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Scoped Environmental Impact Study (EIS) for 7085 Goreway Drive, City of Mississauga

PECG Project #
1602802

Prepared For
Redwood Properties

May 29, 2020

74 Berkeley Street, Toronto, ON M5A 2W7
Tel: 647-795-8153 | www.pecg.ca

May 29, 2020

Brian Ng
Redwood Properties
330 New Huntington Road, Suite 201
Woodbridge, Ontario L4H 4C9

Dear Brian Ng:

Re: Scoped Environmental Impact Study (EIS) for 7085 Goreway Drive, City of Mississauga
Project #: 1602802

Palmer is pleased to submit a preliminary scoped Environmental Impact Study (EIS) for 7085 Goreway Drive, City of Mississauga. This scoped EIS has been completed as part of a proposed re-zoning and an Official Plan Amendment to support the re-development of the subject property.

The findings of our study are the result of a background review, initial field investigation and an analysis of data using the current scientific understanding of the ecology of the area, as well as the current natural heritage policy requirements. From the work completed to date, which is proposed to be supplemented with further field investigations, we have identified the environmental sensitivities, constraints and development opportunities of the subject property. Based on the findings and recommendations of this study, it is our professional opinion that with the implementation of the mitigation measures as provided in this report, the proposed development plan is environmentally feasible.

Please let us know if you have question or comments on this submission

Yours truly,

Dirk Janas, B.Sc.
Principal, Ecologist

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1. Introduction

Palmer is pleased to submit this preliminary scoped Environmental Impact Study (EIS) for 7085 Goreway Drive, in the City of Mississauga (herein referred to as the "subject property") (**Figure 1**). This scoped EIS was completed as part of a proposed re-zoning and an Official Plan Amendment (OPA) to support the re-development of the subject property.

The subject property is currently occupied by a large commercial building and surrounded by a parking lot and is adjacent to a natural area that comprises Mimico Creek. A paved multi-use recreational trail on municipally owned lands called the Malton Greenway Park runs parallel to Mimico Creek, east of the subject property.

This scoped EIS is based on a natural heritage policy review, background data analysis and an initial field investigation. We proposed to supplement the scoped EIS with further field surveys and the preparation of an Addendum report to identify any further constraints, updates, and mitigation measures.

2. Environmental Policy

2.1 Migratory Birds Convention Act (1994)

The *Migratory Birds Convention Act, MBCA* (1994) and Migratory Birds Regulations, MBR (2014) protect most species of migratory birds and their nests and eggs anywhere they are found in Canada. General prohibitions under the MBCA and MBR protect migratory birds, their nests and eggs and prohibit the deposit of harmful substances in waters / areas frequented by them. The MBR includes an additional prohibition against incidental take, which is the inadvertent harming or destruction of birds, nests or eggs.

Compliance with the MBCA and MBR is best achieved through a due diligence approach, which identifies potential risk, based on a site-specific analysis in consideration of the Avoidance Guidelines and Best Management Practices information on the Environment Canada website.

2.2 Endangered Species Act (2007)

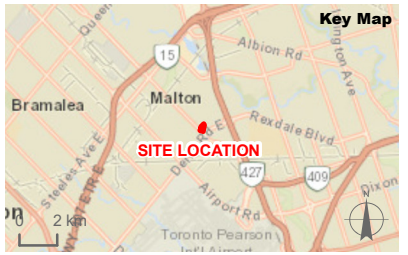
Species designated as Endangered or Threatened by the Committee on the Status of Species at Risk in Ontario (COSSARO) are listed as Species at Risk in Ontario (SARO). These species at risk (SAR) and their habitats (e.g. areas essential for breeding, rearing, feeding, hibernation and migration) are afforded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

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

LEGEND:

- Subject Property Boundary
- Study Area

Imagery (2018) provided by City of Toronto.



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PROJECT NO.	1602802	REVISION:	1
DATE:	May 25, 2020	SCALE:	1:2000
DRAWN:	BE	DATUM:	NAD 1983
CHECKED:	ND	PROJECTION:	UTM zone 17

CLIENT: Redwood Properties (Preston Homes)

PREPARED BY: Palmer

PROJECT: 7085 Goreway Drive EIS

TITLE: **Site Location**

Figure 1

Document Path: C:\Egnyte\Shared\Projects\Active\16028 - Redwood Properties (Preston Homes)\1602802 - 7085 Goreway Dr EIS\Mapping\Figures\5_ArcGIS\1602802_1-1_Site Location.mxd

2.3 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) provides direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features and resources. Section 2.1 of the PPS defines ten natural heritage features (NHF) and adjacent lands and provides planning policies for each. Of these NHF, development is not permitted in:

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

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

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

Each of these natural heritage features is afforded varying levels of protection subject to guidelines, and in some cases, regulations. The Subject Property is located in Ecoregion 7E.

2.4 Growth Plan for the Greater Golden Horseshoe (2017)

The Growth Plan for the Greater Golden Horseshoe (GGH) directs growth and the development to ensure economic prosperity, environmental protection and community support. This is intended to direct municipalities towards the establishment of appropriate policies to maintain, restore, or enhance biodiversity and connectivity of the system and long-term ecological function. The subject property is outside of the designated Natural Heritage System for the GGH.

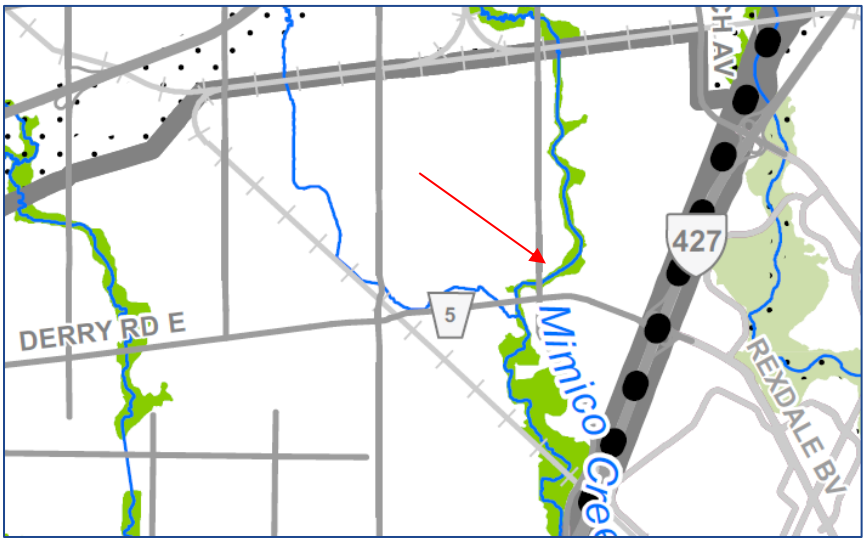
The Growth Plan for the GGH was developed as a supplement to the PPS, and "*builds upon the policy foundation provided by the PPS and provides additional and more specific land use planning policies to address issues facing specific geographic areas in Ontario. This Plan is to be read in conjunction with the PPS. The policies of this Plan take precedence over the policies of the PPS to the extent of any conflict, except where the relevant legislation provides otherwise."*

Schedule 2 of the Growth Plan depicts the subject property as located within the "Built-up Area – Conceptual", outside of the "Greenbelt Area". The Growth Plan has been adopted by the Peel Region's Official Plan OP which was updated in 2018.

2.5 Peel Region Official Plan (2018)

The Region's Official Plan (OP) was adopted by the Regional Council on July 11, 1996. The in-effect OP underwent office consolidation in 2018. Natural heritage features in Peel Region are protected by its Greenlands System, which consists of Core Areas, Natural Areas and Corridors, and Potential Natural Areas and Corridors. Core Areas are designated on Schedule A (Core Areas of the Greenlands System of Peel) of the Official Plan and are intended to represent the most important natural features in Peel, providing the best uninterrupted natural systems and highest biodiversity as identified through the OP. Natural Areas and Corridors and Potential Natural Areas and Corridors are to be identified and protected in lower tier municipal official plans in accordance with the policies outlined in the Peel Official Plan.

The subject property is adjacent to Core Areas of the Greenlands System (**Map A**).



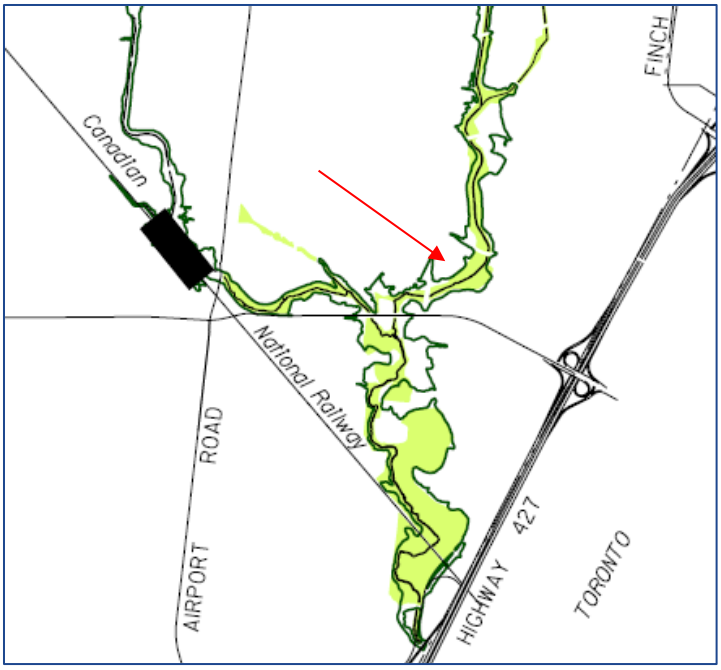
Map A. Core Area in green present adjacent to the subject property (Peel Region OP, Schedule A).

2.6 City of Mississauga Official Plan (2019)

The office consolidation of the City of Mississauga Official Plan has recently been updated which includes Ontario Municipal Board decisions and City Council approved Official Plan Amendments. As there are still outstanding appeals, the 2003 Mississauga OP remains partially in effect.

The City's Green System makes up about 23% of the land area of Mississauga and is comprised of the Natural Heritage System (NHS), Urban Forest, Natural Hazard Lands, and Parks and Open Spaces. The Official Plan, Section 6.3.8 states that: *Buffers will be determined on a site-specific basis as part of an Environmental Impact Study or other similar study to the satisfaction of the City and appropriate conservation authority.*

The subject property is adjacent to the City's Natural Heritage System designated as Significant Natural Areas and Natural Green Spaces as identified on Schedule 3 (**Map B**).



Map B. Natural Heritage System (outlined) and Significant Natural Areas and Natural Green Spaces (light green) (City of Mississauga, 2019 Official Plan, Schedule 3).

2.7 Toronto and Region Conservation Authority

Toronto and Region Conservation Authority (TRCA) regulations and policies include the following:

- Ontario Regulation 166/06 - *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*. Through this regulation, the TRCA regulates activities in natural and hazardous areas (e.g., areas in and near rivers, streams, floodplains, wetlands, and slopes and shorelines)

- *The Living City Policies* (TRCA, 2014) and associated *Planning and Development Procedural Manual* (TRCA January 2008). These documents present the TRCA's planning and permit review practices and technical guidelines. Relevant policies will be discussed in applicable sections of this report.

The subject property is partially within the (TRCA regulated limit, thus a permit under O. Reg. 166/06 will be required (**Map C**)

Map C. TRCA Regulated Area (shaded orange) (TRCA Online Regulatory Search Tool).

3. Study Approach

3.1 Background Review

Palmer has reviewed relevant background material to provide a focus on field investigation and ensure compliance with applicable regulations and policy. Background information collection is guided by the *Natural Heritage Information Request Guide (*MNRF, 2018*)*. Current direction from the Ministry of Natural Resources and Forestry (MNRF) and Ministry of Environment, Conservation and Parks (MECP) is to gather natural heritage information and species occurrence records from available sources; the Natural Heritage Information Centre (NHIC) Make Make-a-Map application being the main source of information and records from the Ministry itself (MNRF, 2020). Information gathered is recommended to be balanced and supplemented by a professional ecological review of potential habitats and characteristics of a project site.

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

- **Land Information Ontario (LIO):** certain data types including aquatic resource area (ARA) information is available through these publicly available data layers (Government of Ontario, 2020).
- **Conservation Authorities:** the TRCA collects and maintains natural heritage mapping and data, and publish reports, that all provide regional and often site-specific ecological context.
- **Mimico Creek Watershed Report Card:** The TRCA's watershed report cards provide a summary of the status of the subwatershed (TRCA, 2018).

- **Natural Area Inventory (NAS):** the NAS provides factsheets for the Natural Areas in the City of Mississauga (City of Mississauga, 2019).
- **Ontario Breeding Birds Atlas (OBBA):** Referenced Region 12, Square 17PJ14 for breeding birds records in the general vicinity (Bird Studies Canada, 2020).
- **eBird:** Searched bird sightings for general area on this website maintained by the Cornell Lab of Ornithology (Cornell Lab of Ornithology, 2020).
- **Fisheries and Oceans Canada (DFO):** The DFO maintains mapping of aquatic species at risk (SAR) habitats, including the critical habitat, occupied and contributing habitat ranges of SAR and Special Concern species (DFO, 2020).

Following the *Information Request Guide (*MNRF, 2018*)*, MECP advice and direction should be solicited once Species at Risk (SAR) interactions or potential interactions are identified via field investigation and analysis.

3.2 Ecological Surveys

An ecological field survey was conducted on May 12, 2020. The weather was 5ºC, with 20km/h wind and 60% cloud cover. Preliminary ecological surveys included in field data collection for vegetation community, flora, general wildlife observations, and a brief aquatic habitat assessment.

Vegetation Community and Flora

Vegetation communities were mapped and described following the Ecological Land Classification (ELC) System for Southern Ontario (Lee *et al*. 1998). Vegetation community boundaries were delineated on field maps through the interpretation of and recent aerial photographs and refined in the field. On May 12, 2020, Palmer conducted a flora inventory and ELC delineation. Botanical surveys were completed by traversing the site and recording species observed in each vegetation community. Local plant rarity status is based on *The Vascular Plant Flora of the Greater Toronto Area* (Varga *et al*. 2000) and TRCA's L-Rank (TRCA, 2019). Provincial plant status was based on the *Provincially Rare Flora of Ontario* (Oldham and Brinker 2009) and the S-Rank (OMNRF, 2018).

Incidental Wildlife Observations

Incidental observations of wildlife were recorded during field investigations. Incidental observations included direct sightings and indirect evidence such as nests, tracks, scat, and browse.

Aquatic Habitat Assessment

A brief aquatic habitat assessment was conducted for a reach of Mimico Creek located adjacent to the subject property. Data recorded in-field includes estimated channel size, substrate type, presence of bank undercuts and other observations that indicate the quality of the habitat such as entrenchment, erosion, degradation, riparian cover and shading, identification of in-stream barriers to fish passage.

Species at Risk

For the purposes of this report, SAR include species listed as Endangered, Threatened or Special Concern under Ontario's ESA. The protection provisions for species and their habitat within the ESA apply only to those species listed as Endangered or Threatened on the SARO list. Special Concern species may be afforded protection through policy instruments respecting significant wildlife habitat as defined by the Province or other relevant authority, or other protections contained in OP policies.

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

Additional Surveys

Further field surveys are proposed to be conducted in late Spring/early Summer 2020. The additional surveys include two Breeding Bird surveys and an early Summer vegetation inventory to supplement to current flora list. The findings of these additional surveys and relevant implications will be provided in an EIS Addendum report.

The Breeding Bird surveys will be conducted in accordance with standard field protocols (Ontario Breeding Bird Atlas, 2001). The breeding bird surveys will record bird species and documented the bird communities in the various habitats on and adjacent to the subject property.

4. Existing Conditions

4.1 Site Description

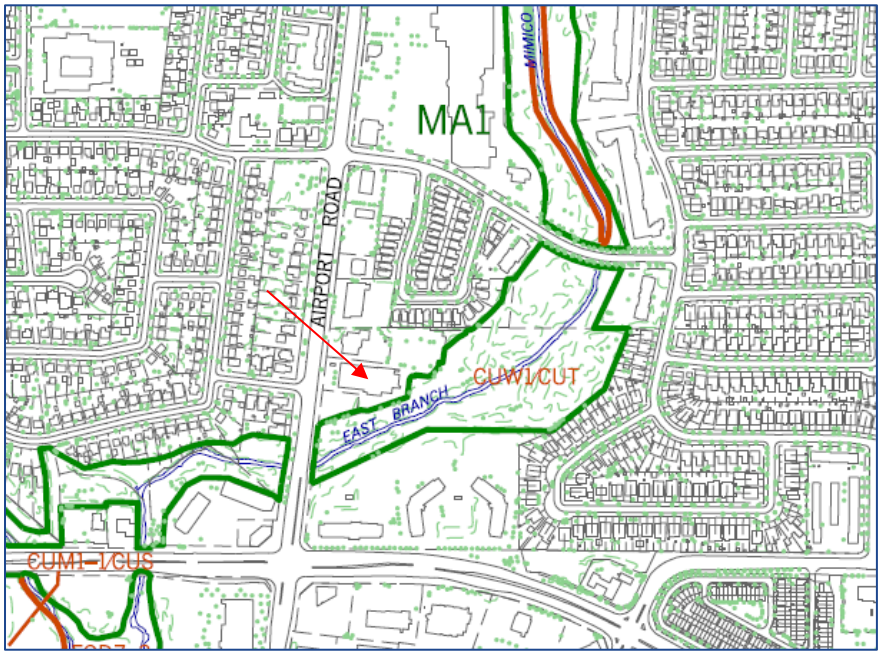
The subject property is currently occupied by a large commercial building and surrounded by a parking lot and the study area for the scoped EIS included that adjacent municipal lands (**Figure 1**). The subject property is directly adjacent to a natural area that comprises Mimico Creek. A paved multi-use recreational trail called the Malton Greenway Park runs parallel to the Mimico Creek at the western edge of the subject property.

4.2 Physiography

The subject property is located within the Peel Plain physiographic region. This area is a relatively flat glaciolacustrine clay plain that extends across the York, Peel, and Halton Regions and is characterized as a level-to-undulating tract of clay soil. The region was influenced by the succession of changing levels of glacial Lake Peel, whose sediments occur throughout the lows in the till plain. The surface of this region therefore consists of lake sediments, or till. Some stream valleys are bordered by trains of sandy alluvium. Topography in this region generally varies between level and gently rolling, and gradually slopes towards Lake Ontario. (Chapman and Putman, 1984).

4.3 Environmental Designations

The subject property does not include provincially designated features such as significant woodland, wetlands, Area of Natural and Scientific Interest (ANSIs) or Environmentally Significant/Sensitive Areas (ESAs). The natural area located adjacent to the site is identified as a Significant Natural Area (MA1) as part of the NAS (City of Mississauga, 2019) (**Map D**).



Map D. Significant Natural Area (MA1) (City of Mississauga, 2019)

4.4 Vegetation Communities and Flora

Ecological Land Classification

The subject property is an anthropogenic area occupied by a large building, paved parking, planted trees and mowed lawn. The vegetated areas adjacent to the subject property are classified as a Cultural Woodland/Cultural Thicket in the NAS Natural Areas Fact Sheet (**Figure 2**).

Anthropogenic (ANTH)

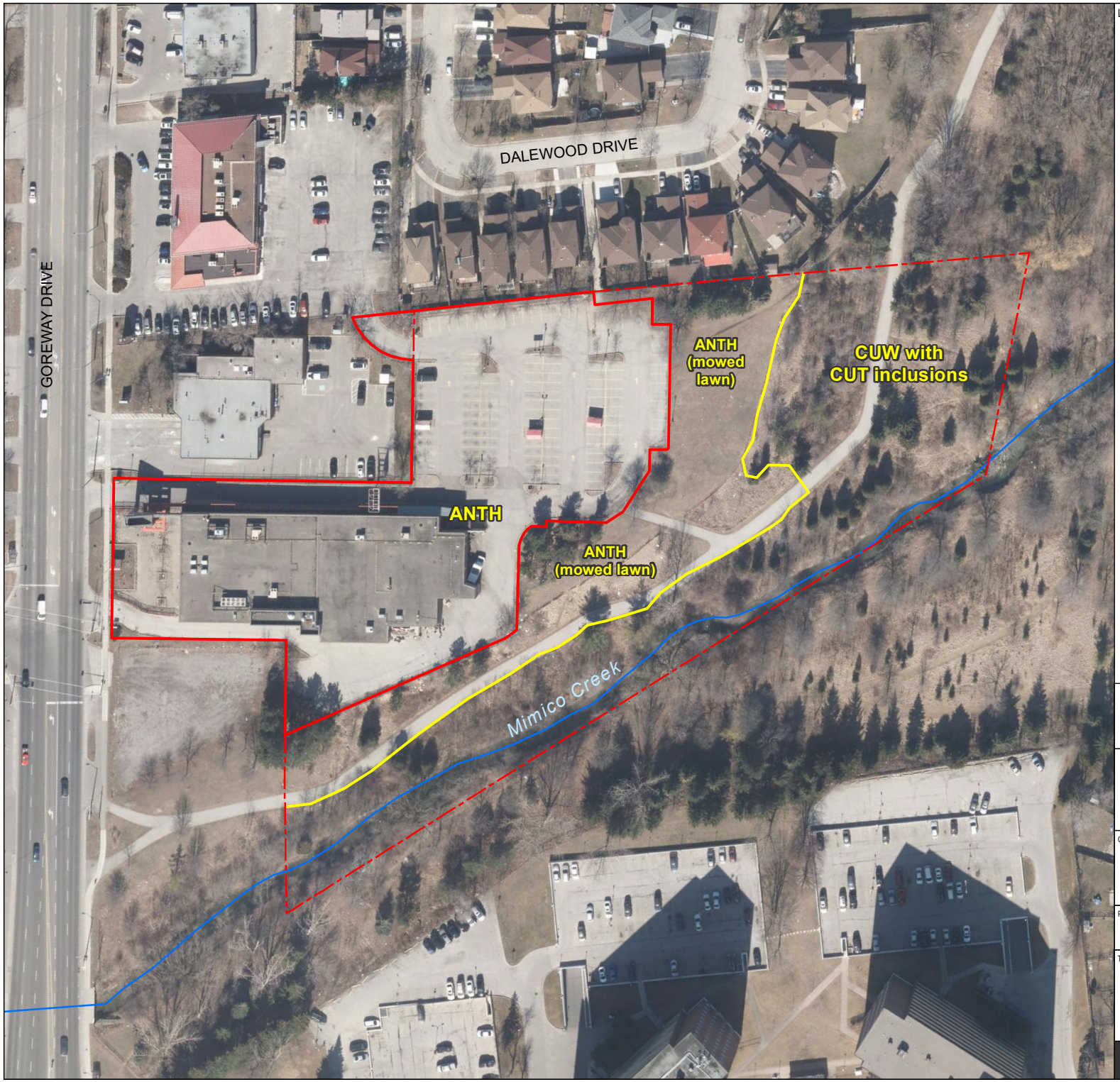
The subject property is occupied by a large abandoned building surrounded by a paved roadway and parking lot (**Photo 1**). Planted Honey Locust (*Gleditsia triacanthos*) cultivars are growing in and around the parking lot. A few White Ash (*Fraxinus americana*) in poor condition are present along the western property boundary. Directly adjacent to the north and east side of the subject property is an open area with a mowed lawn, labelled as ANTH (mowed) on **Figure 2**. A small cluster of Scots Pine (*Pinus sylvestris*) with European Buckthorn (*Rhamnus cathartica*), and Garlic Mustard (*Alliaria petiolata*) is located directly northeast of the paved area. Manitoba Maple (*Acer negundo*) and Scots Pine are growing on the outside of the fenced property eastern property boundary.

Photo 1. Anthropogenic (ANTH) area.

Cultural Woodland with Cultural Thicket inclusions (CUW with CUT inclusions)

This vegetation community is comprised of Cultural Woodland with Cultural Thicket inclusions (**Photo 2**). The canopy is dominated by White Pine (*Pinus strobus*), Manitoba Maple, and White Spruce (*Picea glauca*), providing 25 to 60% cover. The subcanopy contains Eastern White Cedar (*Thuja occidentalis*), and Scots Pine, providing 10 to 25% cover. The understorey comprises European Buckthorn, Staghorn Sumac (*Rhus typhina*), hawthorn (*Crataegus* sp.), and Tartarian Honeysuckle (*Lonicera tatarica*), proving 25 to 60% cover. The ground layer consists of cool season grasses, Garlic Mustard, and goldenrod (*Solidago* sp.), providing greater than 60% cover. Signs of cut down ash trees were observed (i.e., tree stumps) near the edge of the multi-use trail. This vegetation community is generally considered to be in poor condition. A cluster of dead pine trees is noted on the west side of the multi-use trail, north of the subject property.

Photo 2. Cultural Woodland (CUW) with Cultural Thicket (CUT) inclusions.



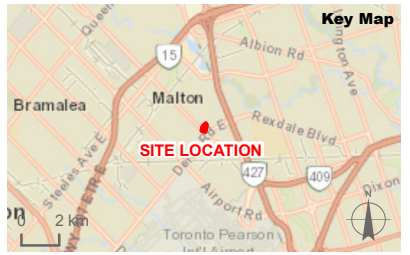
LEGEND:

- Subject Property Boundary
- Watercourse
- ELC Community
- Study Area

ELC Communities

CUW: Cultural Woodland
CUT: Cultural Thicket
ANTH: Anthropogenic

Imagery (2018) provided by City of Toronto.



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DATE:	May 25, 2020	SCALE:	1:1500
DRAWN:	BE	DATUM:	NAD 1983
CHECKED:	ND	PROJECTION:	UTM zone 17

CLIENT:
Redwood Properties
(Preston Homes)

PREPARED BY:
Palmer

PROJECT:
7085 Goreway Drive EIS

TITLE:
Existing Environmental Conditions

Figure 2

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Flora

A total of 32 species of vascular plants was recorded within the study area during the May survey. As many as 17 (53%) species are native, 11 (34%) are non-native, and 4 (13%) species were only recorded to the genus level. Several highly invasive species were observed in the study area, including Tartarian Honeysuckle, European Buckthorn, and Garlic Mustard. Based on the single season survey there were no regional species of conservation concern (L1 to L3 ranks) other than White Spruce. All species recorded are common to Ontario (S rank), and no provincially or federally rare species was observed (**Appendix A**).

4.5 Incidental Wildlife Observations

Several bird species were observed during the field visit. Breeding Bird surveys are proposed to be completed during the 2020 breeding bird season to gain a better understanding of the species of birds that inhabit the general area and to identify if any uncommon or rare species are present adjacent to the subject property.

No sign of nesting habitat (e.g. barn swallow nest) and no signs of holes (e.g. bat entrance/exit holes) was noted in association with the existing building. The building is a flat-roofed brick building that does not provide the type of structure where bats could access a roof area for roosting.

Due to the urban environment, wildlife habitat opportunities within the study area are generally limited. The area of greatest wildlife habitat value is expected to be the Mimico Creek valleyland. Wildlife expected to be present consisting of common, generalist and urban-adapted species such as Raccoon (*Procyon lotor*), Skunk (*Mephitis mephitis*) and Grey Squirrel (*Sciurus carolinensis*).

4.6 Aquatic Habitat Assessment

Mimico Creek is a small subwatershed that is entirely urbanized with commercial and industrial development bounding an anthropogenically confined channel corridor (TRCA, 2018). The reach of Mimico Creek located east of the subject property is characterized as a meandering watercourse with riffle-run-pool sequence (**Figure 2**). The substrate is largely comprised of sandy soils with segments of large stone creating riffles and runs. The channel is roughly 4 m wide. The channel banks show signs of undercutting, scour erosion, and exposure of large tree root systems. The flowing water is opaque. The watercourse has minimal herbaceous vegetation cover. Riparian trees and shrubs provide approx. 60% shade to the watercourse (**Photo 3**). No obstruction to fish passage was observed. No critical fish habitat is present within this segment of Mimico Creek (DFO, 2020).

Mimico Creek is managed as a warmwater watercourse (LIO, 2020). Numerous fish species have been recorded at TRCA's monitoring station MM004WM located approx. 600 m upstream of the study area, including Brook Stickleback (*Culaea inconstans*), Creek Chub (*Semotilus atromaculatus*), and Fathead Minnow (*Pimephales promelas*).

Photo 3. Mimico Creek

5. Assessment of Significance

5.1 Species at Risk

Screening for potential Species at Risk (SAR) habitat was completed based on the background information review (MNRF, 2020; DFO, 2020; Bird Studies Canada, 2020; Cornell Lab of Ornithology, 2020) and data collected during field investigations (**Appendix B**).

Although the subject property provides limited habitat for SAR, several SAR birds may be present close to the subject property. Information obtained from background review sources such as OBBA indicates that the following SAR birds have been identified in the broader area: Common Nighthawk (*Chordeiles minor*), Eastern Wood-Pewee (*Contopus virens*), Wood Thrush (*Hylocichla mustelina*), Bobolink (*Dolichonyx oryzivorus*), Chimney Swift (*Chaetura pelagica*), Eastern Meadowlark (*Sturnella magna*). While habitat opportunities appear to be largely absent in lands adjacent to the property (e.g., interior forest, larger old field meadows), breeding bird surveys are proposed to be conducted in May and June 2020 to refine the records SAR birds that are present/absent within and directly adjacent to the subject property.

5.2 Significant Wildlife Habitat

Significant Wildlife Habitat (SWH) is considered a significant feature in Provincial, Regional, and Municipal (Town of Whitby) policies. SWH is defined by the MNRF in the Significant Wildlife Habitat Technical Guide (OMNR, 2000) and includes the following broad categories:

- seasonal concentration areas;
- rare vegetation communities or specialised habitats for wildlife;

- habitats of species of conservation concern, excluding the habitats of endangered and threatened species; and
- animal movement corridors.

The criteria for the identification of these features are also provided in the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E* (MNRF 2015). These criteria were used to provide an intitial screening for wildlife habitat within the study area for potential SWH. The results of the screening for SWH associated with subject property and adjacent natural area is provided in **Appendix C**:

Further field investigations are proposed to inform whether the Special Concern and Rare Wildlife Species are present within the subject property and adjacent natural area. As previously discussed, potential presence/absence for Special Concern bird species will be assessed through 2020 breeding bird surveys.

6. Proposed Development Plan

The subject property is proposed to be fully re-developed with two high-rise residential towers and a complex of townhouses, and over three levels of underground parking (**Figure 3**).

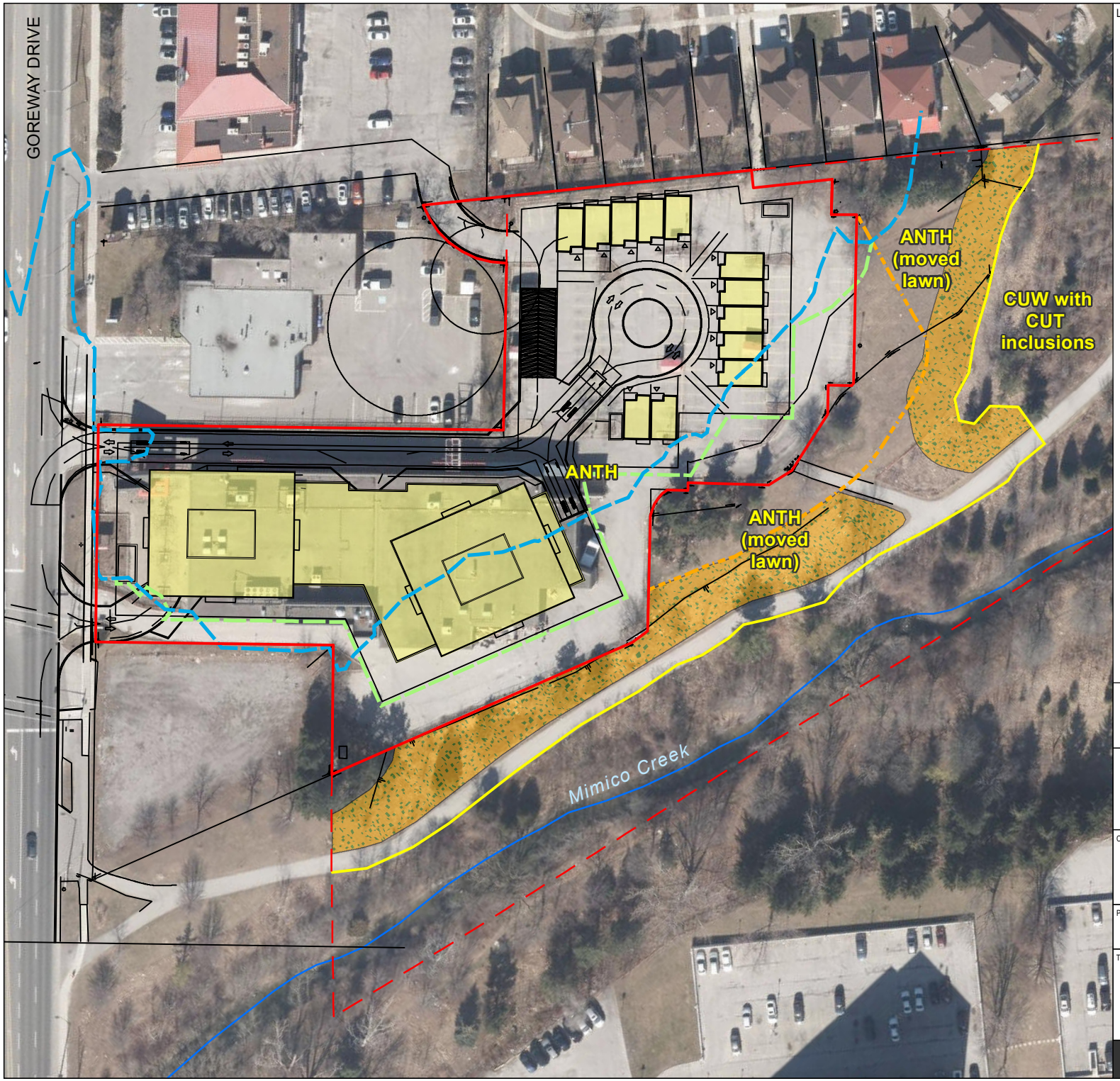
To achieve the proposed development, the existing regulatory floodline which currently overlaps onto the subject property is proposed to be revised by re-grading the east and north portions of the subject property. The development setbacks to the floodline is proposed to be 6 m wide. Further details and justification for the proposed setback width are addressed by the Floodline Hazard Assessment prepared by Greck and Associates.

The grading works are proposed to extend into municipal land directly northeast of the subject property (**Figure 3**). Potential impacts associated with the proposed grading works and general site re-development works are provided in the section below.

7. Impact Assessment and Mitigation Measures

The area of proposed disturbance is limited to the anthropogenic land currently occupied by the existing building, paved parking, or manicured lawn and isolated trees. The proposed works are not expected to result in the removal or the encroachment into the Cultural Woodland (CUW) with Cultural Thicket (CUT) inclusions vegetation community adjacent to the subject property. No works are expected to alter or impact the main multi-use trail system or interfere with Mimico Creek.

TRCA's Living policy document recommends a development setback for Valley and Stream Corridors (section 8.4.8.a). This matter is being addressed through a Floodline Hazard Assessment study prepared by Greck and Associate.



LEGEND:

- Subject Property Boundary
- Existing Regulatory Floodplain
- Proposed Regulatory Floodline
- Limit of grading works on municipal property
- Watercourse
- ELC Community
- Proposed Building Footprint
- Study Area

Proposed Enhancement Plan

- Edge Management Plantings (5-10 m buffer)

Imagery (2018) provided by City of Toronto.

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metres

PROJECT NO.	1602802	REVISION:	1
DATE:	May 27, 2020	SCALE:	1:1100
DRAWN:	BE	DATUM:	NAD 1983
CHECKED:	ND	PROJECTION:	UTM zone 17

CLIENT:
Redwood Properties
(Preston Homes)

PREPARED BY:
Palmer

PROJECT:
7085 Goreway Drive EIS

TITLE:
Constraints and Opportunities

Figure 3

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The portion of Cultural Woodland located north of the subject property, near the area of proposed grading on Municipal land, is proposed to be protected during grading works and enhanced with native buffer plantings following the completion of the construction works. Some minor disturbance to land directly east of the subject property is expected, thus the area between the existing trail and the subject property is also proposed to be enhanced with native buffer plantings. In general accordance with TRCA's Natural Systems policies (section 7.3.1.4) and the City's Green Systems policies (section 6.3.8), a 10 m buffer, where feasible, is proposed to be planted from the feature limit to protect the existing vegetation cover. A brief outline of the proposed Enhancement Plan is provided in the subsection below.

Erosion and Sediment Control Measures

Erosion and Sediment Control (ESC) measures should be installed and maintained during the period of construction works to delimit the area of construction works and protect adjacent natural features and their ecological functions. ESC measures are recommended to be installed at the limit of the proposed construction works following the best practices recommended in the *Erosion & Sediment Control Guideline for Urban Construction per the Greater Golder Horseshoes Conservation Authorities* (GGHA CAs), dated 2006.

Vegetation Removal

Any vegetation removal required for construction works should be completed between mid-August and mid-April of any given year to avoid impacting migratory birds and their nests and eggs. Should vegetation removal be required outside of these periods, a qualified biologist must screen for potential nesting birds and identify any necessary mitigation and protection measures.

Enhancement Plan

The proposed redevelopment of the subject property is expected to result in increase in the urban residential density and trail use. Although no impacts to natural heritage features such as the watercourse and Cultural Woodland are anticipated, the increased human use may result in further degradation of the adjacent natural features. The opportunity for restoration of the natural area adjacent to the subject property is proposed through the preparation of an Enhancement Plan. The purpose of the Enhancement Plan will be to protect the current vegetation community and improve the diversity of native plants and wildlife habitat through the implementation of Edge Management Plantings within a 5 to 10 m buffer to the adjacent natural features (**Figure 3**). Edge management plantings are expected to be provide a densely planted with native trees, shrubs and herbaceous species to provide edge protection to the natural feature. Planting details are proposed to be provided in the Addendum report.

General restoration of the natural vegetation is expected to improve the quality and quantity of the native vegetation near the creek as noted in Natural Areas Fact Sheet management recommendations (City of Mississauga, 2019) (**Figure 3**).

8. Policy Conformity

A summary of applicable natural heritage policies and the manner in which the proposed development plan meets their requirements is provided in **Table 1** below.

Table 1. Policy Conformity

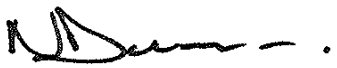
Policy Document	Policy Intent/Objective	Implications and Policy Conformity
Migratory Birds Convention Act	Protect most species of migratory birds and their nests and eggs anywhere they are found in Canada.	Vegetation removal should be completed between mid-August and mid - April of any given year. Biologist to screen for nest for any proposed vegetation removal outside of this period.
Endangered Species Act	Species and the habitat of species designated as Endangered or Threatened are afforded legal protection.	Further studies are proposed to be conducted to ensure that SAR birds are not present within or directly adjacent to the subject property.
Provincial Policy Statement	Direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features.	No development or site alteration is proposed within defined natural heritage features. Potential presence/absence of SWH will be confirmed through additional field surveys.
Growth Plan	Directs growth and the development to ensure economic prosperity, environmental protection and community support.	The Subject Property is within the City's Settlement Area; the Growth Plan's natural feature protection buffer do not apply.
Region of Peel Official Plan	Core Areas: Development is generally prohibited within Core Areas.	No develop is proposed within Core Areas.
City of Mississauga Official Plan	The City's Green System is comprised of the NHS, Urban Forest, Natural Hazard Lands, and Parks and Open Spaces. Buffers are determined on a site-specific basis as part of the EIS.	A 5-10 m buffer to the portion of the natural feature north and east of the subject property is proposed to be enhanced with native plantings following the completion of nearby grading works.
O. Reg. 166/06	TRCA regulates activities in natural and hazardous areas	The subject is partially within the TRCA regulated area. A permit will be required.
Living City Policies	TRCA permit review practices and technical guidelines.	Relevant policies and regulations are discussed and addressed, including Valley and Stream Corridors (to be addressed by Greck and Associates), and the general application of the Natural Systems policies such as the protection of the nearby woodland vegetation community and the implementation of a 5-10 m buffer with edge management plantings following grading works.

9. Conclusions

The findings of this preliminary scoped EIS are the result of a background review, field investigations and an assessment of ecological data, as well as the current natural heritage policy requirements. We have identified the natural environmental sensitivities, constraints and development opportunities associated with the proposed development plan. We proposed to supplement the scoped EIS with further field surveys and with the preparation of an Addendum report to identify any further constraints, updates, and mitigation measures.

10. Certification

This report was prepared, reviewed and approved by the undersigned:



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Appendix A

Plant List

Appendix A

Plant List

Scientific Name	Common Name	Native/ Exotic/ Unranked	S Rank (OMNR, 2018)	SARO Status (OMNRF, 2018)	L-Ranks (TRCA, 2019)	Toronto Regional Rarity (Varga *et al.*, 2000)	Vegetation Communities	
							ANTH	CUT with CUW inclusions
Acer x *freemanii*	Freeman's Maple	N	SNA		L4	U?		X
Acer negundo	Manitoba Maple	N	S5		L+?	+?	X	X
Alliaria petiolata	Garlic Mustard	E	SNA		L+	+	X	X
Amelanchier laevis	Smooth Serviceberry	N	S5		L4	U		X
Arctium minus	Common Burdock	E	SNA		L+	+	X	X
Crataegus sp.	Hawthorn Species							X
Daucus carota	Wild Carrot	E	SNA		L+	+		X
Equisetum arvense	Field Horsetail	N	S5		L5	X		X
Fraxinus americana	White Ash	N	S4		L5	X	X	
Galium mollugo	Smooth Bedstraw	E	SNA		L+	+	X	
Glechoma hederacea	Ground-ivy	E	SNA		L+	+		X
Gleditsia triacanthos	Honey Locust	N	S2?		L+	+	X	
Helianthus tuberosus	Jerusalem Artichoke	U	SU		L5	+?		X
Juglans nigra	Black Walnut	N	S4?		L5	X		X
Ligustrum vulgare	European Privet	E	SNA		L+	+	X	X
Lonicera tatarica	Tatarian Honeysuckle	E	SNA		L+	+	X	X
Picea abies	Norway Spruce	E	SNA		L+	+p	X	
Picea glauca	White Spruce	N	S5		L3	+p		X
Pinus strobus	Eastern White Pine	N	S5		L4	X		X
Pinus sylvestris	Scots Pine	E	SNA		L+	+	X	X
Poa sp.	Bluegrass Species						X	X
Populus deltoides	Eastern Cottonwood	N	S5		L5			X

Scientific Name	Common Name	Native/ Exotic/ Unranked	S Rank (OMNR, 2018)	SARO Status (OMNRF, 2018)	L-Ranks (TRCA, 2019)	Toronto Regional Rarity (Varga *et al.*, 2000)	Vegetation Communities	
							ANTH	CUT with CUW inclusions
Rhamnus cathartica	European Buckthorn	E	SNA		L+	+	X	X
Rhus typhina	Staghorn Sumac	N	S5		L5	X		X
Rubus idaeus	Red Raspberry	N	S5					X
Salix discolor	Pussy Willow	N	S5		L4	X		X
Salix sp.	Willow Species							X
Solidago sp.	Goldenrod Species							X
Thuja occidentalis	Eastern White Cedar	N	S5		L5	X		X
Tilia americana	Basswood	N	S5		L5	X		X
Toxicodendron radicans	Poison Ivy	N	S5				X	X
Viburnum lentago	Nannyberry	N	S5		L5	X		X

Appendix B

Species at Risk Screening

Appendix B

Species at Risk Screening

NAME	SARO	COSEWIC	SCHEDULE	S-RANK	HABITAT REQUIREMENTS	SOURCE OF RECORD	POTENTIAL HABITAT PRESENT (Y/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
AVIFAUNA									
Bank Swallow (*Riparia riparia*)	THR	THR	1	S4B	The bank swallow is threatened by loss of breeding and foraging habitat, destruction of nesting habitat and widespread pesticide use. Bank swallows are small songbirds with brown upperparts, white underparts and a distinctive dark breast band. It averages 12 cm long and weighs between 10 and 18 grams. The swallow can be distinguished in flight from other swallows by its quick, erratic wing beats and its almost constant buzzy, chattering vocalizations. They nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposit, including banks of rivers and lakes, active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	No nests or nesting activity observed on eroded bank of the watercourse	None
Barn Swallow (*Hirundo rustica*)	THR	THR	1	S4B	The barn swallow is a threatened species, is found throughout southern Ontario, and can range into the north as long as suitable nesting locations can be found. These birds prefer to nest within human made structures such as barns, bridges, and culverts. Barn swallow nests are cup-shaped and made of mud; they are typically attached to horizontal beams or vertical walls underneath an overhang. A significant decline in populations of this species has been documented since the mid-1980s, which is thought to be related to a decline in prey. Since the barn swallow is an aerial insectivore, this species relies on the presence of flying insects at specific times during the year. Changes in building practices and materials may also be having an impact on this species (Ministry of Natural Resources and Forestry, 2015).	OBBA; eBird	N	No nests or nesting activity observed on existing building	None
Common Nighthawk (*Chordeiles minor*)	SC	THR	1	S4B	The common nighthawk is an extremely well camouflaged bird that inhabits gravel beaches, rock outcrops and burned woodlands, that have little to no ground vegetation. This species can also be found in highly disturbed locations such as clear cuts, mine tailings areas, cultivated fields, urban parks, gravel roads, and orchards. As an insectivore, the primary threat to this species is the widespread application of pesticides (Ministry of Natural Resources and Forestry, 2015). Special concern species do not receive habitat protection under the ESA.	OBBA	To be determined	Pending breeding bird survey	To be determined
Eastern Wood-Pewee (*Contopus virens*)	SC	SC	1	S4B	The eastern wood-pewee is classified as a species of special concern by COSSARO. Their population has been gradually declining since the mid-1960's (The Cornell Lab of Ornithology, 2015). The eastern wood-pewee is a "flycatcher", a bird that eats flying insects, that lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation. Threats to the population are largely unknown; however, causes may include loss of habitat due to urban development and decreases in the availability of flying insect prey (Ministry of Natural Resources and Forestry, 2014).	OBBA; eBird	To be determined	Pending breeding bird survey	To be determined

NAME	SARO	COSEWIC	SCHEDULE	S-RANK	HABITAT REQUIREMENTS	SOURCE OF RECORD	POTENTIAL HABITAT PRESENT (Y/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
Wood Thrush (*Hylocichla mustelina*)	SC	THR	1	S4B	The wood thrush is a species of Special Concern because of habitat degradation or destruction by anthropogenic development. The wood thrush is a medium-sized songbird, generally rusty-brown on the upper parts with white under parts and large blackish spots on the breast and sides, and about 20 cm long. The wood thrush forages for food in leaf litter or on semi-bare ground, including larval and adult insects as well as plant material. They seek moist stands of trees with well-developed undergrowth in large mature deciduous and mixed (conifer-deciduous) forests. The wood thrush flies south to Mexico and Central America for the winter (Ministry of Natural Resources and Forestry, 2014).	OBBA	To be determined	Pending breeding bird survey	To be determined
Bobolink (*Dolichonyx oryzivorus*)	THR	THR	1	S4B	The bobolink is found in grasslands and hayfields, and feeds and nests on the ground. This species is widely distributed across most of Ontario; however, are designated at risk because of rapid population decline over the last 50 years (Ministry of Natural Resources and Forestry, 2014). The historical habitat of the bobolink was tallgrass prairie and other natural open meadow communities; however, as a result of the clearing of native prairies and the post-colonial increase in agriculture, bobolinks are now widely found in hayfields. Due to their reproductive cycle, nesting habits, and use of agricultural areas, bobolink nests and young are particularly vulnerable to loss as a result of common agricultural practices (i.e. first cut hay).	OBBA	To be determined	Pending breeding bird survey	To be determined
Chimney Swift (*Chaetura pelagica*)	THR	THR	1	S4B,S4N	The chimney swift is a threatened species which breeds in Ontario and winters in northwestern South America. It is found mostly near urban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. Prior to settlement, the chimney swift would mainly nest in cave walls and hollow tress. The chimney swift initially benefitted from human settlement; however, recent declines in flying insects and the modernization of chimneys are factors attributed to their current population declines. As a threatened species, the chimney swift receives protection for both species and habitat under the ESA (Ministry of Natural Resources and Forestry, 2014).	OBBA; eBird	To be determined	Pending breeding bird survey	To be determined
Eastern Meadowlark (*Sturnella magna*)	THR	THR	1	S4B	The eastern meadowlark is a bird that prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields and human use areas such as airports and roadsides. Eastern meadowlarks can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses. The decline in population of these species is thought to be at least partially related to habitat destruction and agricultural practices (Ministry of Natural Resources and Forestry, 2014).	OBBA	To be determined	Pending breeding bird survey	To be determined
VASCULAR PLANTS									

NAME	SARO	COSEWIC	SCHEDULE	S-RANK	HABITAT REQUIREMENTS	SOURCE OF RECORD	POTENTIAL HABITAT PRESENT (Y/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
Butternut (*Juglans cinerea*)	END	END	1	S2?	The butternut is designated as endangered by COSSARO and is tracked by the NHIC as a species at risk. The tree is federally regulated by the Species at Risk Act (2002). Butternut belongs to the walnut family and produces edible nuts which are a preferred food source for wildlife. The range of butternut trees is south of the Canadian Shield on soils derived from calcium rich limestone bedrock. Butternut trees, which at one time were much more common to the south extending to the northern aspect of zone 6E, have been declining due to factors including forest loss and disease. Butternut trees suffer from a highly transmissible fungal disease called butternut canker. Butternut canker is causing very rapid decline in this tree species across its native range. The fungal disease is easily transmitted by wind and is very difficult to prevent. Trees often die within a few years of infection by butternut canker (Ministry of Natural Resource and Forestry, 2014).	Field Surveys	N	Not observed when conduction the spring vegetation survey	None
MAMMALS									
Tri-colored Bat (Eastern Pipistrelle) (*Perimyotis subflavus*)	END	END	1	S3?	The eastern pipistrelle is a small bat that is widely distributed in eastern North America and whose range extends north to southern Ontario. The eastern pipistrelle is rare in this region of Ontario which is at the northernmost limit of the natural range for the species. These bats prefer to nest in foliage, tree cavities and woodpecker holes, and are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Eastern pipistrelles feed primarily on small insects and prefer an open forest habitat type in proximity to water (University of Michigan Museum of Zoology, 2004).	Field Surveys	N	Suitable roosting habitat not observed in trees or in existing building	None
Eastern Small-footed Myotis (*Myotis leibii*)	END	No Status	No Schedule	S2S3	The eastern small-footed myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Eastern small-footed bat's fur has black roots and shiny light brown tips, giving it a yellowish-brown appearance. Its face mask, ears and wings are black, and its underside is grayish-brown, about 8 cm long in size and weighs 4-5 grams. In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects to eat, including beetles, mosquitos, moths, and flies. They hibernate in winter, often in caves and abandoned mines. They can be found from south of Georgian Bay to Lake Erie and east to the Pembroke area, and choose colder and drier sites (Ministry of Natural Resources and Forestry, 2014).	Field Surveys	N	Suitable roosting habitat not observed in trees or in existing building	None
Little Brown Myotis (*Myotis lucifugus*)	END	END	1	S4	Little brown myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Little brown bats have glossy brown fur and usually weigh between four and 11 grams. Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing – an ideal environment for the fungus to grow and flourish. The syndrome affects bats by disrupting their hibernation cycle, so that they use up body fat supplies before the spring when they can once again find food sources (Ministry of Natural Resources and Forestry, 2014).	Field Surveys	N	Suitable roosting habitat not observed in trees or in existing building	None

NAME	SARO	COSEWIC	SCHEDULE	S-RANK	HABITAT REQUIREMENTS	SOURCE OF RECORD	POTENTIAL HABITAT PRESENT (Y/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
Northern Myotis (*Myotis septentrionalis*)	END	END	1	S3	The northern long-eared myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Northern long-eared bats have dull yellow-brown fur with pale grey bellies. They are approximately eight cm long, with a wingspan of about 25 cm, and usually weigh six to nine grams. Northern long-eared bats can be found in boreal forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines (Ministry of Natural Resources and Forestry, 2014).	Field Surveys	N	Suitable roosting habitat not observed in trees or in existing building	None

Notes:
SC - Special Concern
THR - Threatened
END - Endangered
S1 - Extremely rare in Ontario
S2 - Very rare in Ontario
S3 - Rare to uncommon in Ontario
S4 - Considered to be common in Ontario
S5 - Species is widespread in Ontario
SH - Possibly extirpated
S#S# - Indicates insufficient information exists to assign a single rank.
S#? - Indicates some uncertainty with the classification due to insufficient data.
S#N - Nonbreeding
S#B - Breeding

Appendix C

Significant Wildlife Habitat Screening

Appendix C

Significant Wildlife Habitat Screening

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes and Species Observations
Seasonal Concentration Areas of Animals					
Waterfowl Stopover and Staging Areas (Terrestrial)	Duck-like species, Tundra Swan	CUM + CUT ecosites	Fields with sheet-water flooding mid-March to May. Specific areas for Tundra Swan	N	Suitable habitat is absent
Waterfowl Stopover and Staging Area (Aquatic)	Ducks, Geese	Ponds, Lakes, Inlets, Marshes, bays, coastal inlets, watercourse used in migration, Swamps, Shallow Water Ecosites	Sewage & SWM ponds **not** SWH. Reservoir managed as a large wetland or pond/lake qualifies. Abundant food supply (inverts, shallow water veg)	N	Suitable habitat is absent
Shorebird Migratory Stopover Area	Shorebirds	Beaches, Dunes, Meadow Marshes	Shorelines. Great Lakes Shores, including rocky ones. Sewage treatment ponds and storm water ponds **not** SWH.	N	Suitable habitat is absent
Raptor Wintering Area	Eagles, Hawks, Owls	**Hawks/Owls:** Combination of both Forest and Cultural Ecosites **Bald Eagle:** Forest or swamp near open water (hunting ground)	**Raptors:** >20ha, with a combo of forest and upland. Meadow (>15ha) with adjacent woodlands. **Eagles:** open water, large trees & snags for roosting.	N	Suitable habitat is absent
Bat Hibernacula	Big Brown Bat, Tri-coloured Bat	Caves, Crevices, mines, karsts	Buildings and active mine sites **not** SWH.	N	Suitable habitat is absent
Bat Maternity Colonies	Big Brown Bat, Silver-haired Bat	Deciduous or mixed forests and swamps.	Mature deciduous and mixed forests with >10/ha cavity trees >25 cm DBH.	N	Suitable habitat is absent
Turtle Wintering Area	**Turtles** (Midland, N. Map, Snapping)	SW, MA, OA, SA, FEO, BOO (requires open waters)	**Free water beneath ice.** Soft mud substrate. Permanent water bodies, large wetlands, bogs, fens with adequate DO. Man-made is not SWH.	N	Suitable habitat is absent
Reptile Hibernaculum	Snakes	**Snakes:** Any ecosite (esp. w/ rocky areas), other than very wet ones. Talus, Rock Barren, Crevice, Cave, Alvar esp.	**Access below frost line:** burrows; **rock** crevices, piles or slopes, **stone** fences or foundations. Conifer/shrubby swamps/swales, poor fens, depressions in bedrock w/ accumulations of sphagnum moss or sedge hummock ground cover.	N	Suitable habitat is absent
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Cliff Swallow, N. Rough-winged Swallow	Banks, sandy hills/piles, pits, slopes, cliff faces, bridge abutments, silos, barns.	Exposed soil banks, **not** a licensed/permitted aggregate area or new man-made features (2 yrs).	N	Exposed banks present but signs of nesting not observed
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Great Blue Heron, Black-crowned Night Heron, Great Egret, Green Heron	SWM2, SWM3, SWM5, SWM6, SWD1 to SWD7, FET1	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and emergent may be used. Nests in trees are 11 - 15 m from ground, near tree tops.	N	Suitable habitat is absent
Colonially-nesting Bird Breeding Habitat (Ground)	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	**Gulls/Terns:** Rocky island or peninsula in lake or river. **Brewer's Blackbird:** close to watercourses in open fields or pastures with scattered trees or shrubs.	**Gulls/Terns:** islands or peninsulas with open water or marshy areas. **Brewers Blackbird colonies:** on the ground in low bushes close to streams and irrigation ditches.	N	Suitable habitat is absent

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes and Species Observations
Migratory Butterfly Stopover Area	Painted Lady, Red Admiral, **Special Concern:** Monarch	Combination of open (CU) and forested (FO) ecosites (need one from each).	≥10 ha, located within 5 km of Lake Ontario. Undisturbed sites, with preferred nectar species.	N	Suitable habitat is absent
Landbird Migratory Stopover Areas	All migratory songbirds. All migrant raptor species.	Forest (FO) and Swamp (SW) ecosites	Woodlots >5 ha within 5 km of L. Ontario & L. Erie (2-5 ha if rare in area). If multiple woodlands are along the shoreline, those <2 km from L. Ontario are more significant.	N	Suitable habitat is absent
Deer Winter Congregation Areas	White-tailed Deer	Mixed or Conifer ecosites	Determined by MNRF - no studies	N	Suitable habitat is absent
Rare Vegetation Communities					
Cliffs and Talus Slopes		TAO, TAS, CLO, CLS, TAT, CLT e.g., Niagara Escarpment (contact NEC)	**Cliff:** near vertical bedrock >3m **Talus Slope:** coarse rock rubble at the base of a cliff	N	Vegetation community is absent
Sand Barren		SBO1, SBS1, SBT1	Sand Barrens >0.5 ha. Vegetation can vary from patchy and barren to tree covered, but <60%. <50% vegetation cover are exotic species.	N	Vegetation community is absent
Alvar	*Carex crawei, Panicum philadelphicum, Eleocharis compressa, Scutellaria parvula, Trichostema brachiatum*	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Alvar >0.5 ha. **Need 4 of the 5 Alvar Inidcator Spp**. <50% vegetation cover are exotic species.	N	Vegetation community is absent
Old Growth Forest	Trees >140 yrs; heavy mortaily = gaps. Multi-layer canopy, lots of snags and downed logs	FOD, FOC, FOM, SWD, SWC, SWM	Woodland areas 0.5 ha. No evidence of logging.	N	Vegetation community is absent
Savannah	Prairie Grasses w/ trees	TPS1, TPS2, TPW1, TPW2, CUS2	No min. size.A Savannah is a tallgrass prairie habitat that has tree cover of 25 – 60%. <50% cover of exotic species.	N	Vegetation community is absent
Tallgrass Prairie	Prairies Grasses dominate	TPO1, TPO2	No min. size. An open Tallgrass Prairie habitat has < 25% tree cover. Less than 50% cover of exotic species.	N	Vegetation community is absent
Other Rare Vegetation Communities		Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of SWHTG.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	N	Vegetation community is absent
Specialized Habitat for Wildlife					
Waterfowl Nesting Area	Ducks	Upland habitats adjacent to: MAS1 to MAS3, SAS1, SAM1, SAF1, MAM1 to MAM6, SWT1, SWT2, SWD1 to SWD4 (>0.5 ha open water wetlands, alone or collectively).	Extends 120 m from a wetland or wetland complex. Upland areas should be at least 120 m wide. Wood Ducks and Hooded Mergansers use cavity trees (>40 cm dbh).	N	Suitable habitat is absent
Bald Eagle & Osprey Nesting, Foraging and Perching Habitat	Osprey, Bald Eagle	FOD, FOM, FOC, SWD, SWM, SWC directly adjacent to riparian areas	Nesting areas are associated with waterbodies along forested shorelines, islands, or on structures over water. Not man-made structures.	N	Suitable habitat is absent
Woodland Raptor Nesting Habitat	Barred Owl. **Hawks:** N. Goshawk, Cooper's, Sharp-shinned, Red-shouldered, Broad-winged.	Forests (FO), swamps (SW), and conifer plantations (CUP3)	>30 ha with > 4 ha interior habitat (200 m buffer)	N	Suitable habitat is absent

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes and Species Observations
Turtle Nesting Areas	Midland Painted Turtle **Special Concern:** Snapping Turtle, Northern Map Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within: MAS1 to MAS3, SAS1, SAM1, SAF1, BOO1, FEO1	Nest sites within open sunny areas with soil suitable for digging. Sand and gravel beaches.	N	Suitable habitat is absent
Seeps and Springs	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp.	Seeps/Springs are areas where ground water comes to the surface.	Any forested area within the headwaters of a stream/river system. **(2 or more confirms SWH type).**	N	Suitable habitat is absent
Amphibian Breeding Habitat (Woodland)	Woodland Frogs and Salamanders, E. Newt	FOC, FOM, FOD, SWC, SWM, SWD	Open water wetlands, pond or woodland pool of >500 m^2 within or adjacent to wooded areas. Permanent ponds or holding water until mid-July preferred.	N	Suitable habitat is absent
Amphibian Breeding Habitat (Wetlands)	Toads, Frogs, and Salamanders, E. Newt	SW, MA, FE BO, OA and SA. Typically, isolated (>120m) from woodland ecosites, however larger wetlands may be adjacent to woodlands.	Open water wetland ecosites >500m^2 isolated from woodland ecosites with high species diversity. Permanent water with abundant vegetation for bullfrogs.	N	Suitable habitat is absent
Woodland Area-Sensitive Bird Breeding Habitat	Birds (area-sensitive species)	FOC, FOM, FOD, SWC, SWM, SWD	Large mature (>60 years) forest stands/woodlots >30 ha. Interior forest habitat >200m from forest edge.	N	Suitable habitat is absent
Habitat of Species of Conservation Concern					
Marsh Bird Breeding Habitat	Wetland Birds	MAM1 to MAM6, SAS1, SAM1, SAF1, FEO1, BOO1 **Green Heron**: SW, MA and CUM1	Wetlands with shallow water and emergent vegetation. Gr. Heron @ edges of these types w/ woody cover.	N	Suitable habitat is absent
Open Country Bird Breeding Habitat	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, N. Harrier, Savannah Sparrow, **Short-eared Owl (SC)**	CUM1, CUM2	Grassland/meadow >30 ha. Not being actively used for farming. Habitat established for 5 years or more.	N	Suitable habitat is absent
Shrub/Early Successional Bird Breeding Habitat	**Brown Thrasher + Clay-coloured Sparrow (indicators);** Field Sparrow, Black-billed Cuckoo, E. Towhee, Willow Flycatcher, Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large field areas succeeding to shrub and thicket habitats > 10 ha. Areas not actively used for farming in the last 5 years.	N	Suitable habitat is absent
Terrestrial Crayfish	Chimney or Digger Crayfish; Devil Crayfish or Meadow Crayfish	MAM1 to MAM6, MAS1 to MAS3, SWD, SWT, SWM. CUM1 sites with inclusions of the aforementioned.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish (typc. protected by wetland setbacks).	N	Suitable habitat is absent
Special Concern and Rare Wildlife Species	Any species of concern or rare wildlife species	Any ELC code.	Presence of species of concern or rare wildlife species.	TBD	Common Nighthawk, Eastern Wood-Pewee and/or, Wood Thrush may be present. Breeding bird surveys will inform the presence/absence of these Special Concern bird species.
Animal Movement Corridors					
Amphibians	Amphibians	all ecosites assoc. w/ water	When Breeding Habitat - wetland confirmed	N	Suitable habitat is absent
Exceptions for Ecoregion 6E					
Bat Migratory Stopover: 7E-2	Hoary Bat, Eastern Red Bat, Silver-haired Bat	No Specific ELC	Long Point (42º35' N, 80º30'E to 42º33' N, 80º,03'E) - Silver-haired.	N	Not in 7E-2