    - Tall shrubs are to be planted at a density of 2,750 shrubs/ha
- Spacing requirements for planted material to achieve the targeted densities:

- Low shrubs: 1m to 1.45m o.c.
- Deciduous trees / tall shrubs: 2.2m o.c.
- Coniferous trees/tall shrubs: 1.45m to 2.2m o.c.

- Minimum height for planted material includes: 1.5-2.5m for whips and 60cm for shrubs.
- To prevent any potential dispersal of non-native species into the neighbouring natural area, we will require that restoration plantings include only native species that are common to the local watershed and appropriate for the site conditions. We recommend that the applicant reviews Credit Valley Conservation Authority's seed mix and vegetation selection guidance documents:
  - Credit Valley Conservation Authority. (2018). Plant Selection: Species List for Planting Plans within the Credit River Watershed. Link: https://cvc.ca/document/plant-selection-guideline-species-list-for-planting-plans-within-the-credit-river-watershed/
  - Credit Valley Conservation Authority. (2023). Guidelines for Designing Enhancement Plans within Setbacks and Buffers. Link: https://cvc.ca/document/57660/
- The planting layout of the buffer area should follow a naturalized approach with random distribution to achieve a degree of structural and species diversity, arranged in a way that reflects natural plant communities, providing greater resilience against environmental stressors.
- A detailed plan for monitoring and maintenance must be developed to the satisfaction of the City's Forestry team.

Comment 9: Bird Friendly Design

Given the proximity of the development to a *Significant Woodland* associated with *Significant Natural Area SD1*, bird collisions are a potential long-term impact. In an effort to mitigate bird strikes, the City recommends that the applicant explores bird-friendly design principles (refer to Canadian Standards Association A460:19) through the prepared EIS, such as minimizing reflective surfaces on windows (applying visual markers or window films) and directing outdoor lighting downwards and away from natural areas too reduce the risk of bird strikes.

End of Comments

Jeffrey Driscoll
Natural Heritage Specialist, Forestry

Appendix 1. Mapping of Significant Woodland Encroachment


iMaps
MISSISSAUGA
580 HAZELHURST RD
I want to...
Tools
5.21 m
4.32 m
52.71 m
Area: 0.06 ha
Perimeter: 157.48 m
E3-12
FOD
D
7.10 m
1954
2024
1995
Scale 1:
564
Go
0
5
10m
0 City Centre Drive, Mississauga, Ontario Canada L5B 3C1 | City of Mississa

Appendix 2. Site Visit Photos

Property photos were taken on September 16th, 2025, by Jeffrey Driscoll, Natural Heritage Specialist at the City of Mississauga.

Photo Site 1 (Encroachment) – 43.91332N, -79.631635W

Photo Site 2 (Woodland Dripline) – 43.491675N, -79.631913W

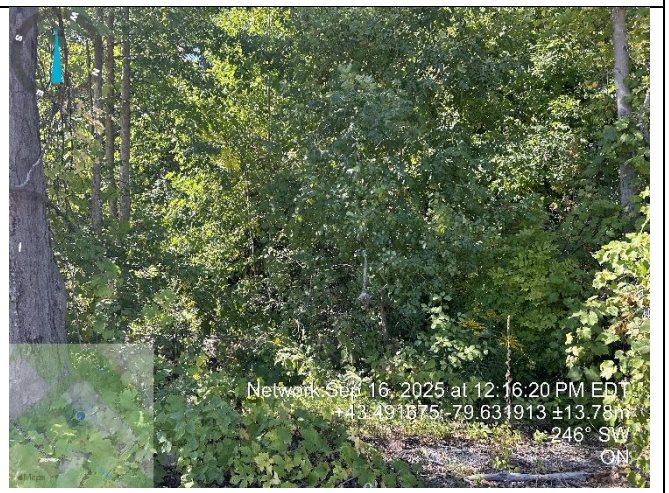

Photo Site 3 (Woodland Interior) – 43.491202N, -79.631760W