Environmental Impact Study
900 Lakeshore Road West
City of Mississauga
Region of Peel

Prepared for:
1000570027 Ontario Inc.

Prepared by:
Azimuth Environmental
Consulting, Inc.

March 2026

AEC 23-290

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

March 20, 2026 AEC 23-290

1000570027 Ontario Inc.
17b Cosmo Road
Etobicoke, ON MX8 1Z3

Attention: Ryan Atkinson

Re: **Update Environmental Impact Study for a Proposed Development at 900 Lakeshore Road West, City of Mississauga, Region of Peel**

Dear Mr. Atkinson:

Azimuth Environmental Consulting, Inc. was retained to provide an Environmental Impact Study report for a proposed nine (9) story residential development at the location described above. The original EIS report was prepared in November 2024. Subsequent to submission of this report, review comments have been received by the City of Mississauga and the Credit Valley Conservation Authority. The purpose of this report update is to address the agency comments with respect to the identified natural heritage features and functions.

Should you have any questions or require additional information please do not hesitate to contact the undersigned.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

L. Moran

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Table of Contents

page

List of Figures

List of Tables

List of Appendices

1.0 INTRODUCTION

Azimuth Environmental Consulting, Inc. (Azimuth) was retained by 1000570027 Ontario Inc. to prepare an Environmental Impact Study (EIS) for a proposed residential development at 900 Lakeshore Road West in the City of Mississauga (the "City"), Region of Peel (Figure 1). The original 2024 EIS was part of the submission to the City of Mississauga (City) as part of the Official Plan Amendment, Zoning By-law Amendment and Site Plan Approval development applications. According to the City Official Plan, adjacent lands are designated as part of the City's Green System. It is our understanding that the City has requested that an EIS be undertaken as the development limits and adjacent lands comprise (in part) mapped natural heritage features.

The study area contains wetlands on adjacent lands, and therefore falls within the jurisdiction of Credit Valley Conservation (CVC); CVC project review and permit may be required to proceed with the proposed development as it relates to the wetland.

This EIS report update has been prepared in order to address Submission 1 Comments received from the City of Mississauga and CVC related to Natural Heritage matters.

The purpose of this EIS is to identify the candidate Key Natural Heritage Features (KNHFs) present within the study area and address potential impacts to candidate KNHFs. A review of background information in combination with site visits undertaken during the 2023/2024 season to identify natural heritage features and functions as candidates for consideration as significant KNHFs associated with the study area. Azimuth also attended the site with City and CVC staff in October 2023 to stake the woodland dripline, top of bank and wetland boundaries. This report also examines potential for Species at Risk (SAR) protected under the *Endangered Species Act,* 2007 (ESA) within the study area. The potential for negative impacts to natural heritage features resulting from the proposed development is considered and recommendations for avoidance and mitigation are provided.

For the purposes of this EIS the study area comprises the subject property as shown on Figures 1-4 and adjacent lands (within approximately 120 metres (m)) of the property limits). Natural features in the overall planning area beyond the defined study area limits are discussed where applicable throughout this report.

2.0 PLANNING CONTEXT

2.1 Provincial Planning Statement (2024)

All Planning Act decisions must be consistent with the PPS. The PPS outlines policies related to natural heritage features (Section 4.1) and water resources (Section 4.2). Ontario's *Planning Act*, (1990) requires that planning decisions shall be consistent with the PPS. The study area is located entirely within **Ecoregion 7E**. According to the PPS development and site alteration shall not be permitted in:

- *Significant wetlands* in Ecoregions 5E, 6E and 7E; and,
- *Significant coastal wetlands*.

Similarly, Section 4.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted within:

a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E; and 7E;
b) *significant woodlands* in Ecoregions 6E; and 7E;
c) *significant valleylands* in Ecoregions 6E; and 7E;
d) *significant wildlife habitat*;
e) *significant areas of natural and scientific interest*; and,
f) *coastal wetlands* in Ecoregions 5E, 6E; and 7E that are not subject to policy 4.1.4(b)

It is ultimately the responsibility of the Province and/or the Municipality to designate areas identified within Section 4.1.4 and 4.1.5 of the PPS as “significant”.

Section 4.1.6 of the PPS states that development and site alteration is not permitted in fish habitat except in accordance with federal and provincial requirements.

Section 4.1.7 of the PPS states that development and site alteration shall not be permitted in habitat of Endangered and Threatened species, except in accordance with provincial and federal requirements.

Furthermore, under Section 4.1.8 of the PPS, no development and site alteration will be permitted on lands adjacent to natural heritage features and areas identified in policies 4.1.4, 4.1.5 and 4.1.6 unless the ecological function of the adjacent lands has been

evaluated and it has been demonstrated there will be no negative impacts on the natural features and their ecological functions.

2.2 Endangered Species Act, 2007

Ontario's *Endangered Species Act*, 2007 (ESA) provides regulatory protection to Endangered and Threatened species prohibiting harm and/or killing of individuals and destruction of their habitats.

The various schedules of the ESA included under Ontario Regulation (O. Reg.) 230/08 identify SAR in Ontario. These include species listed as Extirpated, Endangered, Threatened and Special Concern. As noted above, only species listed as Endangered and Threatened receive protection from harm and destruction to habitat on which they depend. Species designated as "Special Concern" may receive protection under the Significant Wildlife Habitat provisions of the PPS.

On June 4, 2025, the province of Ontario adopted *Bill 5, Protect Ontario by Unleashing Our Economy Act, 2025* ("Bill 5"), which received Royal Assent the following day. Upon adoption of Bill 5, several amendments to how protections apply to Threatened and Endangered species came into force, including (but not limited to) a revised definition of "habitat" for flora and fauna, removal of species protections against "harassment", and enabling the province to add or remove species from the Species at Risk in Ontario List. The revisions to the provincial ESA that came into effect upon adoption of Bill 5 represent interim changes to regulatory protections and other requirements for Species at Risk in Ontario. It is understood the province currently intends to repeal the ESA and replace with the *Species Conservation Act*, 2025 (SCA), in doing so will implement additional amendments to regulatory requirements for Threatened and Endangered species. Of particular relevance to the development approvals process, the SCA will include a Protected Species in Ontario List regulation that will not necessarily include all Threatened and Endangered species in the province. It is also understood that the Protected Species in Ontario List may provide protections to certain species on a regional level, applying to only some portions of the province. Where impacts to Threatened and Endangered species appearing on the Protected Species in Ontario List may occur, the SCA will introduce a "registration first" approach that will set out rules for proponents to follow as a condition of carrying out the impacting activity. It is understood that this system will replace the existing ESA Permitting process for the large majority of species and occurrences, and will be accessible through an online Species Conservation Registry system. It is anticipated that the full details regarding the overhauled regulatory process for Threatened and Endangered species will be available in early 2026.

2.3 Region of Peel Official Plan

A watercourse has been mapped on adjacent lands according to Schedule A-1 of the Region's Official Plan (Appendix A).

Schedule C-1 (Greenlands System) of the Region of Peel Official Plan (Peel, 2022) designates adjacent lands south of the subject property as within the Greenlands System Overlay (Appendix A). This designation includes provincial Natural Heritage System designations, Core Areas, Natural Areas and Corridors, and Potential Natural Areas and Corridors. These areas are to be protected through the policies of local municipal official plans; development and site alteration will be permitted only in accordance with the appropriate official plan policies.

Similarly, the adjacent lands have been included within the Conservation Authority Natural Heritage System (Appendix A). The Natural Heritage System as mapped by the Conservation Authorities identifies lands in existing natural cover and lands with the potential to be restored or enhanced. It is intended to be further interpreted and identified by the local municipalities through their implementation of the Greenlands System policy framework in accordance with provincial policy (Peel, 2022).

2.4 City of Mississauga

2.4.1 Official Plan (2024)

Schedule 1 (Urban System) of the City of Mississauga Official Plan (Mississauga, 2024) designates the property as Neighbourhood and lands adjacent to the subject property as part of the City's Green System (Appendix A), which includes the Natural Heritage System, Urban Forest, Natural Hazard Lands and Parks and Open Spaces.

The property is not included within the City's Natural Heritage System. Schedule 3 (Natural System) designates adjacent lands south and west of the subject property as Residential Woodlands, which are part of the City's Natural Heritage System (Appendix A). Any proposed development should have regard for how existing tree canopy and understorey are protected, enhanced, restored and expanded (Section 6.3.19 of the City's OP).

Natural Hazard lands are also identified along the south property boundary (Appendix A). Development or site alteration is generally not permitted in Natural Hazard lands; land use in such areas is limited to conservation, flood/erosion control, essential infrastructure and recreation. Development and site alteration will not be permitted

within erosion hazards associated with valleyland and watercourse features and must provide appropriate buffer to erosion hazards, as established to the satisfaction of the City and appropriate conservation authority (Section 6.3.47 of the City's OP).

As per Section 6.3.7 of the City's Official Plan, buffers are vegetated protection areas that provide a physical separation of development from the limits of natural heritage features and natural hazard lands and are intended to maintain slope stability/reduce erosion, reduce human influence, protect tree root zones, provide a safety zone for tree fall, enhance natural heritage features and functions. Buffers shall be determined on a site-specific basis as part of an EIS (Section 6.3.8 of the City's OP).

Schedule 10 (Land Use Designations) designates the property as Low Density Residential 1 and adjacent lands as Greenlands, Natural Hazards and Public Open Space. Public Open Spaces include city parks and trails, stormwater management facilities, and lands intended for conservation or recreation.

2.4.2 Public Tree Protection (By-law 0020-2022)

This By-law applies to all public property within the City. As per By-law 0020-2022, no person shall injure or prune a public tree or perform any work within a Tree Protection Zone (*i.e.* store/maintain any construction material, fill, refuse, equipment or vehicles, alter/change grade or excavate, tunnel or trench) without a valid permit. This By-law would be applicable to adjacent lands in public ownership.

2.4.3 Private Tree Protection (By-law 0021-2022)

This By-law applies to all private property within the City. As per By-law 0020-2022, no person shall injure or destroy a tree with a diameter of 15 centimetres (cm) or greater without a valid permit. No person shall interfere with hoarding that is erected in accordance with this By-lay and no person shall injure or destroy a replacement tree without a valid permit. Planting a replacement tree may be a condition of a permit.

2.5 Credit Valley Conservation

Under Ontario Regulation 41/24, CVC has jurisdiction over natural hazard lands occurring within CVC regulation limits. As discussed above, natural hazard lands were identified along the subject property boundary, which occur outside of CVC regulation limits (Appendix B). CVC project review was requested independently by the City for the natural hazard lands identified outside of CVC regulation limits.

2.6 Federal Fisheries Act

The *Fisheries Act* includes protections for fish and fish habitat in the form of standards, codes of practice, and guidelines for projects near water. The *Fisheries Act* provides protection against the "death of fish, other than by fishing", (Section 34.4(1)) and the "harmful alteration, disruption or destruction of fish habitat", (Section 35(1)), otherwise known as HADD. In cases where impacts to fish and fish habitat cannot be avoided, and the project does not fall within waterbodies where Fisheries and Oceans Canada (DFO) review is not required, proponents are asked to submit a request for review to their Fish and Fish Habitat Protection Program regional office to determine approval requirements. All projects are encouraged to avoid causing the death of fish and a HADD of fish habitat, using measures to protect fish and fish habitat that include standards and codes of practice for common works, undertakings and activities.

3.0 STUDY APPROACH

A combination of a background information and field data were used to fulfill the objectives of this EIS. Azimuth undertook the following activities for this study:

- Conducted field surveys to document existing natural heritage features, functions, and species. Surveys included:
    - Evaluated/mapped vegetation community types based on Ecological Land Classification methods (ELC; Ecological Land Classification for Southern Ontario: First Approximation and its Applications. SCSS Field Guide FG-02; Lee *et al*., 1998, updated 2008) (September 2023 and June 2024);
    - Documented fish and fish habitat features within and adjacent to the property to characterize fish habitat permanence and sensitivity (September 22, 2023);
    - Conducted a detailed vascular plant inventory on the property during summer (June 18, 2024), and early fall (September 22, 2023);
    - Conducted two dawn breeding bird surveys in June 2024;
    - Completed a Butternut Health Assessment on the single Butternut tree identified on the property (June 18, 2024); and
    - Recorded all incidental wildlife observations during site visits.
- Provided a description of the CVC regulated wetland by an Ontario Wetland Evaluation System Evaluator;
- Completed a SAR habitat assessment using field data collected by Azimuth and other data available and/or provided by agencies to confirm environmental constraints, and approval requirements under the ESA;

- Completed a Significant Woodland and Significant Wildlife Habitat assessment using criteria identified in the Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009);
- Integrated other associated reports such as the Functional Servicing Report and Hydrogeology Report into the assessment of the regulated wetland. Assessed the potential direct and indirect impacts of the proposed development on the full suite of identified natural heritage features and functions identified on or adjacent to the development parcel including recommendations related to mitigation to reduce the intensity, duration or extent of anticipated impacts.

City and CVC staff attended the site on October 19, 2023. During this site visit, the City confirmed the limit of the dripline and CVC confirmed the top of bank and wetland limit. Subsequent to this meeting, CVC confirmed that the adjacent drainage is not considered a regulated watercourse as such the slope is not considered regulated by the CVC; therefore, the staked top of bank does not reflect a CVC constraint. The wetland (adjacent lands) is regulated by CVC (Appendix B).

The Terms of Reference (ToR) was provided to the City the field program and impact assessment on September 13, 2023. It is our understanding that the ToR was forwarded to CVC by the City. A response was received from the City on February 8, 2024 confirming that the scope of the program undertaken was acceptable as with additional information required as noted in the e-mail correspondence (Appendix B). The City's additional requests are acceptable and have been incorporated into this report. CVC provided e-mail correspondence (January 25, 2024) with respect to the information requirements of the EIS related to the CVC regulated feature (Appendix B).

3.1 Background Information

A review of the following background documents provided information on site characteristics, habitat, wildlife, rare species and communities and general cultural/historic aspects of the study area:

- Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) including NHIC Make-A-Map: Natural Heritage Areas Application (MNR, 2024a);
- Atlas of the Breeding Birds of Ontario (OBBA; Cadman *et al.*, 2007);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2020);
- Ministry of Environment, Conservation and Parks (MECP) Species at Risk Ontario list (MECP, 2024);
- iNaturalist (NHIC) Rare Species of Ontario (iNaturalist, 2024);

- Air photos available for the Project Area (Google, VuMap);
- Government of Canada's Species at Risk Public Registry;
- DFO Aquatic Species at Risk Mapping (DFO, 2024);
- MNR Land Information Ontario (LIO) online database: Aquatic resource area line segment (MNR, 2024b); and,
- Atlas of the Mammals of Ontario (Dobbyn, 1994).

3.2 Vegetation Community Mapping and Surveys

Prior to undertaking the field studies, an initial classification of vegetation communities was undertaken using recent air photo imagery for an area encompassing the study area. Vegetation community boundaries were then checked in the field on September 22, 2023 and June 18, 2024 during the growing season when the emergent ground cover vegetation layer was present. Vegetation community types were classified using ELC protocols.

The site visit was undertaken by a qualified ecologist with existing knowledge related to rare, Threatened, and Endangered plant species with potential to occur in the area. The site assessment was focused during ELC work to ensure that appropriate effort was made to detect any federally or provincially designated species, notably SAR as identified under the ESA.

A detailed survey including a screening for Butternut (*Juglans cinerea*; Endangered) and Black Ash (*Fraxinus nigra*; Endangered) was also conducted within the study area.

3.3 Wildlife Surveys

Wildlife species utilizing the study area were identified from direct observation, auditory signs, and through interpretation of other signs (tracks, scats, vocalizations, *etc.*) as a matter of course while conducting field surveys.

3.3.1 Species at Risk

The SAR screening undertaken for the scope of this assignment includes an assessment of SAR with potential to occur in the overall planning area, compared with potential habitat features identified within the study area. Habitat requirements and appropriate designations (Endangered, Threatened, or Special Concern) are outlined in Table 1.

According to the NHIC database, there are records for restricted species. Azimuth reached out to NHIC and can confirm that the restricted species is considered within our SAR assessment (Table 1).

3.3.2 Breeding Birds

Two dawn breeding bird surveys were conducted within the study area on June 4 and June 18, 2024 guided by point count methodology presented in Appendix D of the OBBA Guide for Participants (2001). All surveys were conducted no earlier than one half hour before sunrise and were completed prior to 10:00a.m. Surveys were completed under suitable weather conditions (*i.e.* no precipitation and light winds (Beaufort wind scale ≤3)), with an observation period of 10 minutes carried out at the point count station shown on Figure 2.

3.3.3 Fish and Fish Habitat

Watercourses and drainage features in the project area was evaluated on September 22, 2023. The site evaluation was aimed at understanding the location of potential fish habitat features noting general channel features and observations of fish to determine characteristics of fish habitat and fish habitat sensitivity.

4.0 EXISTING CONDITIONS

4.1 Land Use

The subject property is located on the south side of Lakeshore Road West, between Whittier Crescent and Richard's Memorial Park. The property lies approximately 250m northwest of the Lake Ontario shoreline. A single residential dwelling with accessory structures currently exists on the property. Numerous trees are present within the property, some of which are contiguous with the adjacent woodlands.

Lands immediately adjacent to the property include woodlands to the south and east, and Lakeshore Road West to the northwest. Beyond lies residential neighbourhoods to the north, west and south. As mentioned above, Richard's Memorial Park lies to the east of the property, and consists of wooded patches and open parkland.

4.2 Vegetation

A field survey was undertaken to evaluate vegetation community types including representative plant species compositions on September 22, 2023 and June 18, 2024. Property access was granted within the property boundary only (Figure 2), and therefore alternative survey techniques (*i.e.* "fenceline" surveys) were completed for

lands located beyond the property line. The site visit was undertaken by a qualified Terrestrial Ecologist with knowledge of rare, Threatened, and Endangered plant species with potential to occur in the area.

There are no elements of occurrence (EO_ID) within the property or adjacent lands for provincially Endangered or Threatened species according to the MNRF NHIC database. Four EO_IDs were identified for provincially rare plant species (S1-S3):

- Cleland's Evening-primrose (*Oenothera clelandii*; S1)
- Fall Crabgrass (*Digitaria cognata*; S1)
- Sundial Lupine (*Lupinus perennis*; S2S3)
- Virginia Bluebells (*Mertensia virginica*; S3)

Records of Common Hoptree (*Ptelea trifoliata*; Special Concern) were identified in Richard's Memorial Park through the iNaturalist database. These records are located beyond the study area. The Greater Toronto Area is located outside the natural range of this species in Ontario (COSEWIC, 2015), and these individuals are likely cultivated/ornamental plantings.

A detailed survey was undertaken to identify Butternut and Black Ash trees. One Butternut tree was observed on the property (Figure 2). A Butternut Health Assessment (BHA) was undertaken for this individual. Through the BHA, the tree was determined to be a Category 1 Butternut. Category 1 Butternut are not afforded protection according to Ontario's ESA. The BHA was submitted and accepted by MECP and is no longer afforded any protection according to Ontario's ESA (Appendix C).

No Black Ash trees were observed within the property limits or on adjacent lands.

No other plant species considered Endangered or Threatened were identified during the site investigation. Further, no provincially rare species were observed. None of the vegetation communities or species documented are of federal or provincial conservation concern (MNR, 2024).

The Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study (2009) recommends using a resource that is not publicly available therefore, the City has advised using other species lists such as TRCA's Flora Species L-ranks (City of Mississauga, 2024).

TRCA ranks flora and fauna found within the watershed. Species ranked L1-L3 are of conservation concern and L4 species are species of conservation concern in an urban area.

The following TRCA rare species were documented during Azimuth's field investigations:

> **TRCA L1 Species**: Red Pine (*Pinus resinosa*)*
> **TRCA L3 Species**: Butternut*, Common Winterberry (*Ilex verticillata*)*, Purple-stemmed Angelica (*Angelica atropurpurea*), White Spruce (*Picea glauca*)*
> **TRCA L4 Species**: Broad-leaved Cattail (*Typha latifolia*), Eastern Hemlock (*Tsuga canadensis*)*, Paper Birch (*Betula papyrifera*)*, Pussy Willow (*Salix discolor*)*, Red Oak (*Quercus rubra*)*, White Pine (*Pinus strobus*)*

*Species documented within CVR (residential area) and likely established within this area through ornamental planting. Please refer to Tree Inventory and Assessment prepared by Cohen and Master Tree and Shrub Service (2023) for location of trees within CVR area and along woodland edge (FODM7-4, Figure 2).

Please refer to Table 2 to determine which community the above-listed TRCA rare species were found. Precise location within the community is unknown. A detailed vascular plant inventory is presented in Table 2.

Vegetation communities within the study area were determined in accordance with the ELC system, and are summarized below and illustrated on Figure 2. Vegetation communities identified within the study area are listed as follows:

- CVR_1 (Low Density Residential)
- FODM7-4 (Fresh-Moist Black Walnut Lowland Deciduous Forest)
- MAMM3-1 (Mixed Mineral Meadow Marsh)

The subject property consists primarily of the existing residence and landscaped yard (CVR_1, Figure 2). Common tree species observed included Black Walnut (*Juglans nigra*), Black Locust (*Robinia pseudoacacia*), Norway Spruce (*Picea abies*), Scots Pine (*Pinus sylvestris*), White Mulberry (*Morus alba*), White Spruce (*Picea glauca*) and Manitoba Maple (*Acer negundo*). The Category 1 Butternut tree identified is located adjacent to the south side of the residence (Figure 2). Although primarily manicured, a variety of shrub and forb species were observed along the periphery or within unmanicured spaces within the CVR_1. Many of

the species noted were non-native/invasive including Common Buckthorn (*Rhamnus cathartica*), Multi-flora Rose (*Rosa multifolora*), European Spindletree (*Euonymus eurpaeus*), European Lily of the Valley (*Convallaria majalis*) and Garlic Mustard (*Alliaria petiolata*).

The deciduous forest (FODM7-4, Figure 2) community identified to the south and east of the residence was dominated by Black Walnut; other species observed included Red Oak (*Quercus rubra*), Manitoba Maple, White Birch (*Betula papyrifera*) and Sugar Maple (*Acer saccharum*). Shrub and groundcover species included Tall Goldenrod (*Solidago altissima*), Stinging Nettle (*Urtica dioica*), Riverbank Grape (*Vitis riparia*), Thicket Creeper (*Parthenocissus vitacea*), Garlic Mustard, Ostrich Fern (*Matteuccia struthiopteris*) and Periwinkle (*Vinca minor*). The community is largely a treed ravine that slopes downward to an intermittent drainage feature that flows east to Lake Ontario.

The meadow marsh (MAMM3-1, Figure 2) community identified to the southeast of the residence and along the drainage feature was dominated by Spotted Jewelweed (*Impatiens capensis*) and Reed Canary Grass (*Phalaris arundinacea*) with Bittersweet Nightshade (*Solanum dulcamara*), and sedges (*Carex* spp.). Other species observed included cattails (*Typha* sp.), Yellow Iris (*Iris pseudacorus*), Willow (*Salix* sp.), Nodding Beggarticks (*Bidens cernua*) and Sensitive Fern (*Onoclea sensibilis*).

4.3 Wildlife

Direct and indirect observations of wildlife (*i.e.* tracks, scat, fur) were collected as a matter of course during the site investigation. The following species and signs thereof were observed within the study area limits during the site investigation:

- Mammals: Coyote, Eastern Chipmunk, Eastern Grey Squirrel
- Amphibians: American Toad

None of the wildlife observed are of provincial conservation concern. Eastern Chipmunk and American Toad are L4 species within the TRCA watershed.

4.3.1 Birds

Twenty (20) bird species were recorded during dawn breeding bird surveys, all of which are typical of urban/semi-urban landscapes and woodland edge habitats (Table 3).

None of the species observed are of provincial conservation concern. Several TRCA L4 species were observed within the study area including Carolina Wren, Great-crested Flycatcher, Hairy Woodpecker, Northern Flicker, Red-eyed Vireo and White-breasted Nuthatch (Table 3).

4.3.2 Natural Heritage Information Centre

MNR's NHIC database identifies records of species listed as Threatened, Endangered, Special Concern, or provincially rare (S-Rank 1-3) within the vicinity of the study area. Species listed as Threatened, Endangered, or Special Concern are included within Table 1. An additional eight (8) species with designated S-rank of S1-S3 were identified within 1km of the study area based on an NHIC query:

- American Coot (S3B);
- Blue-winged Teal (S3B);
- Common Gallinule (S3B);
- Deepwater Sculpin – Great Lakes / St. Lawrence population (S3);
- Fish Crow (S1B, S3N);
- Greater Redhorse (S3);
- Red-necked Grebe (S3);
- Tufted Titmouse (S3);

No aquatic habitat suitable for American Coot, Blue-winged Teal, Common Gallinule, Deepwater Sculpin, Greater Redhorse, Red-necked Grebe, is present within the study area. These records are likely associated with habitats associated with Lake Ontario (*i.e.* beyond the study area). As such, these species are not anticipated to occur within the study area.

Tufted Titmouse inhabits woodlands as well as urban areas and parks but was not observed during Azimuth's 2024 dawn breeding bird surveys.

4.4 Species at Risk

A screening for SAR occurred within the planning area based on potentially suitable habitat features identified during the site investigation (Table 1). The SAR assessment fully considers SAR with potential to occur within the overall planning area. Based on this assessment in combination with vegetation communities and other environmental features observed during the site investigation, the following species are considered below in this report:

- **Threatened and Endangered:** Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Red-headed Woodpecker, Tri-colored Bat

4.4.1 Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tri-colored Bat

No bat species were directly observed throughout the course of the field program; however, these species are treated as present in lieu of conducting detailed ecological studies to verify presence/absence. The current MECP Bat Survey Standards Note (2022) states that "in cases where acoustic monitoring surveys are not performed, MECP will assume SAR bat presence in all habitat containing potentially suitable tree roosts". Potential bat roosting habitat was identified within the study area within the deciduous forest community (FODM7-4, Figure 2). Numerous mature trees and standing snag trees (trees with cavities or other features suitable for roosting) were observed within the forest habitat adjacent to the subject property. Caves, karst topography, and/or abandoned mines are absent within the study area, therefore potential hibernacula are not located within the study area limits.

The existing residence on the property was not noted to possess any features or openings that may facilitate bat roosting therefore is considered low potential for providing maternity roost habitat for bats.

With regards for potential roosting habitat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tri-colored Bat may utilize woodlands as maternity roost sites, preferring trees >25cm diameter at breast height with evidence of cracks, holes, splits, lifted bark, *etc.* (called "snags") to provide refuge for the rearing of young during the late spring and early summer months (approximately June) (Environment Canada, 2015). Larger trees are generally preferred, and in the case of Silver-haired Bat, older woodlands are preferred; however trees of any size with suitable access features have potential to be occupied by bats during the active period (Environment Canada, 2015; COSEWIC, 2023).

Potential roosting Habitat for Hoary Bats and Eastern Red Bats may include the foliage of trees and occasionally shrubs in both deciduous and coniferous forests of any age class. Maternity roosts in particular tend to be found in large-diameter, tall trees, reaching or exceeding the height of the surrounding canopy, with preferred roosting locations typically located in south-facing sites sheltered from wind and temperature extremes. Roosting tends to occur in locations with overhead foliage for cover with

open flight space below, frequently near the edge of the tree canopy crown (COSEWIC, 2023).

Incidentally, day roosting habitat for bats may occur within the individual trees within the maintained CVR_1 (Figure 2) where potentially suitable features exist.

4.4.2 Red-headed Woodpecker

Red-headed Woodpeckers prefer to nest in mature deciduous forests with an open understory, tall trees and with beech or oak present. This species may also occur in agricultural or other sparsely treed areas such as orchards, parks and golf courses. Suitability of nesting habitat is also dependent on the presence of dead trees or trees in decline, in which cavities are excavated (ECCC, 2021). Forest cover adjacent to the subject property is likely too dense to support Red-headed Woodpecker. The residential CVR_1 is largely dominated by conifer which is not a preferred species. No Red-headed Woodpecker were observed during Azimuth's dawn breeding bird surveys. Species records in the area (*i.e.* eBird) are either historical in nature or were captured during non-breeding seasons. Nonetheless, it is possible that the semi-treed parkland in Richard's Memorial Park (adjacent lands) may provide suitable habitat for this species.

4.5 Wetlands

A portion of the adjacent wetland was staked with CVC in October 2023 (Figures 2-4). Subsequent to the initial 2024 submission, Figures 2-4 within this EIS update have been revised to accurately reflect the location of the wetland edge as per the Topographic Survey and Site Plan.

A Mixed Mineral Meadow Marsh (MAMM3-1) community was identified near the east boundary of the subject property. This wetland community was not previously identified on municipal or provincial mapping resources. The wetland is not identified on any provincial mapping sources and is not designated as a Provincially Significant Wetland or Locally Significant Wetland by the province and/or municipality.

As per the PPS and Ontario Wetland Evaluation System (OWES), a coastal wetland is defined as a wetland that is on a tributary to the Great Lakes (or connecting channels) and lies, either wholly or in part, downstream of a line located 2km upstream of the 1:100 year floodline of the large water body to which it is connected. Based on this definition, the wetland on the adjacent land would be considered coastal as it is located within 2km of Lake Ontario. As per the PPS, development and site alteration shall not

be permitted in coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 4.1.4 b) [*i.e.* "significant"] unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

The Region of Peel Official Plan includes non-provincially significant coastal wetlands as part of their Natural Areas and Corridors (NAC) of the Greenland System. The Regional Official plan directs local municipalities to include objectives and policies in their official plans for the interpretation, protection, restoration, enhancement, proper management and stewardship of the NAC which conform to the intent of the Regional Official Plan in conjunction with provincial policy and other relevant policy (where applicable) (Section 2.14.20 of Region's OP).

Coastal wetlands are considered "significant wetlands" and therefore is considered a Significant Natural Area as per the City's Official Plan (Section 6.3.12 of City's OP). Significant Natural Areas as well as their associated buffers will be designated Greenlands and zoned to ensure their long-term protection (Section 6.3.26 of City's OP).

Azimuth attended the site on October 19, 2023 with City and CVC staff to delineate and stake the wetland boundary adjacent to the subject property boundary.

4.6 Candidate Significant Woodland

Woodlands within the study area are not identified as Significant Woodland according to municipal or provincial mapping resources.

The woodland dripline was staked with the City of Mississauga in October 2023 (Figures 2-4). Subsequent to this staking, two (2) hazard trees were removed and refinements to the woodland dripline were made by Cohen and Master Arborists in September 2024 (Figures 2-4). The dripline depicted on Figures 2-4 represent the final (current) dripline as a result of the original 2023 staking with the 2024 update. The revisions made in 2024 to the dripline were as a result of the removal of the two (2) hazard trees, no additional revisions to the dripline have been made.

The Region of Peel provides criteria and thresholds for the identification of Core Area, NAC and Potential Natural Areas and Corridors (PNAC) Woodlands within Table 1 of the Official Plan. Based on a review of air photos, the woodland within the study area is about 3 hectares (ha) in size. Based on this size criteria, the woodland would meet the criteria to be considered a NAC Woodland. NAC are part of the Region's Greenland System. The Regional Official plan directs local municipalities to include objectives and

policies in their official plans for the interpretation, protection, restoration, enhancement, proper management and stewardship of the NAC which conform to the intent of the Regional Official Plan in conjunction with provincial policy and other relevant policy (where applicable) (Section 2.14.20 of Region's OP).

As discussed in Section 2.4, the City of Mississauga Official Plan identifies the adjacent forest community as Residential Woodlands. In addition, the Official Plan has a set of criteria to identify Significant Woodland (Section 6.3.12 of City's OP). As per the City's Official Plan, any woodland greater than 2ha are to be considered significant. Furthermore, any woodland greater than 0.5ha in size located within 30m of a watercourse or significant wetland should be considered significant. The FODM7-4, is greater than 2ha in size, contains a drainage feature and wetland deemed to be a Significant Natural Area as per City of Mississauga Official Plan (See Section 4.5 above); as such, the woodland will be considered Significant Woodland for the purposes of this assessment. Significant Natural Areas as well as their associated buffers will be designated Greenlands and zoned to ensure their long-term protection (Section 6.3.26 of City's OP).

As per the City approved Terms of Reference, an assessment of woodland significance should be undertaken as per the Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study (2009). As per this study, woodlands outside of the Oak Ridges Moraine planning boundaries should be considered significant if they satisfy any one of the following criteria:

1. Urban System: all woodlands equal to and larger than 4ha in size.
2. Woodlands, or inclusions in woodlands, that are 0.5ha or greater in size, and older than 90 years.
3. Any woodland (0.5ha or greater) identified as supporting a linkage function.
4. Woodlands (>0.5ha in size) within 100m of another significant feature.
5. Woodlands within 30m of a watercourse, surface water feature or evaluated wetland.
6. Woodlands that supports any of the following
    i. Any G1, G2, G3, S1, S2 or S3 plant or animal species or community as designated by NHIC; or
    ii. Any species designated by COSEWIC or COSSARO as Threatened, Endangered or of Special Concern.
    iii. The following forest communities:
        - Dry-Fresh White Pine-Red Pine Coniferous Forest Type (FOC1-2)
        - Dry-Fresh White Pine-Oak Mixed Forest Type (FOM2-1)

- Dry-Fresh White Pine-Sugar Maple Mixed Forest Type (FOM2-2)
- Moist-fresh Hemlock-Sugar Maple Mixed Forest Type (FOM6-1)
- Dry-Fresh Red Oak Deciduous Forest Type (FOD1-1)
- Dry-Fresh White Oak Deciduous Forest Type (FOD1-2)
- Dry-Fresh Mixed Oak Deciduous Forest Type (FOD1-4)
- Dry-Fresh Oak-Hickory Deciduous Forest Type (FOD2-2)
- Dry-Fresh Hickory Deciduous Forest Type (FOD2-3)
- Fresh Sugar Maple-Black Maple Deciduous Forest (FOD6-2)

Overall, the woodland on site (extending onto adjacent lands) appears to be approximately 2.6ha in size. Although it likely does not meet the size or age criteria for significance, it likely meets the following criteria for significance:

- Linkage – the woodland provides a linkage between Lake Ontario up into the ravine.
- Proximity – Woodland is within 100m of Lake Ontario and is within 30m of the intermittent drainage feature

Based on this information, the FODM7-4, would be considered to be a Significant Woodland as per the Peel-Caledon 2009.

Based on the above assessments, the woodland would be considered Significant as per the Region, City and Peel-Caledon (2009) documented above and will be considered Significant Woodland for the purposes of this assessment.

4.7 Candidate Significant Valleyland

No portion of the study area is identified as Significant Valleyland, nor assigned a similar designation according to municipal or provincial mapping resources.

The Region of Peel provides criteria and thresholds for the identification of Core Area Valley and Stream Corridors (Table 2 within Official Plan). As per this criterion, associated ravines within the Urban System are to be included if it meets one of the listed criteria. The wetland and woodland identified within the study area would be considered part of the Region's Greenland System (See Section 4.5 and 4.6); therefore, the ravine provides a linkage between these features and therefore would meet the criteria as a Core Area Valley and Stream Corridor. Typically, development and site alteration is prohibited within the Core Areas of the Greenlands System in Peel except as permitted within Section 2.14.15 of the Region's OP.

The City of Mississauga Official Plan define Significant Valleylands (Significant Natural Area) as valleylands associated with watercourses and tributaries draining directly to Lake Ontario. The identified drainage feature and associated ravine, although intermittent, are connected to the Lake Ontario shoreline. Additionally, this area is identified as a Significant Groundwater Recharge Area on Schedule A-3 of the Region of Peel Official Plan (Peel, 2022). The Natural Heritage Reference Manual identifies groundwater functions (infiltration/release) as a criterion for identifying Significant Valleylands (OMNR, 2010); the drainage feature flows through a wetland feature that may be associated with groundwater functions. As such, the drainage feature and associated ravine will be considered Significant Valleylands for the purposes of this assessment. Significant Natural Areas as well as their associated buffers will be designated Greenlands and zoned to ensure their long-term protection (per Section 6.3.26 in the City's OP).

4.8 Candidate Significant Wildlife Habitat

An assessment of the potential for Significant Wildlife Habitat (SWH) within study area was conducted using the criteria outlined within the Significant Wildlife Habitat Technical Guide (OMNR, 2000) and the accompanying the Ecoregion 7E Criteria Schedules (MNRF, 2015) (Table 4). Additionally, the Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study (2009) was used to identify potential SWH function. The following potential SWH types were determined to be present, or have potential to be present within the study area based on the results of the field program:

- Bat Maternity Colonies
- Migratory Butterfly Stopover Area
- Landbird and Bat Migratory Stopover Area
- Amphibian Breeding Habitat (Woodland)
- Species that are Rare within the Region (TRCA ranks L1-L4)
- Animal movement corridor

SWH meeting one or more of the MNR (2015) criteria for Ecoregion 7E is considered to be a NAC of the Regional Greenlands System (Section 2.14.18 (g) of the Region's OP).

The City of Mississauga Official Plan defines SWH as wildlife habitat that is ecologically important as defined in the Region of Peel Official Plan in terms of features, functions, representation or amount, and contributing to the quality and diversity of an

identifiable geographic area or natural heritage system. The below-listed SWH functions meet this definition of SWH. SWH is identified as a Significant Natural Area as per the City's Official Plan, as such, the potential SWH functions listed below will be considered SWH for the purposes of this assessment.

4.8.1 Bat Maternity Colonies

Maternity colonies can be found within mature deciduous or mixed forest stands. The FODM7-4 community (Figure 2) has the potential to provide maternity colony habitat for Big Brown Bat and Silver-haired Bat.

4.8.2 Migratory Butterfly Stopover Areas

Although the woodland may not meet the size criterion for significance as per MNR's Ecoregion 7E Criteria Schedules, the study area is located within 5km of Lake Ontario CVC has documented migratory butterfly congregations along the Lake Ontario shoreline within local parks less than 10km from the study area (North-South *et al*., 2009). Although not documented, the study area (including the adjacent Richard's Memorial Park) could provide this SWH function.

4.8.3 Landbird Migratory Stopover Area

Woodland fragments that are 2.5ha in size located along the shoreline of Lake Ontario (*i.e.* <2km from lake) could be considered significant for landbird migration. Therefore, the FODM7-4 community (Figure 2) could be considered SWH for this potential function.

4.8.4 Amphibian Breeding Habitat

Wetland is present within the study area. Evening amphibian surveys were not undertaken as part of this EIS, therefore, it is assumed that the wetland could potentially function for breeding amphibians.

4.8.5 Species that are Rare within the Region (TRCA Rare)

Several species that are considered to be of conservation concern within the TRCA watershed have been documented within the study area (Please refer to Section 4.2, 4.3 and 4.3.1 for lists of TRCA flora and fauna). Apart from the tree species that were likely planted within the CVR area (*i.e.* residential areas), the TRCA rare species were documented within and are utilizing the natural heritage features within the study area including the woodland, wetland and valley corridor.

4.8.6 Animal Movement Corridor

The woodland/valley has the potential to be considered an animal movement corridor as it is an "elongated, naturally vegetated landscape that can be used by animals to move from one habitat to another" (OMNR, 2000). The movement corridor within the study area would likely be a local movement corridor (*i.e.* tertiary) that is valued on a local scale for wildlife movement.

4.9 Areas of Natural and Scientific Interest

There are no Areas of Natural and Scientific Interest located within the study area according to municipal or provincial mapping resources (Appendix A, Appendix C).

4.10 Fish and Fish Habitat

The property is located within the Credit River Watershed. As per online mapping, no watercourses or drainage features are located on the property. However, during field investigation completed by Azimuth on September 22, 2023, one drainage swale was identified to the south of the property as shown on Figure 2. The unnamed drainage swale was located 20m south of the property line and drains in an easterly direction. The feature collects drainage from Lakeshore Road West where two culverts outlet on the southeast side of the road into the forested area south of the property. Within the forested area, the drainage swale flows east and outlets into Lake Ontario 350m east of Lakeshore Road West. No surface drainage feature was observed upstream (north) of Lakeshore Road West. It is anticipated that the drainage swale collects surface and stormwater drainage from the road and subdivision lands in the area. South of the property in the forested lands, the drainage swale had no defined banks, no substrate sorting was noted, and a shallow (<3cm) trickle flow was observed. Access to the outlet location to Lake Ontario was not possible due to private lands.

Nearby watercourses to the north (Lornewood Creek) and south (unnamed tributary) are both identified as warmwater systems on the MNRF LIO online database (MNR, 2024b). Therefore, based on site observations (poorly defined swale feature, shallow water conditions with a lack of refuge pools, trickle flow in the fall season) and known nearby warmwater systems, the unnamed drainage swale is characterized as an intermittent feature that provides indirect warmwater fish habitat. Fish would not be expected to inhabit the watercourse at any time of the year, but the feature would be protected under the Federal *Fisheries Act* due to the indirect fish habitat functions that is provides (*i.e.,* the conveyance of water, nutrients, and food sources to downstream receiving watercourses).

There are no known potential aquatic SAR within the study area according to DFO mapping (2024). Shortnose Cisco (Endangered) are documented to occur beyond the study area within Lake Ontario (Appendix C).

5.0 NATURAL HERITAGE FEATURES SUMMARY

The results of Azimuth's site investigation combined with review of background information indicate the potential for the following candidate KNHFs within the study area:

- Habitat for Endangered and Threatened Species
    - Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat
    - Red-headed Woodpecker (adjacent lands)
- Wetlands (non-provincially significant)
- Significant Woodland
- Significant Valleyland
- Candidate Significant Wildlife Habitat
    - Bat Maternity Colonies
    - Migratory Butterfly Stopover Area
    - Landbird and Bat Migratory Stopover Area
    - Amphibian Breeding Habitat (Woodland)
    - Species that are Rare within the Region (TRCA ranks L1-L4)
    - Animal movement corridor
- Fish Habitat
    - Unnamed drainage swale – indirect warmwater fish habitat.

6.0 NATURAL HERITAGE CONSTRAINTS

The recommended setbacks are based on our review and interpretation of CVC's Watershed Planning and Regulation Policies (2010). Section 6.2 of this CVC document outlines the buffer requirements related to natural heritage and hazard lands. CVC generally recommends that development and site alteration be set back in accordance with policies 6.2.1 b) and c), to the extent feasible:

i. 10m from the limit of flood hazards;
ii. 10m from the limit of erosion hazards;
iii. 10m from the limit of dynamic beach hazard;
iv. 10m from the drip line of significant woodlands;

v. 10m from the limit of other wetlands;
vi. 30m from the limit of provincially significant wetlands,
vii. 30m from the bankfull flow location of watercourses, and/or
viii. A distance to be determined through the completion of a comprehensive environmental study or technical report, to the satisfaction of CVC, from the limit of the following:
    a. Significant wildlife habitat,
    b. Significant habitat of threatened species and endangered species;
    c. Regionally and provincially significant life science ANSIs;
    d. ESAs; and/or,
    e. Significant habitat of species of conservation concern.

As per Section 7.4 of CVC's Watershed Planning and Regulation Policies (2010) provides further direction related to the Setback Criteria for Development to indicate that, as a minimum, all development must be set back 10m from the following features:

i. Top of stable slope;
ii. Stable toe of slope;
iii. Meander belt;
iv. Bankfull flow location of a watercourse;
v. Provincially significant wetlands; and,
vi. Other wetlands required to be protected.

As indicated above, the only CVC regulated feature associated with the study area is the non-provincially significant wetland located on adjacent lands (MAMM3-1, Figure 2).

As per the City of Mississauga's Official Plan, buffers shall be determined on a site-specific basis as part of an EIS or similar study, to the satisfaction of the City and appropriate conservation authority (Section 6.3.8 of the City's OP).

Based on this information, we have prepared Figure 3 that depicts the setbacks from the identified natural heritage features which is 10m from the woodland dripline and 10m from the wetland.

7.0 PROPOSED RE-DEVELOPMENT

The proposed re-development includes a 9-storey tower with an additional Mechanical Penthouse. The proposed re-development will consist of 161 residential units with three (3) levels of underground parking (Figure 4).

Stormwater Management will be designed to meet the City's Storm Design requirements and the post-development flow rate is to be controlled to the pre-development target flows. All overland flow will be directed towards the adjacent right of way. Post development, Drainage Area A1, A2 and A3 will be controlled into the underground storage tank that will provide quantity control. Drainage Area A4 will run uncontrolled towards the adjacent wetland feature. Quality controls will be provided by a Stormwater Quality Control Device provided for the driveway areas in order to meet provincial quality standards. The proposed development will discharge into the wetland feature via a proposed headwall (Lithos, January 2026).

Sanitary will be provided via a connection to the sanitary sewer along Lakeshore Road West (Lithos, January 2026).

Construction dewatering and permanent drainage is required to facilitate the construction of the proposed residential units and associated underground parking as discussed within Fisher Engineering Limited's Hydrogeological Investigation (November, 2024) and Lithos'Functional Servicing and Stormwater Management Report (2026).

A 3m offset has been applied to the footprint of the development. All lands beyond this 3m setback will be place in public ownership through conveyance to the City and zoned Greenlands. A 1.5m landscape strip will be maintained at some locations on the private lands and zoned as Greenlands. This private Greenlands strip will act as an additional buffer to the natural heritage features and will provide a visual transition to the fence and City acquired Greenlands (Figure 4).

8.0 IMPACT ASSESSMENT

This impact assessment is prepared with regards to the construction footprint of proposed structures and associated grading limits, as described above and illustrated in Figure 4.

8.1 Habitat for Threatened and Endangered Species

Impacts with regards to the ESA and Habitat of Threatened or Endangered Species are covered under Section 9 and 10 of the ESA. Section 9 deals directly with killing, harming, or harassing living members of a species while Section 10 covers destruction or damage to habitat of Threatened or Endangered species. The following Threatened or Endangered species have the potential to occur within the limits of the property and on adjacent lands:

- Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat (Endangered)
- Red-headed Woodpecker (Endangered)

8.1.1 Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat (Endangered)

The forested community within the study area (FODM7-4, Figure 2) represents potential general habitat for SAR bats. With the exception of the headwall and plunge pool, there is no proposed development within the FOM7-4, Figure 4. The setback from the Greenland zoning to the woodland dripline will range from 0m to 17.30m with an overall average setback of 6.49m, tree removals within the FODM7-4 will be limited to only what is required for the installation of the stormwater outlet. Potentially suitable SAR bat habitat will remain within property and overall study area post-development thus maintain this potential natural heritage function on the landscape. Any vegetation removals that need to occur to facilitate the installation of the headwall and plunge pool should occur outside of the active timing window for bats in order to avoid incidental impacts, anticipating minor tree removals may be required to facilitate the installation.

When assessing the potential for impacts to bats, the surrounding landscape plays an important role in understanding if SAR bat habitat will be impaired by the removal of potentially suitable habitat. One of the considerations is the distance that female bats can travel while lactating which is about 400m. If significant amounts of habitat is removed within the maximum distance, then the function of the habitat would become impaired or impacted (MECP, 2022b). In this particular situation, potentially suitable SAR bat habitat will remain on site and within adjacent lands post-development, therefore development will avoid impairing, create barriers, fragmenting or eliminating the function of habitat for supporting bat life processes and impacts to SAR bat habitat availability is not expected therefore remains consistent with MECP, 2022a and MECP, 2025 guidelines. Based on the proposed development, there is no expectation that there will be any impacts to local SAR bat habitat availability. Therefore, there will be no negative impacts to SAR bat habitat provided the recommended mitigation measures (*i.e.* timing restrictions) are implemented as described in Section 9 below.

Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 9 below, there is no expectation that the proposed development will result in a negative impact to Eastern Red Bat, Hoary Bat, Little Brown

Myotis, Northern Myotis, Silver-haired bat and Tri-colored Bat, or the habitat upon which they depend.

8.1.2 Red-headed Woodpecker

Potential habitat associated with Red-headed Woodpecker has been identified within the adjacent park area (*i.e.* Richard's Memorial Park). There is no development on adjacent lands and the trees bordering the property will be retained post-development (Cohen & Master, 2023). Based on this information, there is no expectation that there will be any impact to potential Red-headed Woodpecker habitat associated with the study area.

8.2 Other Wetlands

The proposed development will not result in direct removals of wetlands on the adjacent property. There will be no development or site alteration (including grading) within 10m of a wetland.

Currently, the lands within the southern corner of the property within the woodland dripline are largely manicured space. Post-development, the proposed buffer areas should be planted with native self-sustaining vegetation. Therefore, the proposed buffer, at this location will provide an improved condition providing an enhanced buffer to the adjacent wetland area.

The site stormwater discharge will be controlled to the pre-development flow and will be directed towards the wetland. In order to attain the target flows and meet the City's Storm Water Quantity Control requirements, quantity controls will be utilized and storage will be required. The stormwater management system will be designed to provide enhanced level (Level 1) protection, as specified by the MECP. Quality control will be provided for the site for a minimum total suspended solids removal of 80% (Lithos, 2026).

According to the water balance calculations in the Hydrogeological Assessment (Fisher Engineering, 2024), there will be a reduction in post-development infiltration. A Low Impact Development (LID) feature has been proposed to promote infiltration so that groundwater levels are not altered to the extent that wetlands, woodlands or watercourses are adversely affected (Lithos, 2026).

As part of the comments provided for the EIS as part of the EIS consultation, CVC identified the need to assess the pre-to-post water balance. Subsequent to review of the 2024 EIS, CVC review comments requested the following information:

i) Pre to post development wetland drainage mapping;
ii) If property represents 10% or greater of the total wetland catchment area, a Wetland Water Balance Risk Evaluation will be required; and
iii) Mitigations should be provided to reduce any impacts on wetland hydrological inputs.

In order to address this comment, Fisher Engineering prepared a letter response (October 30, 2025) which was circulated to the City and CVC (October 30, 2025 via email) (Appendix B). Pre to post development wetland drainage mapping had been prepared to indicate that the pre-development site area represents 8.48% while the post-development site area represents 9.85% of the total catchment area. Since this is <10%, a Wetland Water Balance Risk Evaluation is not required. Mitigation measures proposed include:

- Post-development surface water flow to be directed to the wetland via a stormwater management tank;
- Rainwater to be collected from rooftop to be conveyed to infiltration galleries; and
- Infiltration galleries to be used to mitigate infiltration deficit.

Fisher Engineering concluded that since post-development surface and groundwater flow towards the wetland will be conserved or exceed pre-development conditions, a feature-based water balance would not be required as confirmed during a meeting with CVC staff on November 13, 2025.

The calculated dewatering influence zone will not extend beyond the property boundaries. Groundwater flow in the shallow monitoring wells would be expected to predominantly eastwards towards Lake Ontario and may not contribute to water levels in the wetland. Therefore, construction groundwater dewatering would not be expected to impact water levels on the wetland (Fisher Engineering Limited, November 2024).

Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 9 below, there is no expectation that the proposed development will result in a negative impact upon Other Wetlands.

8.3 Significant Woodland

With the exception of the proposed headwall and plunge pool, there is no proposed development within the FOM7-4, Figure 4. It is understood that grading will extend into the setback to the woodland as depicted on Figure 4. Engineering solutions are recommended to facilitate the proposed development and in order to stabilize the slope as recommended within Fisher's Slope Stability Assessment (2026).

All slope stabilization activities will be carried out under the supervision of an Arborist whereby disturbance within the Tree Protection Zone will be minimized and protective protocols (*i.e.* low-impact excavation, root pruning, temporary stabilization) will be undertaken where excavation is unavoidable. Following re-grading, the slope will be stabilized through the incorporation of clean, free-draining soils and establishment of deep-rooted native vegetation in order to leave the site more stable, resilient and self-sustaining compared to current conditions (Cohen & Master, January 2026).

The setback from the Greenland zoning to the woodland dripline will range from 0m to 17.30m with an overall average setback of 6.49m. The final setback, subsequent to the required earthworks will be restored with native vegetation.

Currently, the lands along and within woodland dripline are largely manicured space and/or contain existing development. Existing development such as the current driveway and structures exist immediately adjacent to the woodland dripline in proximity to Lakeshore Road West post-development, the proposed buffer areas will provide an improved condition and should be planted with native self-sustaining vegetation. The woodland buffer areas will provide an enhancement of the woodland edge and wildlife habitat that occurs within the valley. Therefore, the proposed buffer, along the dripline will provide an improved condition providing an enhanced buffer to the adjacent woodland area compared with the existing condition.

According to the water balance calculations in the Hydrogeological Assessment (Fisher Engineering, October 2025), there will be a reduction in post-development infiltration. A Low Impact Development (LID) feature has been proposed to promote infiltration so that groundwater levels are not altered to the extent that wetlands, woodlands or watercourses are adversely affected (Lithos, 2026).

A Pedestrian Wind Environment Study was undertaken for the site (Windtech, 2026). It is our understanding that the original reports prepared in 2024 contained calculation errors that resulted in the wind gusts appearing more hazardous than in actuality. As a result, the City had concerns with respect to ecological impacts. However, results of this 2026 study indicate that comfortable wind conditions are expected for the majority of locations throughout the year, and for all locations during the summer season. The report concludes that the mean wind speed under the proposed conditions generally does not exceed 20km/hr (annual). The results of the annual gusts (under proposed conditions) do not exceed 90km/hr (annual).

8.4 Significant Valleyland

The top of bank represents the limit of the Significant Valleyland and is not a CVC regulated feature. Similar to the assessments above, the current condition in proximity to the valleyland is largely manicured and/or currently developed. Post-development, the buffer areas should be planted with native self-sustaining vegetation. This will provide an improved condition adjacent to the valleyland.

A Slope Stability Assessment was undertaken by Fisher Engineering (March, 2026), the assessment concluded the option of using engineering solutions to stabilize the slope will be required along at least a portion of the slope and the setback for this area will be reduced accordingly. Soil nailing combined with a geogrid is recommended in order to achieve stability of the slope and surficial stability for erosion control (March, 2026). The resulting Long-term Stable Top of Slope with the development setback line is depicted on Figure 4 and within Appendix B.

8.5 Candidate Significant Wildlife Habitat

According to the PPS development and site alteration are not permitted within SWH located in Ecoregion 7E, unless it can be demonstrated there will be no negative impacts upon the feature and its ecological functions. For the purposes of this assessment, Candidate SWH described below is treated as significant.

8.5.1 Bat Maternity Colonies

The forested community within the study area (FODM7-4, Figure 2) represents potentially suitable habitat for bat maternity colonies. With the exception of the headwall and plunge pool, there is no proposed development within the FOM7-4, Figure 4. The setback from the proposed development (*i.e.* grading) to the woodland dripline

will range from 0m to 17.30m with an overall average setback of 6.49m, tree removals within the FODM7-4 will be limited to only what is required for the installation of the stormwater outlet and are anticipated to be minimal in scale compared with the retained FODM7-4 feature. Potentially suitable SWH bat habitat will remain within property and overall study area post-development thus maintain this potential natural heritage function on the landscape. Based on this information, there are no anticipated impacts to this potential SWH function.

8.5.2 Migratory Butterfly Stopover Area and Landbird and Bat Migratory Stopover Area

The woodland areas in proximity to the Lake Ontario shoreline will be maintained post-development. Therefore; it is expected that these potential SWH function will be maintained post-development.

8.5.3 Amphibian Breeding Habitat (Woodlands)

The proposed development will not result in direct removals of wetlands on the adjacent property. There will be no development or site alteration within 10m of the wetland with the majority of development occurring >25m from this wetland. The contiguous woodland/wetland will be maintained post-development therefore, there is no habitat fragmentation as a result of the proposed works. Based on this information, it is expected that this potential SWH function will be maintained post-development.

Please refer to Section 8.2 above for an impact assessment related to the wetland.

8.5.4 Species that are Rare within the Region (TRCA ranks L1-L4)

Apart from the TRCA rare species within the CVR (likely represent trees that were planted as part of the existing development), all TRCA rare species within the woodland, wetland and valleyland will be maintained post-development.

Opportunity exists to incorporate TRCA rare species into the detailed planting plans associated with the buffer areas. Such plans will be prepared at detailed design stage.

8.5.5 Animal Movement Corridor

All development is located outside of the identified woodland, wetland and valleyland. A buffer will remain adjacent to these features post- development as discussed in sections above. Therefore, wildlife movement will not be fragmented and/or impeded as a result of the proposed re-development of the site.

8.6 Fish Habitat (Indirect)

The drainage feature on adjacent lands is not a CVC regulated feature.

The proposed re-development will not result in any direct alteration of the adjacent indirect fish habitat drainage feature.

The property boundary is located approximately 10m from the drainage feature at its nearest point. A 10m buffer from indirect fish habitat feature would allow the form and function of the feature to remain unaltered post-development. Furthermore, development within the property will be set back from the property boundary, so the effective buffer to the drainage feature will be 10+m (Figure 4). Similar to the assessments above, the current condition in proximity to the valleyland is largely manicured and/or currently developed. Post-development, the buffer areas should be planted with native self-sustaining vegetation. This will provide an improved condition adjacent to the valleyland.

A Low Impact Development (LID) feature has been proposed to promote infiltration so that groundwater levels are not altered to the extent that wetlands, woodlands or watercourses are adversely affected (Lithos, 2026).

Water quality or quantity in the receiving drainage feature (and ultimately Lake Ontario) are not anticipated to be impacted by the proposed development presuming that the stormwater controls for the development comply with the municipal standards of the Region of Peel, City of Mississauga, MECP and CVC stormwater management criteria.

The anticipated development impacts are principally limited to standard construction risk associated with land grading and exposed soils which may be susceptible to runoff to the watercourse. Such impacts are mitigable using standard best management practices (BMPs) when working around water, which are provided in Section 9.

Based on the above, provided the recommended mitigation measures are adhered to, there is no expectation that the proposed development will result in any impacts to the ecological form or function of indirect fish habitat within the adjacent drainage feature (and ultimately Lake Ontario).

9.0 RECOMMENDATIONS

9.1 Species at Risk

It should be noted that the absence of a protected species within the study area does not indicate that they will never occur within the area. Given the dynamic character of the natural environment, there is a constant variation in habitat use. Care should be taken in the interpretation of presence of species of concern including those listed under the ESA. Changes to policy, or the natural environment, could result in shifts, removal, or addition of new areas to the list of areas currently considered SAR habitat. This report is intended as a point in time assessment of the potential to impact SAR; not to provide long term "clearance" for SAR. While there is no expectation that the assessment should change significantly, it is the responsibility of the proponent to ensure that they are not in contravention of the ESA at the time that site works are undertaken. A review of the assessment provided in this report by a qualified person should be sufficient to provide appropriate advice at the time of the onset of future site works.

9.2 Migratory Breeding Birds and Bats

Activities involving the removal of vegetation should be restricted from occurring during the breeding season. Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act*, 1994 (MBCA) and the *Fish and Wildlife Conservation Act,* 1997 (FWCA). Environment Canada outlines dates when activities in any region have potential to impact nests at the Environment Canada Website (https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html). In Zones C1 and C2 vegetation clearing should be avoided between **April 1 through August 31** of any given year. If work requires that vegetation clearing is required between these dates screening by an ecologist with knowledge of bird species present in the area could be undertaken to ensure that the vegetation has been confirmed to be free of nests prior to clearing.

Activities involving tree removal and/or demolition of the structures, should be avoided between **April 1 through November 30** of any given year, during the active period for bat species that may utilities trees for maternity and day roosting purposes. It is anticipated that adherence to this timing restriction will avoid impacts to individual SAR bats, therefore remaining in compliance with Section 9 of the ESA affording individual protection to Endangered species.

9.3 Sediment and Erosion Controls

Runoff due to construction can contribute significant sediment loads to receiving natural areas. Effective erosion and sediment control plans will be required prior to site alteration, to mitigate impacts to the identified natural heritage features. The following best management practices should be considered for the planning and design of all proposed development activities:

- Installation and maintenance of sediment and erosion controls (ESCs), such as silt fencing, around the perimeter of the natural heritage features (*i.e.* woodland) will be required for construction activities on the property. Materials storage on the property (*i.e.* soil stockpiles) should also be contained within ESCs;
- All ESCs should be installed prior to site alteration (*i.e.* grading, earthworks) and construction, and monitored/maintained on a regular basis until such time that the site is considered stable post construction. Any identified ESC deficiencies should be rectified in a timely manner;
- Timing of construction should coincide with drier times of year to mitigate risk of runoff;
- Minimize vegetation removal, where possible;
- Bare areas should be stabilized with topsoil and seed/sod as soon as possible following construction;
- All machinery and equipment maintenance must have regard for surrounding sensitive habitats;
- All maintenance of machinery should be conducted at least 30m away from the wetland and drainage feature to prevent accidental spillage of deleterious substances that may harm the downstream aquatic environment; and,
- A spill response plan with appropriate spill controls should be available if required.

9.4 Operations

All maintenance activities (including refueling) required during future construction should be conducted at least 30m away from natural features to prevent accidental spillage of deleterious substances that may harm natural environments.

Snow fencing or equivalent should be installed at the limit of the work area to prevent the accidental intrusion of machinery operations into adjacent undisturbed natural areas.

The contractor is recommended to have a Contaminant and Spill Management Plan in place prior to initiation of works. This should include keeping an emergency spill kit on site at all times. In the event of a spill, the contractor must report it immediately to the provincial Spills Action Centre (SAC).

9.5 Fish and Fish Habitat

Details related to the stormwater outlet (headwall and plunge pool) will be developed during subsequent phases and should be reviewed in a Fisheries Screening. Below are general design and mitigation recommendations for working near/in-water to reduce/eliminate the impacts to fish and fish habitat that may occur during construction. This is not an exhaustive list, and will need to be revised once design plans are finalized:

- Erosion controls may be required between the stormwater outlet and the drainage feature in order to prevent scour at the outlet and to prevent erosion;
- All dewatering required during construction is to discharge water into a filter bag (*i.e.,* envirobag or equivalent). Filter bags should be placed a minimum of 30m from the drainage feature and wetland on stable, vegetated ground to allow fines to settle out of the water. Monitoring of dewatering operations should occur throughout the construction process to ensure water is free of fines before entering the drainage feature;
- All machinery maintenance/refueling is recommended to maintain a minimum distance of 30m from retained woodlands, valleylands, and fish habitat to prevent accidental spillage of deleterious substances into natural areas;
- Should future near/in-water works be proposed, they should be screened by a qualified fisheries biologist once design details are available to determine if permitting/submission are needed under the *Fisheries Act*;
- Stockpiled material shall be placed a minimum of 30m from the wetland and drainage feature, and shall be protected with appropriate sediment control measures; and,
- Disposal of excess or waste material should occur in a timely fashion to minimize risk of entry into the drainage feature and wetland.

9.6 Bird Friendly Design Principles

In order to reduce potential bird collision impacts, bird friendly building design strategies should be considered at the site plan stage such as window applications (up to 16m above-grade or to the height of the mature tree canopy) and appropriate positioning of outdoor lighting adjacent to the Significant Woodland. The City of Mississauga Green Development Standard (2024) should be used as a guideline.

9.7 Restoration Plan for Buffer Areas

A Restoration Planting Plan should be prepared for the buffer areas at detailed design stage. General requirements include:

- A planting list that specifies the species to be used including their size and quantity;
- Plantings should meet the minimum planting density targets set by the City that indicate densities of 1,200 trees/ha and 13, 750 shrubs/ha (11,000 low shrubs/ha and 2,750 tall shrubs/ha);
- Seed mixes should be provided, with specific quantities, ratios and application rates;
- Only native species common to the local watershed and appropriate for the site conditions should be used. CVC guidance documents including the CVC 2018 Plant Selection: Species List for Planting Plans within the Credit River Watershed and CVC 2023 Guidelines for Designing Enhancement Plants within Setback and Buffers should be utilized when preparing the plan.

9.8 Restoration for Private Greenland Strip

The Landscape Plans associated with the Private Greenland Strip should be composed of native vegetation.

9.9 Ecological Offsetting

It is recognized that compensation for the proposed encroachment into the woodland dripline setback is required by the City. Compensation could be in the form of off-site planting, cash-in-lieu or an enhanced planting within the buffer areas. The City has indicated that the 2025 rate to compensate for impacts to the City's Natural Heritage System is $215, 559.00/ha. Based on the proposed development, the following summarizes the encroachment and compensation requirements.

Permanent Encroachment into Significant Woodland and 10m Setback	Proposed Buffer to Significant Woodland (provided)	Deficiency in Woodland and Buffer to Significant Woodland
818.07 m^2 + 27.71m^2 + 0.46m^2 = 845.78m^2	176.74m^2 + 198.38m^2 + 139.84 m^2= 514.96m^2	845.78m^2 (0.09ha)

It is our understanding that compensation for the reduction in the Significant Woodland and associated buffer will be required and should be provided at a 1:1 ratio. Based on the configuration of the property, there is no opportunity for on-site compensation. Therefore; compensation will be provided through cash in lieu. The required cash-in-lieu amount for this project is estimated to be and should be confirmed with the City:

($215, 559.00 x 0.08) = $17, 244.72

10.0 CONCLUSIONS

Based upon our analysis, it is concluded that the environmental conditions are not limiting to the proposed re-development of the site through incorporation of the environmental protection measures described in Section 9 of this report.

At this time, our findings are summarized as follows:

- That through the implementation of the proposed mitigation and compensation measures, the proposed development is consistent with the applicable natural heritage policies of the Provincial Planning Statement, ESA, Region of Peel, City of Mississauga, and CVC policies.

- Our impact assessment has given full consideration to the habitat requirements of all SAR assumed and documented to occur in the area and results indicate the proposed re-development will not result in negative direct or indirect impacts to habitat of SAR providing conformance is demonstrated to mitigation measures described in Section 9.

- The proposed works are not expected to negatively impact the ecological functions of Wetlands, Significant Woodland, Significant Valleyland or Candidate Significant Wildlife Habitat outlined in Section 4 (listed in Section 5) if the appropriate mitigation measures outlined in Section 9 are followed.

- No direct or indirect fish habitat features are expected to be negatively impacted as a result of the proposed works if the appropriate mitigation measures described in Section 9 are followed during construction.

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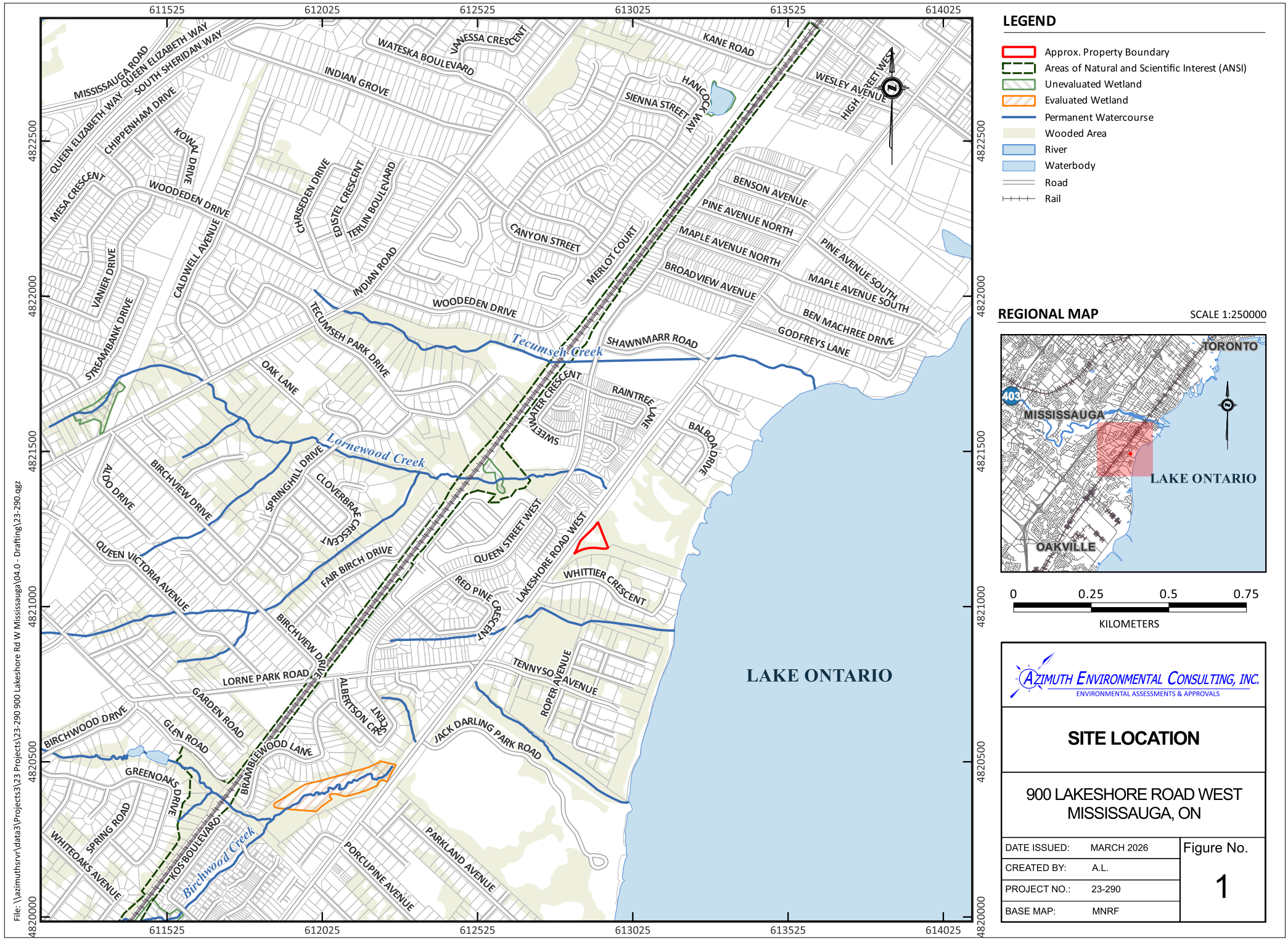


LEGEND

- Approx. Property Boundary
- Areas of Natural and Scientific Interest (ANSI)
- Unevaluated Wetland
- Evaluated Wetland
- Permanent Watercourse
- Wooded Area
- River
- Waterbody
- Road
- Rail

REGIONAL MAP

SCALE 1:250000

0 0.25 0.5 0.75

KILOMETERS

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

SITE LOCATION

900 LAKESHORE ROAD WEST
MISSISSAUGA, ON

DATE ISSUED:	MARCH 2026	Figure No.
CREATED BY:	A.L.	1
PROJECT NO.:	23-290	
BASE MAP:	MNRF	

File: \\azimuthsrvr\data3\Projects3\23 Projects\23-290 900 Lakeshore Rd W Mississauga\04.0 - Drafting\23-290.qgz

QUEEN STREET WEST
SERDICA COURT
IBAR WAY
LAKESHORE ROAD WEST
RICHARD'S MEMORIAL PARK
MARAMIS COURT
WHITTIER CRESCENT
LAKE ONTARIO

WOODLAND DRIPLINE
(CITY OF MISSISSAUGA, OCT. 2023;
COHEN & MASTER, SEPTEMBER 2024)

LONG TERM STABLE
TOP OF SLOPE (LTSTOS)

TOP OF BANK
(CVC, 2023)

CVC CONFIRMED WETLAND
BOUNDARY (CVC, 2023)

FODM7–4
MAMM3–1
FODM7–4
CVR_1

1
2
3

LEGEND:

- APPROX. PROPERTY BOUNDARY
- INTERMITTENT DRAINAGE FEATURE/ INDIRECT FISH HABITAT
- WARMWATER THERMAL REGIME
- CULVERT
- TOP OF BANK (CVC, 2023)
- WOODLAND DRIPLINE (CITY OF MISSISSAUGA, OCTOBER 2023; COHEN & MASTER SEPTEMBER 2024)
- CVC CONFIRMED WETLAND BOUNDARY (CVC, 2023)
- LONG TERM STABLE TOP OF SLOPE (LTSTOS; FISHER ENGINEERING, JANUARY 2026)

ELC UPLAND COMMUNITIES:

CVR_1 — LOW DENSITY RESIDENTIAL
FODM7–4 — FRESH–MOIST BLACK WALNUT LOWLAND DECIDUOUS FOREST

ELC WETLAND COMMUNITIES:

MAMM3–1 — MIXED MINERAL MEADOW MARSH

- BUTTERNUT TREE – CATEGORY 1
- DAWN BREEDING BIRD SURVEY STATION

LOCATION PLAN

0 37.50 75.0
HORIZONTAL SCALE 1:1500

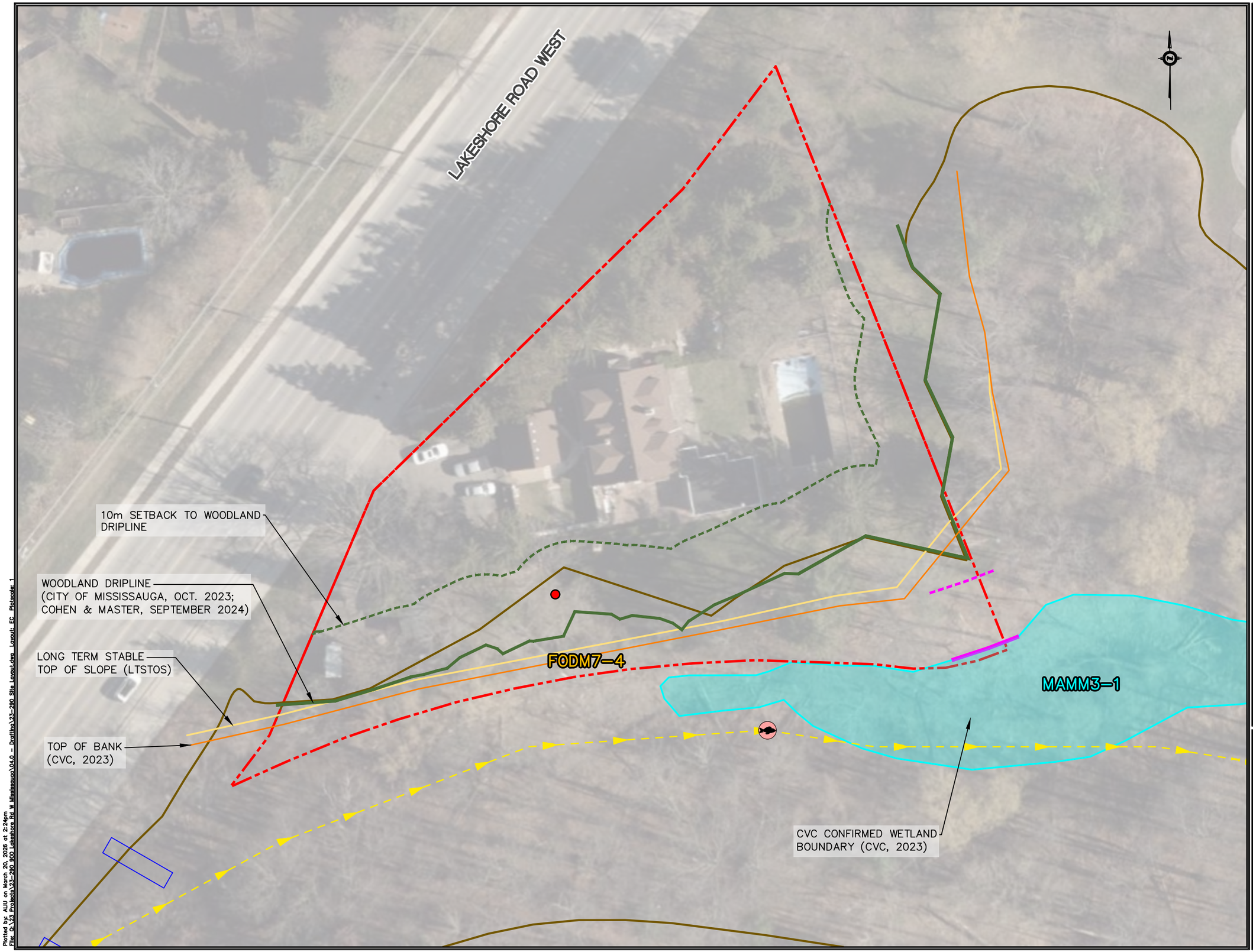
AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

ENVIRONMENTAL FEATURES

900 LAKESHORE ROAD WEST
MISSISSAUGA, ON

DATE ISSUED:	*MARCH 2026*	Figure No.
CREATED BY:	*A.L.*	2
PROJECT NO.:	*23-290*	
REFERENCE:	*CITY OF MISSISSAUGA*	

Plotted by: ALil on March 20, 2026 at 2:23pm
File: G:\23 Projects\23-290 900 Lakeshore Rd W Mississauga\04.0 — Drafting\23-290 Site Layout.dwg Layout: EF Plotscale: 1



LEGEND:

- APPROX. PROPERTY BOUNDARY
- INTERMITTENT DRAINAGE FEATURE/ INDIRECT FISH HABITAT
- WARMWATER THERMAL REGIME
- CULVERT
- TOP OF BANK (CVC, 2023)
- WOODLAND DRIPLINE (CITY OF MISSISSAUGA, OCTOBER 2023; COHEN & MASTER SEPTEMBER 2024)
- CVC CONFIRMED WETLAND BOUNDARY (CVC, 2023)
- LONG TERM STABLE TOP OF SLOPE (LTSTOS; FISHER ENGINEERING, JANUARY 2026)

ELC UPLAND COMMUNITIES:

CVR_1	LOW DENSITY RESIDENTIAL
FODM7–4	FRESH–MOIST BLACK WALNUT LOWLAND DECIDUOUS FOREST

ELC WETLAND COMMUNITIES:

MAMM3–1	MIXED MINERAL MEADOW MARSH

- 10m SETBACK TO WOODLAND DRIPLINE
- 10m BUFFER TO CVC WETLAND BOUNDARY
- BUTTERNUT TREE – CATEGORY 1

LOCATION PLAN

0 12.50 25.0

HORIZONTAL SCALE 1:500

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

POTENTIAL ENVIRONMENTAL SETBACKS

900 LAKESHORE ROAD WEST
MISSISSAUGA, ON

DATE ISSUED:	*MARCH 2026*	Figure No.
CREATED BY:	*A.L.*	3
PROJECT NO.:	*23-290*	
REFERENCE:	*CITY OF MISSISSAUGA*	

LOCATION PLAN

LAKESHORE ROAD WEST

10m SETBACK TO WOODLAND DRIPLINE

WOODLAND DRIPLINE (CITY OF MISSISSAUGA, OCT. 2023; COHEN & MASTER, SEPTEMBER 2024)

DEVELOPMENT SETBACK AND LTSTOS AFTER SLOPE STABILIZATION MEASURES

LIMIT OF GRADING/ DEVELOPMENT EXTENT

LONG TERM STABLE TOP OF SLOPE (LTSTOS)

TOP OF BANK (CVC, 2023)

CONVEYANCE LINE / SETBACK TO WOODLAND

11.96m

6.55m

TEMPORARY ENCROACHMENT INTO WOODLAND DRIPLINE SETBACK (TO BE RESTORED AS BUFFER) = 198.38m²

7.91m

ENCROACHMENT INTO WOODLAND (ESTIMATED) = 27.71m²

17.30m

ENCROACHMENT INTO WOODLAND (TO BE RESTORED) = 8.73m²

10m

6.05m

6.87m

6.94m

1.87m

1.58m

4.38m

FODM7–4

MAMM3–1

CUMULATIVE AREA SUBJECT TO BUFFER PLANTING = 176.74m²

ENCROACHMENT INTO WOODLAND DRIPLINE SETBACK = 818.07m²

CVC CONFIRMED WETLAND BOUNDARY (CVC, 2023)

LEGEND:

- APPROX. PROPERTY BOUNDARY
- INTERMITTENT DRAINAGE FEATURE/ INDIRECT FISH HABITAT
- WARMWATER THERMAL REGIME
- CULVERT
- TOP OF BANK (CVC, 2023)
- WOODLAND DRIPLINE (CITY OF MISSISSAUGA, OCTOBER 2023; COHEN & MASTER SEPTEMBER 2024)
- CVC CONFIRMED WETLAND BOUNDARY (CVC, 2023)
- LONG TERM STABLE TOP OF SLOPE (LTSTOS; FISHER ENGINEERING, JANUARY 2026)

ELC UPLAND COMMUNITIES:

CVR_1 — LOW DENSITY RESIDENTIAL

FODM7–4 — FRESH–MOIST BLACK WALNUT LOWLAND DECIDUOUS FOREST

ELC WETLAND COMMUNITIES:

MAMM3–1 — MIXED MINERAL MEADOW MARSH

- DEVELOPMENT SETBACK AND LTSTOS AFTER SLOPE STABILIZATION MEASURES
- 10m SETBACK TO WOODLAND DRIPLINE
- 10m BUFFER TO CVC WETLAND BOUNDARY
- BUTTERNUT TREE – CATEGORY 1
- LIMIT OF GRADING
- CONVEYANCE LINE / SETBACK TO WOODLAND
- PRIVATE GREENLAND STRIPS
- ENCROACHMENT INTO WOODLAND DRIPLINE SETBACK
- ENCROACHMENT INTO WOODLAND
- AREA SUBJECT TO BUFFER PLANTING
- TEMPORARY ENCROACHMENT INTO WOODLAND DRIPLINE SETBACK (TO BE RESTORED AS BUFFER)
- ENCROACHMENT INTO WOODLAND (TO BE RESTORED AS BUFFER)

0 12.50 25.0

HORIZONTAL SCALE 1:500

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

PROPOSED DEVELOPMENT

900 LAKESHORE ROAD WEST
MISSISSAUGA, ON

DATE ISSUED:	*MARCH 2026*	Figure No. 4
CREATED BY:	*A.L.*	
PROJECT NO.:	*23-290*	
REFERENCE:	*CITY OF MISSISSAUGA*	

Plotted by: ALU on March 20, 2026 at 3:56pm
File: C:\23 Projects\23-290 900 Lakeshore Rd W Mississauga\04.0 - Drafting\23-290 Site Layout.dwg Layout: 4 PROPOSED DEVELOPMENT Plotscale: 1

Table 1: Species at Risk Habitat Summary and Assessment, 900 Lakeshore Road West, City of Mississauga **AEC23-290**

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Assessment
Bank Swallow	*Riparia riparia*	THR	THR	Nests in burrows excavated in natural and human-made settings with vertical sand and silt faces. Commonly found in sand or gravel pits, road cuts, lakeshore bluffs, and along riverbanks (COSEWIC, 2013a). ESA Protection: Species and general habitat protection	No suitable nesting sites were identified as there are no exposed banks associated with the adjacent valley. This species is not anticipated to occur within the study area.
Barn Swallow	*Hirundo rustica*	SC	THR	Ledges and walls of man-made structures such as buildings, barns, boathouses, garages, culverts and bridges. Also nest in caves, holes, crevices and cliff ledges (COSEWIC, 2011a). ESA Protection: Species and general habitat protection	No nests were observed on existing structures within the subject property. This species is not anticipated to occur within the study area.
Black Ash	*Fraxinus nigra*	END	No Status	Facultative wetland tree species frequently found in floodplain forests, swamps, seepage areas, shoreline margins and fens. Occupied sites are generally seasonally-flooded (COSEWIC, 2018a). ESA Protection: Species and general habitat protection (ESA protections take effect January 27, 2024)	No individuals of this species were observed within the study area including within the wetland located on adjacent lands. Surrounding urban areas are not anticipated to contain suitable wet soils for this species.
Blanding's Turtle	*Enydoidea blandingii*	THR	END	Blanding's Turtles are a primarily aquatic species that prefer wetland habitats, lakes, ponds, slow-moving streams, etc., however they may utilize upland areas to search for suitable basking and nesting sites. In general, preferred wetland sites are eutrophic and characterized by clear, shallow water, with organic substrates and high density of aquatic vegetation (COSEWIC, 2016a). ESA Protection: Species and general habitat protection	No ponds, pools or wetlands with sufficient standing water were identified. This species is not anticipated to occur within the study area. This species may occur in Lake Ontario outside of the study area.
Bobolink	*Dolichonyx oryzivorus*	THR	THR	Nests primarily in forage crops (*e.g.* hayfields and pastures) dominated by a variety of species such as clover, Timothy, Kentucky Bluegrass, tall grass, and broadleaved plants. Also occurs in wet prairie, graminoid peatlands, and abandoned fields dominated by tall grasses. Does not generally occupy fields of row crops (*e.g*. corn, soybeans, wheat) or short-grass prairie. Sensitive to habitat size and has lower reproductive success in small habitat fragments (COSEWIC, 2010a). ESA Protection: Species and general habitat protection	No grasslands were identified. This species is not anticipated to occur within the study area.
Butternut	*Juglans cinerea*	END	END	Commonly found in riparian habitats, but is also found in rich, moist, well-drained loams, and well-drained gravels. Butternut is intolerant of shade (COSEWIC, 2017a). ESA Protection: Species and general habitat protection	A single Butternut was identified on the property.
Cerulean Warbler	*Dendroica cerulea*	THR	END	Associated with large tracts of mature deciduous forest with tall trees and an open understory. Found in both wet bottomland forests and upland areas (COSEWIC, 2010b). ESA Protection: Species and general habitat protection	No forest tracts of sufficient size to support this species are present. This species is not anticipated to occur within the study area.
Chimney Swift	*Chaetura pelagica*	THR	THR	Nests primarily in chimneys though some populations (*i.e*. in rural northern areas) may nest in cavity trees (COSEWIC, 2018b). Recent changes in chimney design may be a significant factor in recent declines in numbers (Cadman *et al*., 2007). ESA Protection: Species and general habitat protection	No suitable nesting sites on structures were identified; existing chimneys were observed to be capped. This species is not anticipated to occur within the study area.
Common Hoptree	*Ptelea trifoliata*	SC	SC	In Ontario, Common Hoptree occurs almost entirely along or near the Lake Erie shoreline. It is often found in areas of natural disturbance where it forms part of the outer edge of shoreline woody vegetation (COSEWIC, 2015). ESA Protection: Species and general habitat protection	The study area is located outside the natural range of this species. Records in Richard's Memorial Park are likely cultivated/ornamental. These records are located outside of the study area. Common Hopetree was not identified during Azimuth's field investigations.
Common Nighthawk	*Chordeiles minor*	SC	SC	Open habitats including sand dunes, beaches recently logged/burned over areas, forest clearings, short grass prairies, pastures, open forests, bogs, marshes, lakeshores, gravel roads, mine tailings, quarries, and other open relatively clear areas (COSEWIC, 2018c). ESA Protection: N/A	No open habitats suitable for nesting were identified. This species is not anticipated to occur within the study area.
Eastern Meadowlark	*Sturnella magna*	THR	THR	Most common in grassland, pastures, savannahs, as well as anthropogenic grassland habitats, including hayfields, weedy meadows, young orchards, golf courses, restored surface mines, *etc*. Occasionally nest in row crop fields such as corn and soybean, but there are considered low-quality habitat. Large tracts of grassland are preferred over smaller fragments and the minimum area required is estimated at 5ha (COSEWIC, 2011b). ESA Protection: Species and general habitat protection	No grasslands were identified. This species is not anticipated to occur within the study area.
Eastern Musk Turtle	*Sternotherus oderatus*	SC	SC	Inhabit littoral zones of waterways such as rivers, lakes, bays, streams, ponds, canals, and swamps with slow to no current and soft bottoms. During the active season they prefer shallow water (<2m) with abundant vegetation. Most are found close to shore and do not venture onto land except to nest or access adjacent wetlands (COSEWIC, 2012a). ESA Protection: N/A	No ponds, pools or wetlands with sufficient standing water were identified. This species is not anticipated to occur within the study area. This species may occur in Lake Ontario outside of the study area.
Eastern Red Bat	*Lasiurus borealis*	END	Not Listed	Roosting habitat include deciduous and coniferous forests of any age class. Maternity roost trees tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy with southern exposure and sheltered from the wind. (COSEWIC, 2023). ESA Protection: Species and general habitat protection	Forest habitat within the study area contains mature trees and snag trees, and provides potential roosting habitat.
Eastern Ribbonsnake	*Thamnophis sauritus*	SC	SC	Found in wetland habitats with both flowing and standing water such as marshes, bogs, fens, ponds, lake shorelines and wet meadows. Most sightings occur near the water's edge (COSEWIC, 2012b). ESA Protection: N/A	The wetland and forest habitat identified are small, surrounded by urban development and manicured parkland, and are not anticipated to support a population of this species.
Eastern Small-footed Myotis	*Myotis Lleibii*	END	No Status	Generally occurs in mountainous or rocky regions as well as in buildings, on the face of rock bluffs and beneath slabs of rock and stones. Hibernation is typically confined to caves and old mines (Best and Jennings, 1997). ESA Protection: Species and general habitat protection	No rocky habitat suitable for roosting was identified. This species is not anticipated to occur within the study area.
Eastern Wood-pewee	*Contopus virens*	SC	SC	Mostly in mature and intermediate-age deciduous and mixed forests having an open understory. It is often associated with forests dominated by Sugar Maple and oak. Usually associated with forest clearings and edges within the vicinity of its nest (COSEWIC, 2012c). ESA Protection: N/A	The forest canopy and understory are fairly dense, and the forest patch is surrounded by urban development and manicured parkland. Eastern Wood-pewee was not observed during Azimuth's breeding bird surveys.
Henslow's Sparrow	*Ammodramus henslowii*	END	END	Requires grassland habitat and occurs more frequently and at higher densities in large patches of suitable habitat. Nests in tallgrass prairie, wet meadow, and marsh habitats as well as agricultural grasslands, lightly grazed pasture and grasslands on reclaimed surface mines (COSEWIC, 2011c). ESA Protection: Species and general habitat protection	No grasslands were identified. This species is not anticipated to occur within the study area.
Hoary Bat	*Lasiurus cinereus*	END	Not Listed	Utilize mostly treed habitats (deciduous and coniferous of any age class) for roosting or foraging. Maternity roost trees tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy with southern exposure and sheltered from the wind. Hoary Bats typically roost among the foliage of trees and occasionally shrubs and are typically solitary roosters (COSEWIC, 2023).	This species has potential to occur within the woodland, utilizing cavity trees as habitat.

Table 1: Species at Risk Habitat Summary and Assessment, 900 Lakeshore Road West, City of Mississauga **AEC23-290**

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Assessment
Jefferson Salamander	*Ambystoma jeffersonianum*	END	END	Deciduous or mixed upland forests containing, or adjacent to, suitable breeding ponds. Breeding ponds are normally ephemeral, or vernal, woodland pools that dry in late summer. Terrestrial habitat is in mature woodlands that have small mammal burrows or rock fissures that enable adults to over-winter underground below the frost line (COSEWIC, 2010b). ESA Protection: Species and regulated habitat protection	No suitable breeding habitat was identified. The study area is surrounded by urban development. This species is not anticipated to occur within the study area.
Lake Sturgeon (Great Lakes - Upper St. Lawrence populations)	*Acipenser fulvescens*	THR	No status	Generally found in the shallow areas of lakes or larger rivers, moving into smaller rivers to spawn. Usually found at depths of 5 -10 m and are in areas where water velocity does not exceed 70 cm/sec (COSEWIC, 2017b). ESA Protection: Species and general habitat protection	The drainage feature identified is characterized as an intermittent feature that is not anticipated to provide direct fish habitat. This species is not anticipated to occur within the study area.
Little Brown Myotis	*Myotis lucifugus*	END	END	Forests and regularly aging human structures as maternity roost sites. Regularly associated with attics of older buildings and barns for summer maternity roost colonies. Overwintering sites are characteristically mines or caves (MNRF, 2014) (COSEWIC, 2013b). ESA Protection: Species and general habitat protection	Forest habitat within the study area contains mature trees and snag trees, and provides potential roosting habitat. The existing residence on the property is unlikely to provide potential roosting habitat.
Monarch	*Danaus plexippus*	SC	SC	Breeding habitat is confined to sites where milkweeds, the sole food of caterpillars, grow. Milkweeds grow in a variety of environments, including meadows in farmlands, along roadsides and in ditches, open wetlands, dry sandy areas, short and tall grass prairie, river banks, irrigation ditches, arid valleys, and south-facing hills (COSEWIC, 2016b). ESA Protection: N/A	Milkweed was not observed in abundance. This species is not anticipated to occur within the study area.
Northern Myotis	*Myotis septentrionalis*	END	END	Maternity roost sites are generally located within deciduous and mixed forests and focused in snags including loose bark and cavities of trees. Overwintering sites are characteristically mines or caves (COSEWIC, 2013b). ESA Protection: Species and general habitat protection	Forest habitat within the study area contains mature trees and snag trees, and provides potential roosting habitat. The existing residence on the property is unlikely to provide potential roosting habitat.
Northern Map Turtle	*Grapetemys geographica*	SC	SC	Inhabits rivers and lakes where it basks on emergent rocks, banks, logs and fallen trees. Prefer shallow, soft-bottomed aquatic habitats with exposed objects for basking (COSEWIC, 2012d). ESA Protection: N/A	No ponds, pools or wetlands with sufficient standing water were identified. This species is not anticipated to occur within the study area. This species may occur in Lake Ontario outside of the study
Peregrine Falcon (*anatum/tundrius* subspecies)	*Falco peregrinus*	SC	Not at Risk	Most nest on cliff ledges or crevices, but some will use tall buildings or bridges near good foraging areas. Nests are typically close to bodies of water (COSEWIC, 2017b). ESA Protection: N/A	Although known to occur within the City of Mississauga, no cliffs, tall buildings or other suitable nesting sites were identified. This species is not anticipated to occur within the study area.
Red-headed Woodpecker	*Melanerpes erythrocephalus*	END	END	Occurs in open deciduous forests, particularly those dominated by oak and beech, groves of dead trees, floodplain forests, orchards, cemeteries, savannas and savanna-like grasslands. Although the species occupies a range of habitat types, key habitat is characteristically composed of woodlands where tall trees are of large circumference (*i.e.* mature cover) and are at a low density. A high density of snag trees is also an indicator of key habitat types (COSEWIC, 2018d). ESA Protection: Species and general habitat protection.	Natural forest cover identified is too dense to support this species. The semi-treed parkland of Richard's Memorial Park adjacent to the subject property may provide suitable habitat for this species. Red-headed Woodpecker was not observed during Azimuth's dawn breeding bird surveys.
Redside Dace	*Clinostomus elongatus*	END	END	Found in pools and slow-flowing sections of relatively small, clear headwater streams with both pool and riffle habitats and a moderate to high gradient. These streams typically flow through meadows, pasture or shrub overstory, and have abundant overhanging riparian vegetation (COSEWIC, 2017c). ESA Protection: Species and general habitat protection.	The drainage feature identified is characterized as an intermittent feature that is not anticipated to provide direct fish habitat. DFO mapping does not identifiy Redside Dace as occuring (or potentially occuring) within the study area. This species is not anticipated to occur within the study area.
Shortnose Cisco	*Coregonus reighardi*	END	END	Found only in the Great Lakes of North America. It was last seen in Lake Ontario in 1964.	This species may occur in Lake Ontario outside of the study area.
Silver-haired Bat	*Lasionycteris noctivagans*	END	Not Listed	Roosting by Silver-haired Bats occurs under bark and in the cavities of trees, therefore, they rely on large, decaying trees (deciduous and coniferous). Decidous species (Populus spp.) often have characteristics that make them ideal as roost sites, particularily in older forests. Can utilize old woodpecker cavities. May occasionally roost in buildings, especially during migration (COSEWIC, 2023)	This species has potential to occur within the woodland, utilizing cavity trees as habitat.
Snapping Turtle	*Chelydra serpentina*	SC	SC	Habitat is characterized by slow-moving water with a soft mud bottom and dense aquatic vegetation. Often located in ponds, sloughs, shallow bays or river edges and slow streams, or areas combining several of these wetland habitats (COSEWIC, 2008). ESA Protection: N/A	No ponds, pools or wetlands with sufficient standing water were identified. This species is not anticipated to occur within the study area. This species may occur in Lake Ontario outside of the study area.
Tri-colored Bat	*Perimyotis subflavus*	END	END	Maternity roost sites include forests and modified landscapes (barns or human-made structures). Overwintering sites include mines and caves (COSEWIC, 2013c). ESA Protection: Species and general habitat protection	Forest habitat within the study area contains mature trees and snag trees, and provides potential roosting habitat. The existing residence on the property was not observed to provide potential roosting sites.
Wood Thrush	*Hylocichla mustelina*	SC	THR	Found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches (COSEWIC, 2012e). ESA Protection: N/A	The forest patch identified is relatively small (approximately 2ha in size) and surrounded by urban development and manicured parkland. Wood Thrush was not observed during Azimuth's breeding bird surveys.

[1] Habitat as outlined within the MNR's Species at Risk in Ontario website files (https://www.ontario.ca/environment-and-energy/species-risk-ontario-list), or Species Specific COSEWIC Reports referenced in this document.

Species at Risk in Ontario List (June 13, 2017)

Best, T., and J. Jennings. 1997. Mammalian Species, *Myotis leibii* . The American Society of Mammalogists. No. 547, pp. 1-6, 5 figs.

Cadman, M., D. Sutherland, G. Beck, D. Lepage and A. Couturier. 2007. Atlas of the Breeding Birds of Ontario 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field

COSEWIC. 2008. COSEWIC assessment and status report on the Snapping Turtle *Chelydra serpentina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.

COSEWIC. 2010a. COSEWIC assessment and update status report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 42 pp.

COSEWIC. 2010b. COSEWIC assessment and update status report on the Jefferson Salamander *Ambystoma jeffersonianum* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 38 pp.

COSEWIC. 2011a. COSEWIC assessment and update status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.

COSEWIC. 2011b. COSEWIC assessment and update status report on the Eastern Meadowlark *Sturnella magna* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.

COSEWIC. 2011c. COSEWIC assessment and update status report on the Henslow's Sparrow *Ammodramus henslowii* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 37 pp.

COSEWIC. 2012a. COSEWIC assessment and status report on the Eastern Musk Turtle *Sternotherus odoratus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 68 pp

COSEWIC. 2012b. COSEWIC assessment and status report on the Eastern Ribbonsnake *Thamnophis sauritus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 39 pp.

COSEWIC. 2012c. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.

COSEWIC. 2012d. COSEWIC assessment and status report on the Northern Map Turtle *Graptemys geographica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 63 pp.

COSEWIC. 2012e. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.

COSEWIC. 2013a. COSEWIC assessment and status report on the Bank Swallow *Riparia riparia* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp.

COSEWIC. 2013b. COSEWIC assessment and update status report on the Little Brown Myotis *Myotis lucifugus* , Northern Myotis *Myotis septentrionalis* and Tri-colored Bat *Perimyotis subfalvus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.

COSEWIC. 2015. COSEWIC assessment and status report on the Common Hoptree *Ptelea trifoliata* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 33 pp.

COSEWIC. 2016a. COSEWIC assessment and status report on the Blanding's Turtle *Emydoidea blandingii* , Nova Scotia population and Great Lakes/St. Lawrence population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xix + 110 pp.

COSEWIC. 2016b. COSEWIC assessment and status report on the Monarch *Danaus plexippus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 59 pp.

COSEWIC. 2017a. COSEWIC assessment and status report on the Butternut *Juglans cinerea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 74 pp.

COSEWIC. 2017b. COSEWIC assessment and status report on the Peregrine Falcon *Falco peregrinus* (*pealei* subspecies - *Falco peregrinus* and *pealei anatum/tundrius* - *Falco peregrinus anatum/tundrius*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xviii + 108 pp.

COSEWIC. 2017c. COSEWIC assessment and update status report on the Redside Dace *Clinostomus elongates* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 63 pp.

COSEWIC. 2018a. COSEWIC assessment and status report on the Black Ash *Fraxinus nigra* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 95 pp.

COSEWIC. 2018b. COSEWIC assessment and status report on the Chimney Swift *Chaetura pelagic* a in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp.

COSEWIC. 2018c. COSEWIC assessment and status report on the Common Nighthawk *Chordeiles minor* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 50 pp.

COSEWIC. 2018d. COSEWIC assessment and status report on the Red-headed Woodpecker *Melanerpes erythrocephalu* s in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 60 pp.

COSEWIC. 2023. COSEWIC assessment and status report on the Hoary Bat (*Lasiurus cinereus*), Eastern Red Bat (*Lasiurus borealis*) and Silver-haired Bat (*Lasionycteris noctivagans*) in Canada. Ottawa. xxi + 100 pp.

Ministry of the Environment, Conservation and Parks (MECP). 2024. Species at Risk in Ontario (https://www.ontario.ca/page/species-risk-ontario)

Ministry of Natural Resources and Forestry (MNRF). 2014. Eastern Small-footed Bat. Queen's Printer for Ontario. https://www.ontario.ca/environment-and-energy/eastern-small-footed-bat

Table 2: Vascular Plant List, 900 Lakeshore Road West, City of Mississauga Surveyor: L.Moran and J.Wrobel **AEC23-290**

			Vegetation Communities [2]			Conservation Ranking [3]				Regional Rarity [4]
FAMILY [1]	**SCIENTIFIC NAME [1]**	**COMMON NAME [1]**	**CVR**	**MAMM3-1**	**FODM7-4**	**GRANK**	**SRANK**	**SARO**	**SARA**	**TRCA**
Aceraceae	*Acer negundo*	Manitoba Maple	X		X	G5	S5			L+?
Aceraceae	*Acer platanoides*	Norway Maple	X		X	GNR	SE5			L+
Aceraceae	*Acer saccharum*	Sugar Maple	X		X	G5	S5			L5
Apiaceae	*Angelica atropurpurea*	Purple-stemmed Angelica		X		G5	S5			L3
Apiaceae	*Daucus carota*	Wild Carrot	X			GNR	SE5			L+
Apiaceae	*Heracleum maximum*	American Cow Parsnip		X		G5	S5			L5
Apocynaceae	*Vinca minor*	Lesser Periwinkle			X	GNR	SE5			L+
Apocynaceae	*Vincetoxicum rossicum*	European Swallowwort	X			GNR	SE5			L+
Aquifoliaceae	*Ilex verticillata*	Common Winterberry	X			G5	S5			L3
Araceae	*Arisaema triphyllum*	Jack-in-the-pulpit		X		G5	S5			L5
Araliaceae	*Aralia nudicaulis*	Wild Sarsaparilla	X			G5	S5			L5
Asteraceae	*Arctium minus*	Common Burdock			X	GNR	SE5			L+
Asteraceae	Bidens cernua	Nodding Beggarticks		X		G5	S5			L5
Asteraceae	*Cirsium arvense*	Canada Thistle	X			G5	SE5			L+
Asteraceae	*Cirsium vulgare*	Bull Thistle		X		GNR	SE5			L+
Asteraceae	*Erigeron canadensis*	Canada Horseweed	X			G5	S5			L5
Asteraceae	*Erigeron philadelphicus*	Philadelphia Fleabane	X		X	G5	S5			L5
Asteraceae	*Leucanthemum vulgare*	Oxeye Daisy	X			GNR	SE5			L+
Asteraceae	*Solidago altissima*	Tall Goldenrod	X		X	G5	S5			L5
Asteraceae	*Solidago flexicaulis*	Zigzag Goldenrod			X	G5	S5			L5
Asteraceae	*Solidago rugosa*	Rough-stemmed Goldenrod	X			G5	S5			L5
Asteraceae	*Symphyotrichum novae-angliae*	New England Aster	X			G5	S5			L5
Asteraceae	*Taraxacum officinale*	Common Dandelion	X			G5	SE5			L+
Balsaminaceae	*Impatiens capensis*	Spotted Jewelweed		X	X	G5	S5			L5
Berberidaceae	*Podophyllum peltatum*	May-apple			X	G5	S5			L5
Betulaceae	*Betula papyrifera*	Paper Birch	X		X	G5	S5			L4
Boraginaceae	*Myosotis scorpioides*	True Forget-me-not		X		G5	SE5			L+
Brassicaceae	*Alliaria petiolata*	Garlic Mustard	X		X	GNR	SE5			L+
Caprifoliaceae	*Lonicera sp.*	a Honeysuckle			X	N/A	N/A			
Caprifoliaceae	*Sambucus nigra*	Black Elderberry		X		G5T5	SEH			
Celastraceae	*Euonymus europaeus*	European Euonymus	X			GNR	SE2			L+
Cornaceae	*Cornus alternifolia*	Alternate-leaved Dogwood			X	G5	S5			L5
Cornaceae	*Cornus racemosa*	Grey Dogwood			X	G5	S5			L5
Cupressaceae	Juniperus	a Juniper	X							
Cupressaceae	*Juniperus virginiana*	Eastern Red Cedar	X			G5	S5			L5
Cyperaceae	*Carex sp.*	a Sedge		X		N/A	N/A			
Dryopteridaceae	*Matteuccia struthiopteris*	Ostrich Fern	X	X	X	G5	S5			L5
Dryopteridaceae	*Onoclea sensibilis*	Sensitive Fern		X		G5	S5			L5
Fabaceae	*Medicago lupulina*	Black Medick			X	GNR	SE5			L+
Fabaceae	*Robinia pseudoacacia*	Black Locust	X		X	G5	SE5			L+
Fagaceae	*Quercus rubra*	Northern Red Oak	X		X	G5	S5			L4
Geraniaceae	*Geranium robertianum*	Herb-Robert	X			G5	S5			L+?

Table 2: Vascular Plant List, 900 Lakeshore Road West, City of Mississauga Surveyor: L.Moran and J.Wrobel **AEC23-290**

			Vegetation Communities [2]			Conservation Ranking [3]				Regional Rarity [4]
FAMILY [1]	**SCIENTIFIC NAME [1]**	**COMMON NAME [1]**	**CVR**	**MAMM3-1**	**FODM7-4**	**GRANK**	**SRANK**	**SARO**	**SARA**	**TRCA**
Grossulariaceae	*Ribes rubrum*	European Red Currant		X		G4G5	SE5			L+
Grossulariaceae	*Ribes sp.*	a Currant	X							
Iridaceae	*Iris pseudacorus*	Yellow Iris		X		GNR	SE4			L+
Juglandaceae	*Juglans cinerea*	Butternut	X			G3	S2?	END	END	L3
Juglandaceae	*Juglans nigra*	Black Walnut	X	X	X	G5	S4?			L5
Liliaceae	*Convallaria majalis*	European Lily-of-the-valley	X		X	G5	SE5			L+
Liliaceae	*Maianthemum racemosum*	Large False Solomon's Seal			X	G5T5	S5			L5
Lythraceae	*Lythrum salicaria*	Purple Loosestrife		X		G5	SE5			L+
Moraceae	*Morus alba*	White Mulberry	X			GNR	SE5			L+
Oleaceae	*Fraxinus americana*	White Ash	X			G4	S4			L5
Oleaceae	*Fraxinus pennsylvanica*	Red Ash		X	X	G4	S4			L5
Oleaceae	*Syringa vulgaris*	Common Lilac	X			GNR	SE5			L+
Paeoniaceae	*Paeonia lactiflora*	Chinese Peony	X			GNR	SE1			
Papaveraceae	*Chelidonium majus*	Greater Celandine	X	X		GNR	SE5			L+
Papaveraceae	*Sanguinaria canadensis*	Bloodroot	X			G5	S5			L5
Pinaceae	*Picea glauca*	White Spruce	X		X	G5	S5			L3
Pinaceae	*Picea pungens*	Blue Spruce	X			G5	SE1			L+
Pinaceae	*Pinus resinosa*	Red Pine	X			G5	S5			L1
Pinaceae	*Pinus strobus*	Eastern White Pine	X			G5	S5			L4
Pinaceae	*Pinus sylvestris var. sylvestris*	Scots Pine	X			GNRTNR	SE5			L+
Pinaceae	Tsuga canadensis	Eastern Hemlock	X			G4G5	S5			L4
Plantaginaceae	*Plantago major*	Common Plantain	X			G5	SE5			L+
Poaceae	*Glyceria striata var. striata*	Fowl Mannagrass		X		G5T5	S5			L5
Poaceae	*Phalaris arundinacea*	Reed Canarygrass		X		G5	S5			L+?
Poaceae	*Phleum pratense*	Common Timothy	X			GNR	SE5			L+
Polygonaceae	*Rumex crispus*	Curled Dock	X			GNR	SE5			L+
Ranunculaceae	*Ranunculus acris*	Common Buttercup			X	G5	SE5			L+
Rhamnaceae	*Rhamnus cathartica*	European Buckthorn	X		X	GNR	SE5			L+
Rosaceae	*Geum canadense*	Canada Avens			X	G5	S5			L5
Rosaceae	*Prunus serotina*	Black Cherry	X		X	G5	S5			L5
Rosaceae	*Rosa multiflora*	Multiflora Rose	X		X	GNR	SE5			L+
Rosaceae	*Rubus idaeus ssp. strigosus*	North American Red Raspberry			X	G5T5	S5			L5
Rosaceae	*Rubus occidentalis*	Black Raspberry	X		X	G5	S5			L5
Salicaceae	Salix discolor	Pussy Willow	X			G5	S5			L4
Salicaceae	*Salix euxina*	Crack Willow		X		GNR	SE			
Salicaceae	*Salix sp.*	a Willow		X		N/A	N/A			
Scrophulariaceae	*Linaria vulgaris*	Butter-and-eggs	X			GNR	SE5			L+
Scrophulariaceae	Veronica officinalis	Common Speedwell	X			G5	SE5			L+
Solanaceae	*Solanum dulcamara*	Bittersweet Nightshade	X	X	X	GNR	SE5			L+
Tiliaceae	*Tilia cordata*	Little-leaved Linden			X	GNR	SE1			L+
Typhaceae	*Typha latifolia*	Broad-leaved Cattail		X		G5	S5			L4
Ulmaceae	*Ulmus americana*	White Elm	X			G4	S5			L5

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			Vegetation Communities [2]			Conservation Ranking [3]				Regional Rarity [4]
FAMILY [1]	**SCIENTIFIC NAME [1]**	**COMMON NAME [1]**	**CVR**	**MAMM3-1**	**FODM7-4**	**GRANK**	**SRANK**	**SARO**	**SARA**	**TRCA**
Urticaceae	*Urtica urens*	Burning Nettle	X	X	X	GNR	SE1			L+
Verbenaceae	*Verbena hastata*	Blue Vervain		X		G5	S5			L5
Violaceae	*Viola sp.*	a Violet	X			N/A	N/A			
Vitaceae	*Parthenocissus vitacea*	Thicket Creeper	X		X	G5	S5			L5
Vitaceae	*Vitis riparia*	Riverbank Grape	X	X	X	G5	S5			L5

1 Nomenclature based on Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC, 2024)

2 ELC Codes based on Ecological Land Classification for Southern Ontario manual (Lee *et al* . 1998 with 2008 update) as depicted on Figure 2

3 Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (http://nhic.mnr.gov.on.ca/nhic_.cfm)

4 Regional - TRCA Rankings: TRCA Flora Species. June 2021 Ranks. L1-L3: species of regional conservation concern, L4: species of conservation concern in urban area, L5: species not of conservation concern at this time, L+: introduced species, not native to TRCA, L+?: species is likely introduced to TRCA

Table 3: Breeding Bird Summary, 900 Lakeshore Road West, City of Mississauga

			Location[1,2]								Conservation Rankings[3]				
			1		2		3		Adjacent Lands	Incidental	GRANK	SRANK	ESA	SARA	TRCA Ranking [4]
FAMILY	SCIENTIFIC NAME	COMMON NAME	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2							
Accipitridae	*Buteo jamaicensis*	Red-tailed Hawk							CALL		G5	S5	NAR		L5
Cardinalidae	*Cardinalis cardinalis*	Northern Cardinal				H			S		G5	S5			L5
Columbidae	*Zenaida macroura*	Mourning Dove						H	S		G5	S5			L5
Corvidae	*Corvus brachyrhynchos*	American Crow							CALL		G5	S5			L5
Corvidae	*Cyanocitta cristata*	Blue Jay							CALL		G5	S5			L5
Fringillidae	*Spinus tristis*	American Goldfinch		S		S					G5	S5			L5
Icteridae	*Agelaius phoeniceus*	Red-winged Blackbird							S		G5	S5			L5
Icteridae	*Icterus galbula*	Baltimore Oriole	S								G5	S4B			L5
Paridae	*Poecile atricapillus*	Black-capped Chickadee	S	S		S	S	S			G5	S5			L5
Picidae	*Colaptes auratus*	Northern Flicker							H		G5	S5			L4
Picidae	*Dryobates pubescens*	Downy Woodpecker	CALL	CALL							G5	S5			L5
Picidae	*Dryobates villosus*	Hairy Woodpecker							CALL		G5	S5			L4
Picidae	*Melanerpes carolinus*	Red-bellied Woodpecker	CALL								G5	S5			L5
Sittidae	*Sitta carolinensis*	White-breasted Nuthatch						H			G5	S5			L4
Sturnidae	*Sturnus vulgaris*	European Starling						H			G5	SNA			L+
Troglodytidae	*Thryothorus ludovicianus*	Carolina Wren				S			S		G5	S4			L4
Turdidae	*Turdus migratorius*	American Robin	S	H	X		H	H	S		G5	S5			L5
Tyrannidae	*Myiarchus crinitus*	Great Crested Flycatcher							S		G5	S5B			L4
Vireonidae	*Vireo gilvus*	Warbling Vireo							S		G5	S5B			L5
Vireonidae	*Vireo olivaceus*	Red-eyed Vireo	S								G5	S5B			L4

[1] Visit 1: June 4, 2024, Observer: L.Moran, Temperature 14°C, Cloud Cover 50% , Wind: B2, Precipitation: Nil, Search Time 06:22 to 06:45; Visit 2: June 18, 2024, Observer: L.Moran, Temperature 21°C, Cloud Cover 80% , Wind: B3, Precipitation: Nil, Search Time 08:21 to 08:50

[2] Breeding Bird Evidence Codes: X - Species observed, C - Call heard, FO - Flyover (Species presence); H - Species observed in its breeding season in suitable nesting habitat, S - Singing male (Possible Breeding); P - Pair observed , T - Territorial behaviour, A - Agitated behaviour or anxiety calls of adult, V - Visiting a probably nest site, N - Nest building or excavation of nest hole (Probable Breeding); DD - Distraction display or injury feigning, NU - Used Nest or egg shells, FY - Recently fledged young, AE - Adult leaving or entering nest sites, FS - Adult carrying fecal sac, CF - Adult carrying food for young, NE - Nest containing eggs, NY - Nest with young seen or heard (Confirmed Breeding).

3 Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (http://nhic.mnr.gov.on.ca/nhic_.cfm)

4 Regional - TRCA Rankings: TRCA Flora Species. June 2021 Ranks. L1-L3: species of regional conservation concern, L4: species of conservation concern in urban area, L5: species not of conservation concern at this time, L+: introduced species, not native to TRCA, L+?: species is likely introduced to TRCA

Table 3.1 Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Stopover and Staging Areas (Terrestrial) **<u>Rationale:</u>** 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 the Long Point, Rondeau, Lake St. Clair, Grand Bend and Pt. Pelee areas may be important to Tundra Swans.	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. <u>Information Sources</u> • Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining 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 • Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area	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” • Any mixed species aggregations of 100 or more individuals required. • The flooded field ecosite habitat plus a 100-300m radius, dependant on local site conditions and adjacent land use is the significant wildlife habitat. • Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates). • SWH MIST Index #7 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC ecosites and spring flooding. No further assessment required.
Waterfowl Stopover and Staging Areas (Aquatic) **<u>Rationale:</u>** Important for 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 eco-district	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 storm water 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. • OMNRF 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 • Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area	Studies carried out and verified presence of: • Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days. • Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH • The combined area of the ELC ecosites and a 100m radius area is the SWH • Wetland area and shorelines associated with sites identified within the SWHTG Appendix K are significant wildlife habitat. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • 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 Index #7 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ponds, mashes, lakes, bays, coastal inlets and watercourses. Wetland is present within the study area (MAMM3-1, Figure 2) but is unlikely to support aggregations of waterfowl. No further assessment required.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Shorebird Migratory Stopover Area **<u>Rationale:</u>** 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 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 storm water ponds do not qualify as a SWH. <u>Information Sources</u> • Western hemisphere shorebird reserve network. • Canadian Wildlife Service (CWS) Ontario Shorebird Survey. • Bird Studies Canada • Ontario Nature • Local birders and naturalist clubs • Natural Heritage Information Centre (NHIC) Shorebird Migratory Concentration Area	Studies confirming: • Presence of 3 or more of listed species and > 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 (<24 hours) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. • The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" • SWH MIST Index #8 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to shorelines. Lake Ontario is located beyond the study area. No further assessment required.
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 (hawk/owl) sites need to be > 20ha with a combination of forest and upland. • Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands • Field area of the habitat is to be windswept with limited snow depth or accumulation. • Eagle sites have open water and large trees and snags available for roosting <u>Information Sources:</u> • OMNRF Ecologist or Biologist • Naturalist clubs • Natural Heritage Information Centre (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 of more Bald Eagles or; At least10 individuals and two of the listed hawk/owl species • To be significant a site must be used regularly (3 in 5 years) 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" • SWH MIST Index #10 and #11 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to size requirements (>20 ha). No further assessment required.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Bat Hibernacula **Rationale:** 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. Information Sources • OMNRF for possible locations and contact for local experts • Natural Heritage Information Centre (NHIC) Bat Hibernaculum • Ministry of Northern Development and Mines for location of mine shafts. • Clubs that explore caves (*e.g.* Sierra Club) • University Biology Departments with bat experts.	• All sites with confirmed hibernating bats are SWH. • The area includes 200m radius around the entrance of the hibernaculum for most development types and 1000m for wind farms. • Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind Power Projects" • SWH MIST Index #1 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes. No further assessment required.
Bat Maternity Colonies **Rationale:** 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 (buildings are not considered to be SWH). • Maternity roosts are not found in caves and mines in Ontario. • Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees. • Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. • 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. Information Sources • OMNRF for possible locations and contact for local experts. • University Biology Departments with bat experts.	• Maternity Colonies with confirmed use by; ○ >10 Big Brown Bats ○ >5 Adult Female Silverhaired Bats • The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement 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". • SWH MIST Index #12 provides development effects and mitigation measures.	The forested community within the study area (FODM7-4, Figure 2) have the potential to provide this SWH function.
Turtle Wintering Areas **Rationale:** Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Midland Painted Turtle **Special Concern:** 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 water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. • Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH. Information Sources • EIS studies carried out by Conservation Authorities. • Field Naturalists Clubs • OMNRF Ecologist or Biologist • Natural Heritage Information Centre (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 deepwater 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 (Sept. – Oct.) or spring (Mar. – May). Congregation of turtles is more common where wintering areas are limited and therefore significant. • SWH MIST Index #28 provides development effects and mitigation measures for turtle wintering habitat.	Study area does not meet habitat criteria related to presence of suitable wetland habitats. Wetland community within study area does not provide potentially suitable habitat for turtles as it does not contain sufficient amount of standing water. No further assessment required.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Reptile Hibernaculum **Rationale**: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	**Snakes:** Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake **Special Concern**: Milksnake Eastern Ribbonsnake	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. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator.	• 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 particularly valuable since they provide access to subterranean sites below the frost line. • Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. 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 Naturalist Clubs • University herpetologists • Natural Heritage Information Centre (NHIC)	Studies confirming: • Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. • Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (*e.g.* foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct). • 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 Index #13 provides development effects and mitigation measures for snake hibernacula.	Study area does not meet general habitat criteria related to hibernacula opportunities. No features with potential function as overwintering sites were observed within the study area. No further assessment required.
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff) **Rationale:** Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	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, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	• 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 • Reports and other information available from Conservation Authorities. • Ontario Breeding Bird Atlas • Bird Studies Canada; *NatureCounts* http://www.birdscanada.org/birdmon/ • Field Naturalist Clubs	Studies confirming: • Presence of 1 or more nesting sites with 8cxlix or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. • A colony identified as SWH will include a 50m radius habitat area from the peripheral nests. • Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects", • SWH MIST Index #4 provides development effects and mitigation measures.	The slopes down to the drainage feature traversing adjacent to the property are not suitable for the listed species. No further assessment required.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
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 (OMNRF). • Natural Heritage Information Centre (NHIC) Mixed Wader Nesting Colony. • Aerial photographs can help identify large heronries. • Reports and other information available from Conservation Authorities. • MNRF 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 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH. • 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 Index #5 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes. No heron or egret nests observed within the study area. No further assessment required.
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 or 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. • Natural Heritage Information Centre (NHIC) Colonial Waterbird Nesting Area • MNRF District Offices • Field Naturalist Clubs	• Studies confirming: Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >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 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH. • Studies would be done during May/June when actively nesting. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • SWH MIST Index #6 provides development effects and mitigation measures.	Study area does not meet key habitat criteria (not a rocky island or peninsula). No further assessment required.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Migratory Butterfly Stopover Areas **Rationale:** Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.	Painted Lady Red Admiral Special Concern Monarch	Combination of ELC Community Series; need to have present one Community Series from each land class: Field: CUM CUT CUS Forest: 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 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Erie or Lake Ontario • 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. • 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. • 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. Information Sources • MNRF District Offices Natural Heritage Information Centre (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 (Aug/Oct). 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, significant variation can occur between years and multiple years of sampling should occur. • Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. • MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant. • SWH MIST Index #16 provides development effects and mitigation measures.	The study area is located within 5km of Lake Ontario. According to CVC, migratory butterfly congregations have been observed along the Lake Ontario shoreline within local parks (North-South *et al*., 2009). Although not documented, the study area (including the adjacent Richard's Memorial Park could provide this SWH function.
Landbird Migratory Stopover Areas **Rationale:** 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: Ontario Ministry of Natural Resources: 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 >5 ha in size and within 5 km of Lake Erie and Lake Ontario. If woodlands are rare in an area of shoreline, woodland fragments 2-5ha can be considered for this habitat. • If multiple woodlands are located along the shoreline those Woodlands <2km from Lake Erie and Lake Ontario are more significant. • Sites have a variety of habitats; forest, grassland and wetland complexes. • The largest sites are more significant. • Woodlots and forest fragments are important habitats to migrating birds these features located along the shore and located within 5km of Lake Erie and Lake Ontario are Candidate SWH. Information Sources • Bird Studies Canada • Ontario Nature • Local birders and field naturalist clubs • Ontario Important Bird Areas (IBA) Program	Studies confirm: • Use of the habitat by >200 birds/day and with >35 spp with at least 10 bird spp. 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 (Mar to May) and fall (Aug to Oct) migration using standardized assessment techniques. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • SWH MIST Index #9 provides development effects and mitigation measures.	The forest community (FODM7-4, Figure 2) within the study area in conjunction with adjacent woodland areas may function as SWH for landbird migratory stopover area due to its overall size and it is within 5km of Lake Ontario.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Deer Winter Congregation Areas **Rationale**: 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.	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 >100 ha in size or if large woodlots are rare in a planning area woodlots>50ha. • 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. • Large woodlots > 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha. • Woodlots with high densities of deer due to artificial feeding are not significant. Information Sources • MNRF District Offices. • LIO/NRVIS	Studies confirm: • Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF. • Use of the woodlot by white-tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF. • Studies should be completed during winter (Jan/Feb) when >20cm of snow is on the ground using aerial survey techniques, ground or road surveys, or a pellet count deer density survey. • SWH MIST Index #2 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to minimum woodlot size. Not mapped by the province as a deer yard. No further assessment required.

Table 3.2.1 - Rare Vegetation Communities

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining 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 >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris.	Most cliff and talus slopes occur along the Niagara Escarpment. Information Sources • The Niagara Escarpment Commission has detailed information on location of these habitats. • OMNRF Districts • Natural Heritage Information Centre (NHIC) has location information available on their website • Field Naturalist Clubs • Conservation Authorities	• Confirm any ELC Vegetation Type for Cliffs or Talus Slopes • SWH MIST Index #21 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes. No further assessment required.
Sand Barren **Rationale:** 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 ≤ 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 >0.5ha in size. Information Sources • OMNRF Districts. • Natural Heritage Information Centre (NHIC) has location information available on their website. • Field Naturalist Clubs • Conservation Authorities	• Confirm any ELC Vegetation Type for Sand Barrens • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.) • SWH MIST Index #20 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes. No further assessment required.
Alvar **Rationale**: Alvars are extremely rare habitats in Ecoregion 7E.	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	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	An Alvar site > 0.5 ha in size. Alvar is particularly rare in Ecoregion 7E where the only known sites are found in the western islands of Lake Erie. Information Sources • Alvars of Ontario (2000), Federation of Ontario Naturalists • Ontario Nature – Conserving Great Lakes Alvars • Natural Heritage Information Centre (NHIC) has location information available on their website. • OMNRF Staff. • Field Naturalist Clubs • Conservation Authorities	Field studies that identify four of the five **Alvar Indicator Species** at a Candidate Alvar site is Significant. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.) • The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses • SWH MIST Index #17 provides development effects and mitigation measures	Study area does not meet habitat criteria related to ELC codes. No further assessment required.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
Old Growth Forest **Rationale:** Due to historic logging practices and land clearance for agriculture, old growth forest is rare in Ecoregion 7E.	Forest Community Series: FOD FOC FOM SWD SWC SWM	Old Growth forests are characterized by heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	Woodland area is >0.5ha. Information Sources • OMNRF Forest Resource Inventory mapping • OMNRF Districts • 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 are >140 years old, then the area containing these trees is Significant Wildlife Habitat. • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present). • The area of forest ecosites combined or an eco-element within an ecosite that contain the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest forest area containing the old growth characteristics. • SWH MIST Index #23 provides development effects and mitigation measures.	Forest communities in study area do not meet key criteria related to Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat. No further assessment required.
Savannah **Rationale:** 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 – 60%. In ecoregion 7E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario).	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. Information Sources • Natural Heritage Information Centre (NHIC) has location data available on their website. • OMNRF Districts. • Field Naturalists Clubs. • Conservation Authorities.	Field studies confirm one or more of the Savannah indicator species listed in Appendix N should be present. Note: Savannah plant spp. list from Ecoregion 7E should be used. • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (exotic sp.). • SWH MIST Index #18 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes. No further assessment required.
Tallgrass Prairie **Rationale:** 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 < 25% tree cover. In ecoregion 7E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario).	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. Information Sources • OMNRF Districts. • Natural Heritage Information Centre (NHIC) has location information available on their website. • Field Naturalists Clubs • Conservation Authorities	Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 7E should be used • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (50% vegetative cover are exotic sp.) • SWH MIST Index #19 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes. No further assessment required.
Other Rare Vegetation Communities **Rationale:** 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. 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. The OMNRF/NHIC will have up to date listing for rare vegetation communities. Information Sources • Natural Heritage Information Centre (NHIC) has location information available on their website. • OMNRF Districts. • Field Naturalists 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 • Area of the ELC Vegetation Type polygon is the SWH. • SWH MIST Index #37 provides development effects and mitigation measures.	Study area does not contain Provincially Rare vegetation communities. No further assessment required.

Table 3.2.2 - Specialized Habitats of Wildlife considered SWH

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining 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 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4 **Note: includes adjacency to Provincially Significant Wetlands**	A waterfowl nesting area extends 120 m from a wetland (> 0.5ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (>0.5ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. • 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 (>40cm dbh) in woodlands for cavity nest sites. <u>Information Sources</u> • Ducks Unlimited staff may know the locations of particularly productive nesting sites. • OMNRF 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, or; • 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 - June). Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • 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 from the wetland and will provide enough habitat for waterfowl to successfully nest. • SWH MIST Index #25 provides development effects and mitigation measures.	Study area does not meet habitat criteria related wetland size. The adjacent wetland community is approximately 0.1ha in size. Furthermore, adjacent upland area does not meet width criteria. There is no expectation that waterfowl are utilizing the wetland for nesting. No further assessment required.
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 **Special Concern** 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 platforms). <u>Information Sources</u> • Natural Heritage Information Centre (NHIC) compiles all known nesting sites for Bald Eagles in Ontario. • MNRF 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. • OMNRF District • Check the Ontario Breeding Bird Atlas 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. • 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, maintaining undisturbed shorelines with large trees within this area is important. • For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependent on site lines from the nest to the development and inclusion of perching and foraging habitat • To be significant a site must be used annually. When found inactive, the site must be known to be inactive for ≥ 3 years or suspected of not being used for >5 years before being considered not significant. • Observational studies to determine nest site use, perching sites and foraging areas need to be done from early March to mid August. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • SWH MIST Index #26 provides development effects and mitigation measures.	Although forest habitat is present within the Study Area (FOD, Figure 2), there were no Osprey or Bald Eagle nests observed during Azimuth’s field investigations. No further assessment required.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Woodland Raptor Nesting Habitat **<u>Rationale:</u>** Nests sites for these species are rarely identified; these area sensitive habitats are often used annually by these species.	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 and CUP3	All natural or conifer plantation woodland/forest stands >30ha with >4ha of interior habitat Interior habitat determined with a 200m buffer • Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as 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> • OMNRF Districts • Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. • Check data from Bird Studies Canada. • Reports and other information available from Conservation Authorities.	Studies confirm: • Presence of 1 or more active nests from species list is considered significant. • Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest). • Barred Owl – A 200m radius around the nest is the SWH. • Broad-winged Hawk and Coopers Hawk,– A 100m radius around the nest is the SWH. • Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. • Conduct field investigations from early 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 Index #27 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes or minimum woodlot size. No stick nests observed during Azimuth's field investigations. No further assessment required.
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 (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	• Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. • For an area to function as a turtle nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. <u>Information Sources</u> • Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well drained sands and fine gravels). • Check the Ontario Herpetofaunal Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them. • Natural Heritage Information Centre (NHIC) • Field Naturalist Clubs	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 the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH. • Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. • Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method. • SWH MIST Index #28 provides development effects and mitigation measures for turtle nesting habitat.	Suitable turtle habitat is not present within the study area. No further assessment required.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Seeps and Springs **Rationale:** Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with headwaters of a stream or river system. • Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species. Information Sources • Topographical Map. • Thermography • Hydrological surveys conducted by Conservation Authorities and MOE. • Field Naturalists Clubs and landowners. • Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped.	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 considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat. • SWH MIST Index #30 provides development effects and mitigation measures.	No seeps or springs were documented within the Study Area. No further assessment required.
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) >500m^2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. • Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat. Information Sources • Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records • Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. • OMNRF Districts and 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) or 2 or more of the listed frog species with Call Level Codes of 3. • A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. • The habitat is the wetland area plus a 230m radius of woodland area. 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 Index #14 provides development effects and mitigation measures.	Specific amphibian surveys were not undertaken as part of this EIS, therefore, it cannot be confirmed if the wetland (MAMM3-1, Figure 2) community provides amphibian breeding habitat. Conservatively, Azimuth has identified this potential SWH function.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Breeding Habitat (Wetlands) **Rationale:** 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 (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (*e.g.* Bull Frog) may be adjacent to woodlands.	• Wetlands>500m2 (about 25m diameter) supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats • Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. • Bullfrogs require permanent water bodies with abundant emergent vegetation. Information Sources • Ontario Herpetofaunal Summary Atlas (or other similar atlases). • Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. • OMNRF 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) 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 will be required during the spring (March-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 Index #15 provides development effects and mitigation measures.	No wetlands present within the study area that meet these criteria. No further assessment required.
Woodland Area-Sensitive Bird Breeding Habitat **Rationale:** Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds	Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren Pileated Woodpecker **Special Concern:** Cerulean Warbler Canada Warbler	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 (>60 yrs old) forest stands or woodlots >30 ha. • Interior forest habitat is at least 200 m from forest edge habitat. Information Sources • Local birder clubs. • Canadian Wildlife Service (CWS) for the location of forest bird 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.	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”. • SWH MIST Index #34 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to minimum woodlot size and lacks any interior forest habitat. Key species not observed during Azimuth’s dawn breeding bird surveys. No further assessment required.

Table 3.3 - Habitats for Species of Conservation Concern considered SWH

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
Marsh Breeding Bird Habitat **Rationale:** 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 Green Heron Trumpeter Swan **Special Concern:** 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 • 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. Information Sources • OMNRF District and wetland evaluations. • Field Naturalist clubs • Natural Heritage Information Centre (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 breeding by any combination of 4 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". • SWH MIST Index #35 provides development effects and mitigation measures.	Wetland within the study area does not provide the conditions suitable for marsh breeding bird habitat. No further assessment required.
Open Country Bird Breeding Habitat **Rationale:** This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow **Special Concern** Short-eared Owl	CUM1 CUM2	• Large grassland areas (includes natural and cultural fields and meadows) >30ha • Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years) • Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. • The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. Information Sources • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs. • Ontario Breeding Bird Atlas • EIS Reports and other information available from Conservation Authorities.	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 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". • SWH MIST Index #32 provides development effects and mitigation measures.	Study area does not meet habitat criteria related to ELC codes. No further assessment required.
Shrub/Early Successional Bird Breeding Habitat **Rationale:** 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.	Indicator Spp: Brown Thrasher Clay-coloured Sparrow Common Spp. Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher **Special Concern:** 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>10h in size. • Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no rowcropping, haying or livestock pasturing in the last 5 years) • Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species • Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. Information Sources • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs • Ontario Breeding Bird Atlas • Reports and other information available from Conservation Authorities.	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 Significant Wildlife Habitat. • 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 Wind Power Projects" • SWH MIST Index #33 provides development effects and mitigation measures.	Study area does not contain any cultural (thicket, savannah, woodland) communities. No further assessment required.

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
Terrestrial Crayfish **Rationale:** Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	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 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 semiterrestrial 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. Information Sources • 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. • 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. • SWH MIST Index #36 provides development effects and mitigation measures.	No crayfish or crayfish chimneys were observed during Azimuth's field investigations. No further assessment required.
Special Concern and Rare Wildlife Species **Rationale:** These species are quite rare or have experienced significant population declines in Ontario.	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre (NHIC).	All plant and animal element occurrences (EO) within a 1 or 10km 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 Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites. Information Sources • Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. • NHIC Website "Get Information" : http://nhic.mnr.gov.on.ca • Ontario Breeding Bird Atlas. • Expert advice should be sought as many of the rare spp. have little information available about their requirements.	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 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 Index #37 provides development effects and mitigation measures.	No Special Concern or Provincially-Rare species have been documented within the study area. No further assessment required.

Table 3.4 - Animal Movement Corridors

Habitat	SPECIES	CANDIDATE SWH	CONFIRMED SWH		Assessment
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria	
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. • 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 • MNRF District Office. • Natural Heritage Information Centre (NHIC). • Reports and other information available from Conservation Authorities. • Field Naturalist Clubs	• 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. • Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m. • Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat. • SWH MIST Index #40 provides development effects and mitigation measures.	Study area does not meet key habitat criteria related to presence of identified breeding habitat. No potential for Amphibian Breeding Habitat – Wetland within the study area. No further assessment required.

Table 3.5 - Significant Wildlife Habitat Expectations for Ecodistricts within EcoRegion 7E

EcoDistrict	Wildlife Habitat and Species	Candidate SWH		Confirmed SWH	Assessment
		Ecosites	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 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 habitats 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. • The confirmation criteria and habitat areas for this SWH are still being determined. • SWH MIST Index #38 provides development effects and mitigation measures.	Potential Bat Migratory Stopover Area could align with Landbird Migratory Stopover Areas. Therefore, it is expected that an impact assessment related to the potential landbird SWH function would sufficiently cover the potential impacts to Bat Migratory Stopover Areas. This rationale is consistent with the Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study (2009).

APPENDICES

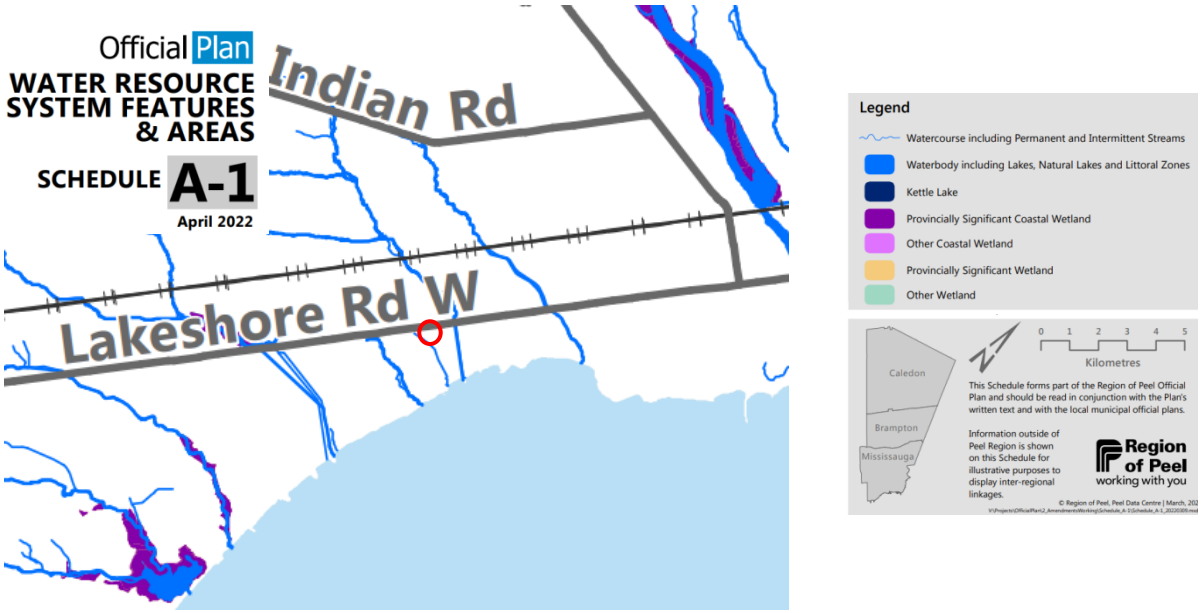
Appendix A: Planning Information

Appendix B: Agency Consultation

Appendix C: Provincial and Federal Information

APPENDIX A

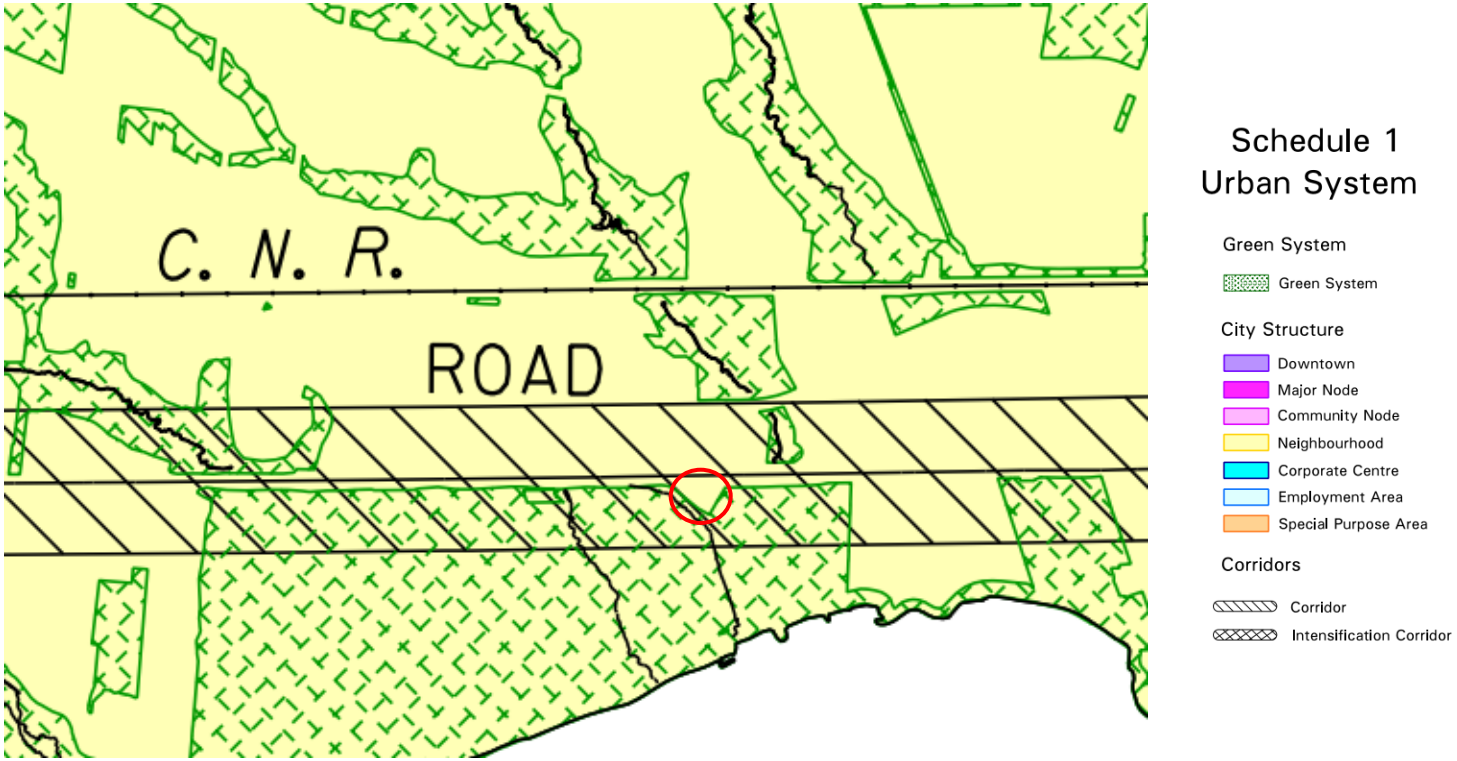
Planning Information



Appendix A: Excerpt from Region of Peel Schedule A-1 Water Resource System Features & Areas (Note: Property contained within red circle drawn on map).

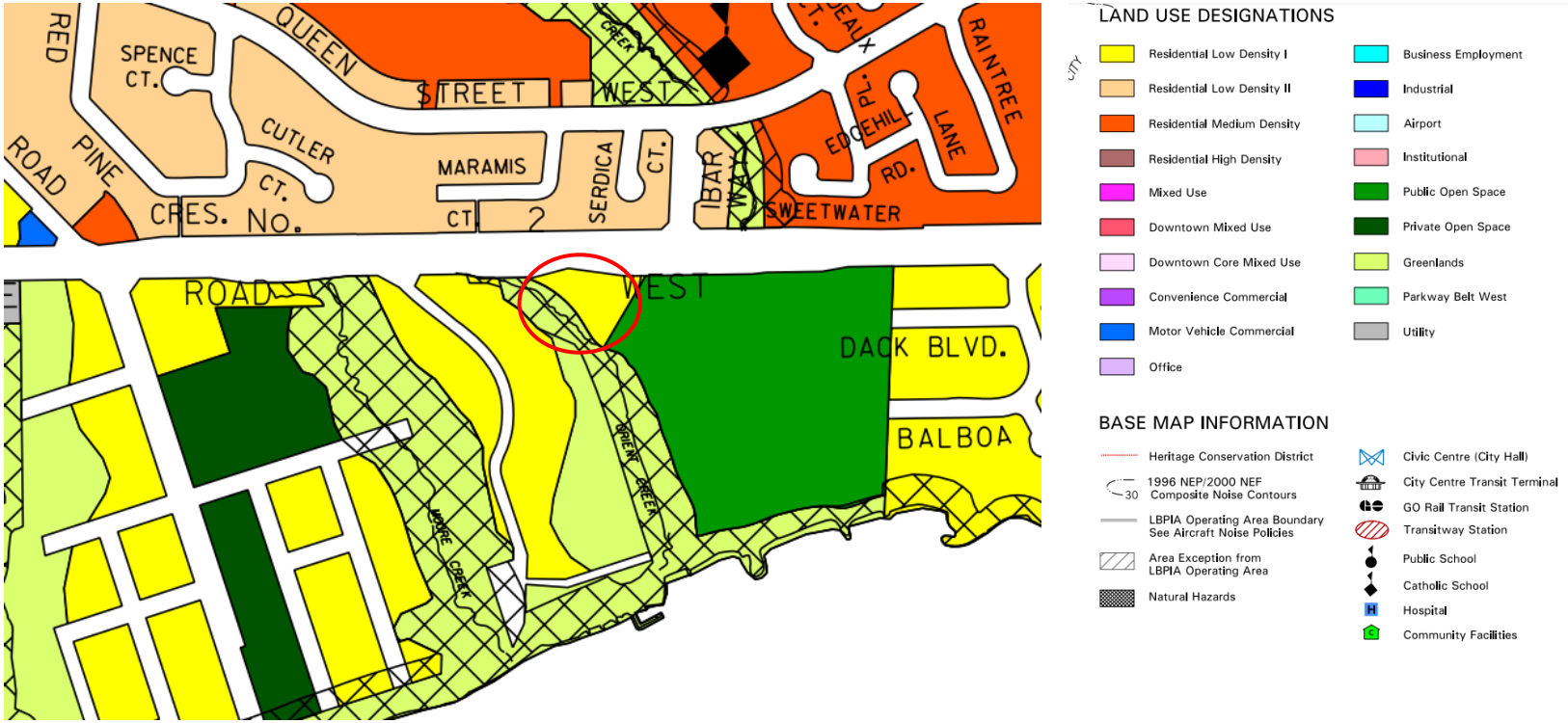
Appendix A: Excerpt from the Region of Peel Schedule C-1 Greenlands System (Note: Property contained within red circle drawn on map).

Appendix A: Excerpt from Figure 8 of the Region of Peel Official Plan (Note: Property contained within red circle drawn on map).



Appendix A: Excerpt from the City of Mississauga Schedule 1: Urban System (Note: Property contained within red circle drawn on map).

Appendix A: Excerpt from City of Mississauga's Schedule 3: Natural System (Note: Property contained within red circle drawn on map).



Appendix A: Excerpt from the City of Mississauga Schedule 10: Land Use Designations (Note: Property contained within red circle drawn on map).

APPENDIX B

Agency Consultation

Regulation Screening- Credit Valley Conservation

2/1/2024, 12:30:42 PM

Credit River Watershed Boundary

Parcels around Regulated Area

Generic Regulation Mapping

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

Peel Region, Maxar

Credit Valley Conservation

Lisa Moran

From: Hughes, Trisha [trisha.hughes@cvc.ca]
Sent: January-25-24 2:47 PM
To: Luca Chandler
Cc: Kosta Derbish; Jim Greenfield; Lisa Moran; Katie Henley; Katie Henley
Subject: RE: [External] Re: 900 Lakeshore Road West - Valley Slope

Hi Luca,

Thanks for following up and I apologize for the delay in response.

Please be advised that based on our further review of information available, the adjacent feature is not considered a Regulated watercourse. As such, the slope is not considered Regulated by CVC. Therefore, the top of bank staked in the field does not reflect a CVC constraint. We recommend the applicant confirm any City requirements related to the slope. This may be more of an engineering item to ensure safety for the proposed development adjacent to the top of bank.

There are still Regulated wetlands in proximity to the site, and a portion of the property is regulated by CVC. Based on our review of the TOR, we offer the following comments:

- Please provide an outline of the scope of work, area and levels of impacts to regulated features, mitigations for the any impacts to regulated features, and fulsome restoration plans. See below for more details on what to include in the deliverable:
    - Description of the natural environment (including ELC according to Lee et al. 1998 with a botanical inventory) within and adjacent to the proposed work area with particular attention paid to wetland community mapping.
    - Description of any regulated features (i.e., wetlands) by a qualified professional (e.g. OWES certified evaluator). Note that a site visit with CVC occurred to verify and stake the limits of these features; please ensure the staked lines are included in the figures and plans.
        - Note that CVC has verified wetland within the study area, as such the development must ensure that there are no impacts to wetland form or function. The submission is to demonstrate pre to post water balance for all regulated wetlands. Please see the CVC Stormwater Management Guidelines (2022): https://cvc.ca/document/stormwater-management-criteria-document/.
    - Develop a constraints and opportunities figure that includes all regulated features based on the site visit and further assessment. All development is to be outside of these areas and set back sufficiently to ensure protection. This should be used to inform the limits of development that are suitable to the site conditions.

- Ensure the submission takes a coordinated and integrated approach and that other associated reports (e.g. Functional Servicing Reports, SWM reports, and hydrogeology reports) are integrated into the assessment of impacts to regulated features.

- Determine the limit of disturbance (grading limits) required to facilitate these works. Note this includes access routes, staging, stormwater management infrastructure and temporary encroachments. Overlay the LOD needed onto the constraints mapping to facilitate review and demonstrate avoidance of regulated features and their setbacks.

- Provide a discussion of the potential direct, indirect and cumulative impacts the proposed work may have (evaluate risk).

- Provide a discussion on the mitigation options that are feasible for the project that aim to reduce the intensity, duration or extent of all impacts to regulated features (i.e., reduce risk). This should include site specific provisions (e.g. wetland soil mitigation, tree protection fencing, ESC, timing windows, etc.).

- Provide restoration plans that demonstrate how the site will be returned to existing conditions or better upon completion of the works. This plan should ensure compliance with the CVC Ecosystem Offsetting Guideline (https://cvc.ca/document/ecosystem-offsetting-guidelines/), the CVC Plant Selection Guideline (https://cvc.ca/document/plant-selection-guideline-species-list-for-planting-plans-within-the-credit-river-watershed/), The CVC Buffer Enhancement Guidelines (https://cvc.ca/document/57660/), the CVC Healthy Soils Guideline (https://cvc.ca/document/healthy-soils-guideline-for-the-natural-heritage-system/), as required.

If there are any questions, please let me know.

Kind regards,

Trisha Hughes | RPP | she/her/hers
Acting Senior Planner, Planning and Development Services | Credit Valley Conservation
905-670-1615 ext 325 | M: 437-855-4056
trisha.hughes@cvc.ca | cvc.ca

From: Luca Chandler <lchandler@kfarchitecture.com>
Sent: Thursday, January 25, 2024 9:59 AM
To: Hughes, Trisha <trisha.hughes@cvc.ca>
Cc: Kosta Derbish <kderbish@kfarchitecture.com>
Subject: [External] Re: 900 Lakeshore Road West - Valley Slope

Hi Trisha,

Following up on my previous email. Please let us know when you have had a chance to review it.

Take care,

On Mon, Jan 22, 2024 at 1:14 PM Luca Chandler <lchandler@kfarchitecture.com> wrote:

> Hi Trisha,
>
> I'm following up on the email from Jim Greenfield this morning about the natural features at 900 Lakeshore Road West.
>
> Can you comment on whether the CVC will require the Long-term Stable Top of Slope to be determined for our rezoning application? Are the "stable valley slope" and the LTSTOS equivalent terms?
>
> It sounds like City staff only require the physical top of slope, which was staked by our consultant and yourselves last year. We are currently coordinating with our Geotechnical consultant regarding the slope stability assessment, so would appreciate your comment as soon as possible.
>
> Thank you for your time,
>
> --
> Luca Chandler
>
> Urban Planner

Lisa Moran

From: Lisa Moran
Sent: September-13-23 12:40 PM
To: 'james.greenfield@mississauga.ca'; 'paul.stewart@mississauga.ca'
Subject: Environmental Impact Study Terms of Reference - 900 Lakeshore Road West, City of Mississauga

Good afternoon Jim and Paul,

Azimuth Environmental Consulting, Inc. (Azimuth) has been retained to complete an Environmental Impact Study (EIS) for the property located at 900 Lakeshore Road West, City of Mississauga. Re-development is proposed at this site and the EIS will form part of the submission requirements for the ZBA and SPA development applications. The property is currently developed with a single detached dwelling and associated amenity space. According to the City's Official Plan, adjacent lands are designated as Residential Woodlands and does not contain any land mapped as regulated by Credit Valley Conservation Authority.

The purpose of the EIS would be to identify the natural heritage features and functions including, but not limited to, watercourses, woodlands, valleylands, wetlands, rare vegetation communities, significant wildlife habitat, and potential habitat of Species at Risk listed under Ontario's Endangered Species Act, 2007 associated with the property and adjacent lands.

The following Terms of Reference (ToR) is proposed towards the completion of the EIS:

- Search the City, Ministry of Natural Resources and Forestry (MNRF), Ministry of the Environment, Conservation and Parks (MECP), and Fisheries and Oceans Canada (DFO) records, as required, to obtain available background information and current data related to natural heritage features and functions in the area;
- Initiate consultation with the City and confirm the ToR for the EIS during the initial stages of the field program;
- Conduct a field survey to document existing natural heritage features, functions, and species. Survey includes:
    - Evaluate/ map vegetation community types based on Ecological Land Classification methods (late summer/fall 2023);
    - One (1) vascular plant inventory (late summer/fall 2023);
    - Record all incidental wildlife observations during site visit.
- Complete an assessment of potential Species at Risk and their habitats that could be present within the study area, including a screening for Butternut and Black Ash trees (Endangered); and
- Prepare the EIS report. The EIS will include a description of the existing natural heritage features and functions, an explanation of the proposed development, provide relevant mapping, assess the potential direct and indirect impacts of the proposed works on the natural heritage features and functions and include mitigation/avoidance/restoration strategy as required.

At this time, Azimuth requests that the City of Mississauga indicate concurrence with the above proposed ToR toward the completion of the EIS.

Feel free to contact me if you would like to discuss any aspects of the project.

Regards,

Lisa Moran
Terrestrial Ecologist

Azimuth Environmental Consulting, Inc
642 Welham Road
Barrie, ON, L4N 9A1
ph: (705) 721-8451 ext 202
cell: (705) 331-1479
lisa@azimuthenvironmental.com
www.azimuthenvironmental.com

*Providing services in **hydrogeology**, **terrestrial** and **aquatic ecology**, **environmental engineering & arborist assessment***

Lisa Moran

From: Jim Greenfield <Jim.Greenfield@mississauga.ca>
Sent: February 8, 2024 2:54 PM
To: Luca Chandler
Cc: Kosta Derbish; Lisa Moran; Katie Henley; Hughes, Trisha
Subject: RE: [External] Re: 900 Lakeshore Road West - Valley Slope

Hi Luca,

Hope you are doing well.
Please find the EIS TOR noted below for the subject property:

1. The Significant Wildlife Habitat Assessment must include an assessment against the criteria/thresholds identified in the Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009).
2. Breeding bird surveys are required as a component to the field surveys.
3. ELC and vascular plant inventories will need to be completed no later than mid-October. If surveys are likely to take place in late October, then they should be planned for summer 2024.
4. Reference material should also include the City's Public and Private Tree Protection By-laws.
5. Re: the Significant Wildlife and SAR screening - depending on the results of the assessment/screening and nature of the proposed developments on the subject property, additional targeted surveys may be required (ex. Bat habitat surveys, butternut health assessment).
6. Re: future components- the City will require a Tree Inventory Report, Arborist Report, and Tree Preservation Plan

Please let me know if you have any questions or concerns.

Kindly,

MISSISSAUGA

Jim Greenfield
Park Planner, Parks & Culture Planning, West Development
T 905-615-3200 ext.8538
jim.greenfield@mississauga.ca

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

---

From: Jim Greenfield
Sent: Monday, February 5, 2024 3:46 PM
To: 'Luca Chandler' <lchandler@kfarchitecture.com>
Cc: Kosta Derbish <kderbish@kfarchitecture.com>; Lisa Moran <lisa@azimuthenvironmental.com>; Katie Henley <katie.henley@mississauga.ca>; Hughes, Trisha <trisha.hughes@cvc.ca>
Subject: RE: [External] Re: 900 Lakeshore Road West - Valley Slope

Hi Luca,

Thanks for following up and my apologies for the delay.

After internal coordination, Parks and Forestry does not require a slope stability report but that does not preclude other departments such as T&W (may have been covered under engineering submission requirements).

Hope this clarifies.
Kindly,

Jim Greenfield, MPL, RPP, MCIP
Park Planner, Parks & Culture Planning, West Development
T 905-615-3200 ext.8538
jim.greenfield@mississauga.ca

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

From: Luca Chandler <lchandler@kfarchitecture.com>
Sent: Monday, February 5, 2024 3:22 PM
To: Jim Greenfield <Jim.Greenfield@mississauga.ca>
Cc: Kosta Derbish <kderbish@kfarchitecture.com>; Lisa Moran <lisa@azimuthenvironmental.com>; Katie Henley <Katie.Henley@mississauga.ca>
Subject: Re: [External] Re: 900 Lakeshore Road West - Valley Slope

Hi Jim,

Following up again on the slope requirements. Please let us know what you think.

All the best,

On Wed, Jan 31, 2024 at 9:32 AM Luca Chandler <lchandler@kfarchitecture.com> wrote:

> Hi Jim,
>
> Following up to see if you can comment on your department's requirements for top-of-slope setbacks and slope stability requirements, given that the slope is not regulated by the CVC.
>
> Please let us know as soon as you are able.
>
> All the best,
>
> On Fri, Jan 26, 2024 at 11:18 AM Luca Chandler <lchandler@kfarchitecture.com> wrote:
>
> > Hi Jim,
> >
> > Just another quick follow-up. Since the slope is not regulated by the CVC, can you comment on what your department's requirements are regarding top-of-bank setbacks?
> >
> > Thank you,
> >
> > On Fri, Jan 26, 2024 at 9:32 AM Luca Chandler <lchandler@kfarchitecture.com> wrote:

Trisha - Thank you for the comments. We will review and let you know if we have any follow-up questions.

Jim - If the CVC does not require a slope stability assessment at this stage, can we assume that this is not a requirement for OPA/rezoning?

Best,

On Thu, Jan 25, 2024 at 2:47 PM Hughes, Trisha <trisha.hughes@cvc.ca> wrote:

Hi Luca,

Thanks for following up and I apologize for the delay in response.

Please be advised that based on our further review of information available, the adjacent feature is not considered a Regulated watercourse. As such, the slope is not considered Regulated by CVC. Therefore, the top of bank staked in the field does not reflect a CVC constraint. We recommend the applicant confirm any City requirements related to the slope. This may be more of an engineering item to ensure safety for the proposed development adjacent to the top of bank.

There are still Regulated wetlands in proximity to the site, and a portion of the property is regulated by CVC. Based on our review of the TOR, we offer the following comments:

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If there are any questions, please let me know.

Kind regards,

Trisha Hughes | RPP | she/her/hers

Acting Senior Planner, Planning and Development Services | Credit Valley Conservation

905-670-1615 ext 325 | M: 437-855-4056

trisha.hughes@cvc.ca | cvc.ca

From: Luca Chandler <lchandler@kfarchitecture.com>
Sent: Thursday, January 25, 2024 9:59 AM
To: Hughes, Trisha <trisha.hughes@cvc.ca>
Cc: Kosta Derbish <kderbish@kfarchitecture.com>
Subject: [External] Re: 900 Lakeshore Road West - Valley Slope

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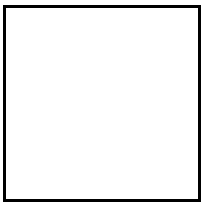
Thank you for your time,

--

Luca Chandler

Urban Planner



197 Spadina Avenue, Suite 500 | Toronto, ON | M5T 2C8

416-633-6226 x 223

lchandler@kfarchitecture.com | www.kfarchitecture.com

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FISHER ENGINEERING | ENVIRONMENTAL | GEOTECHNICAL | LABORATORIES

October 30, 2025

1000570027 Ontario Inc.
17b Cosmo Road
Etobicoke, ON M8X 1Z3

Attn: Luca Chandler
Email: lchandler@kfarchitecture.com

Engineering Comment Response: Hydrogeological Investigation – 900 Lakeshore Road West, Mississauga.

Comments:

1. Forestry Comment: Wetland Water Balance Analysis Section 8.2 of the prepared EIS (Azimuth, November 2024) indicates that a Feature-based Water Balance Analysis of the Coastal Wetland located at the southeast corner of the property will be deferred to detailed design (i.e., Site Plan). However, in order to properly understand the level of risk that the proposal has to the ecological integrity of the wetland through any potential changes to its hydrological regime, a feature-based water balance analysis must be completed prior to advancing to detailed design. This will ensure that all environmental constraints are fully considered when defining the sites buildable envelope.

   As an initial step, the wetlands surface and groundwater catchment areas should be delineated to evaluate the potential magnitude of hydrological change resulting from the proposed development. If there is potential to impact 10% (or more) of the wetland's catchment area, the applicant will be required to undertake a Wetland Water Balance Risk Evaluation to identify the risk level of impacting the wetland, and to establish any required monitoring and mitigation measures to achieve post- to pre-development water balance.

   The outlined approach aligns with the Terms of Reference (TOR) for the EIS issued by Credit Valley Conservation Authority (CVC) on January 25, 2024, which clearly requires the submission to demonstrate pre- and post-development water balance for the regulated wetland. For additional guidance, please refer to Section 7 and Appendix B of the following CVC guidelines: CVC. (2022). Stormwater Management Guideline. Prepared by Credit Valley Conservation Authority (CVC). July 2022.

2. ECO, Feature Based Water Balance: APR2025- As part of comments provided for the Environmental Impact Study Terms of Reference consultation, CVC staff identified the need to assess the pre-to-post water balance to ensure no impacts to the hydrological function of the wetland located at the southeast edge of the property. While the EIS (prepared by Azimuth Environmental Consulting Inc., dated November 2024) suggests deferring this analysis to detailed
   design, a feature-based water balance analysis is required at the feasibility stage to inform the conceptual development plan.

As such, please provide the following information:

I) Please include pre and post development wetland drainage area mapping in the next submission and discuss the impacts to the wetland catchment area. If the subject property falls within this catchment area, the degree of impact to contributing surface drainage to it needs to be quantified (increase or decrease in contribution).

Site plans, prepared by Lithos, dated October 2025, showing pre and post development drainage to the wetland feature are attached. Pre-development site area represents 8.48% of the total catchment area of the wetland. Post-development site area represents 9.85% of the total catchment area of the wetland.

II) If the subject property represents 10% or greater than the total catchment area of the wetland, please complete a Wetland Water Balance Risk Evaluation as per the guideline (provided with the External Agencies folder on ePlans) to assess the sensitivity of the wetland to understand the risk level and subsequent monitoring and mitigations measures to help achieve pre-to-post construction wetland hydrologic conditions.

As the pre-development contribution of the site to the total catchment area of the wetland is less than 10% a Wetland Water Balance Risk Evaluation will not be required as per the guidelines.

lll) Regardless of the result of the analysis, provide mitigations to reduce any impact on wetland hydrological inputs.

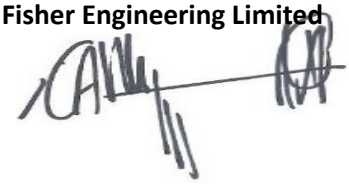
Measures are proposed to mitigate against any development-induced impact on the wetland. These include, but are not limited to:

- Post development surface water flow will be directed to the wetland via a stormwater management tank resulting in a net surplus in drainage to the wetland in comparison with pre-development conditions.
- Some rainwater, to be collected from approximately 1,020m^2 rooftop, will be conveyed to infiltration galleries.
- The proposed infiltration galleries will be used to mitigate against the development-induced infiltration deficit of approximately 700 m^3/year identified in the site-specific water balance analyses.

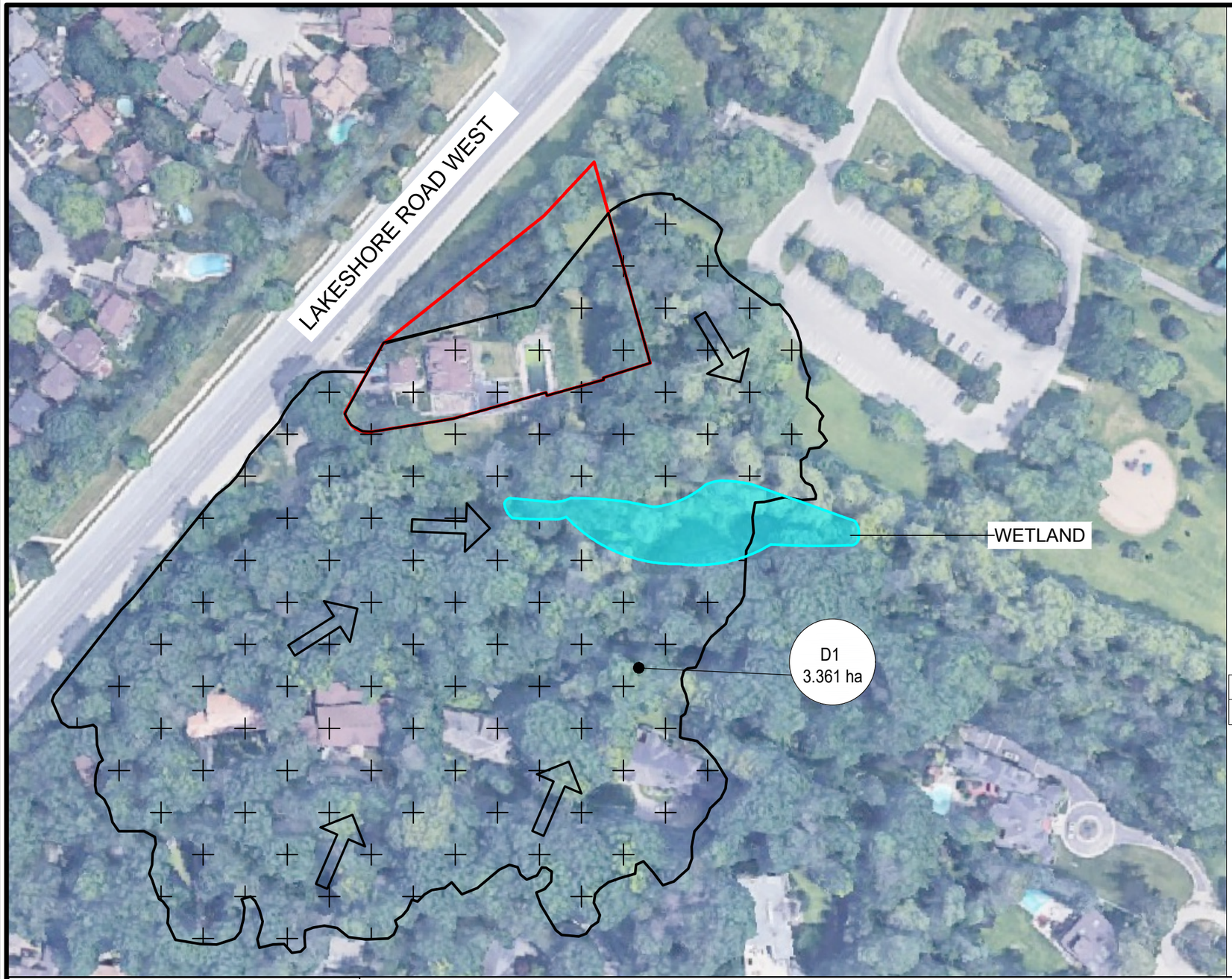
Since the post-development surface and groundwater flow towards the wetland will either be conserved or proposed to exceed pre-development conditions, it would not be expected that a feature-based water balance analysis is required under existing and proposed conditions.

We trust that the information presented herein meets your current requirements. Should you have any questions or require additional information, please do not hesitate to contact us.

Fisher Engineering Limited



Clive Wiggan, PEng
Project Manager
clive@fishereng.com



DRAINAGE AREA	AREA (ha)	SITE AREA (ha)	AREA CONTRIBUTING TO THE WETLAND (ha)	PERCENTAGE OF TOTAL CATCHMENT AREA CONTRIBUTING TO THE WETLAND
PRE-DEVELOPMENT AREA	3.361	0.335	0.285	8.48%

Lithos
150 Bermonsdey Road, North York, Ontario M4A 1Y1

LEGEND

A1 post
0.04 ha
STORM DRAINAGE AREA NUMBER
DRAINAGE AREA (ha)

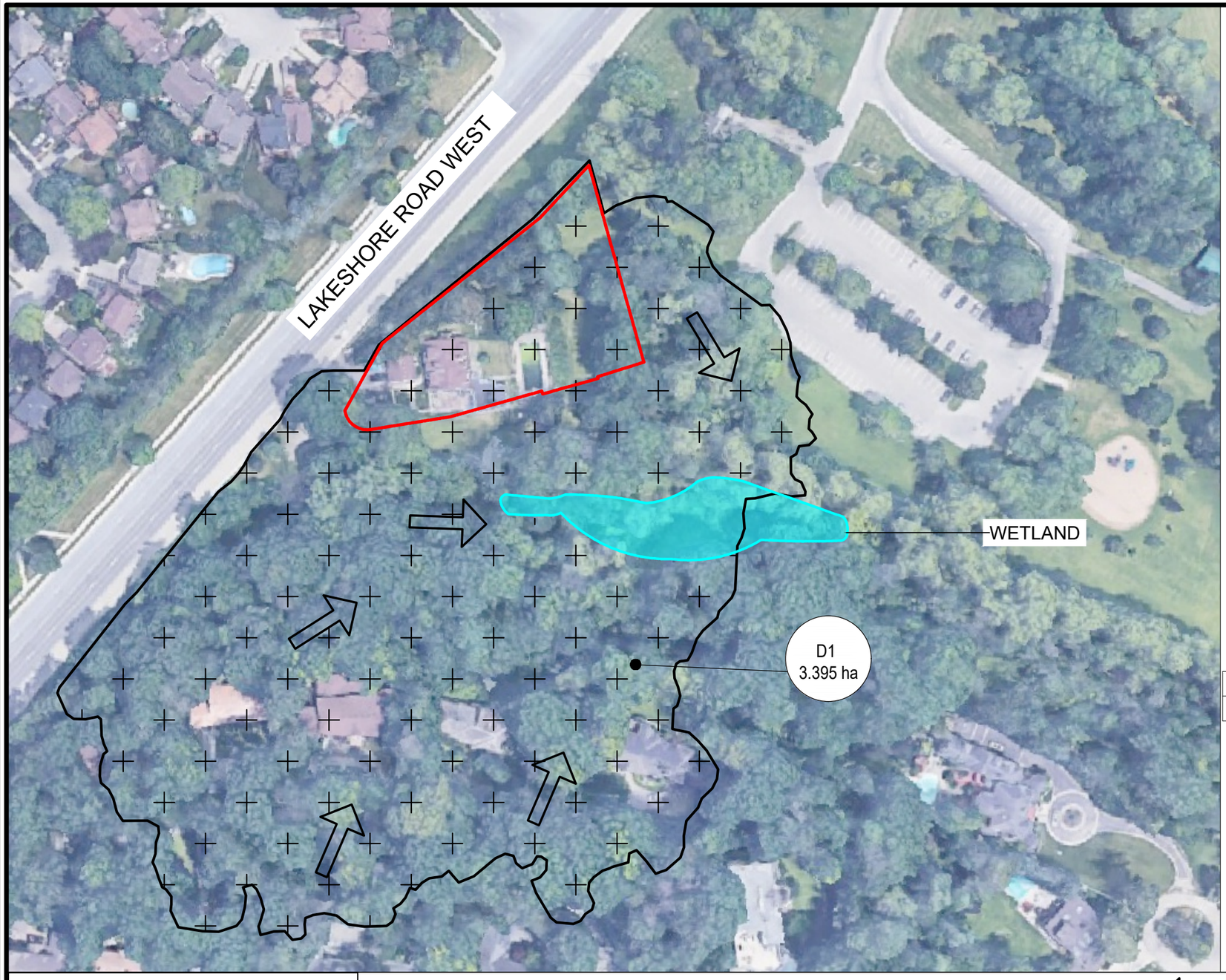
PRE-DEVELOPMENT STORM DRAINAGE AREA
PROPERTY LINE

DRAINAGE DIRECTION - BOTH MANOR AND MAJOR DRAINAGE PATTERNS

WETLAND FEATURE STORM DRAINAGE AREA PLAN - PRE DEVELOPMENT

RESIDENTIAL-USE DEVELOPMENT
900 LAKESHORE ROAD WEST
MISSISSAUGA, ONTARIO

DATE: OCT 2025	PROJECT No: UD23-058
SCALE: N.T.S.	FIGURE No: DAP2.2



DRAINAGE AREA	AREA (ha)	SITE AREA (ha)	AREA CONTRIBUTING TO THE WETLAND (ha)	PERCENTAGE OF TOTAL CATCHMENT AREA CONTRIBUTING TO THE WETLAND
PRE-DEVELOPMENT AREA	3.361	0.335	0.335	9.85%

Lithos

150 Bermonsdey Road, North York, Ontario M4A 1Y1

LEGEND

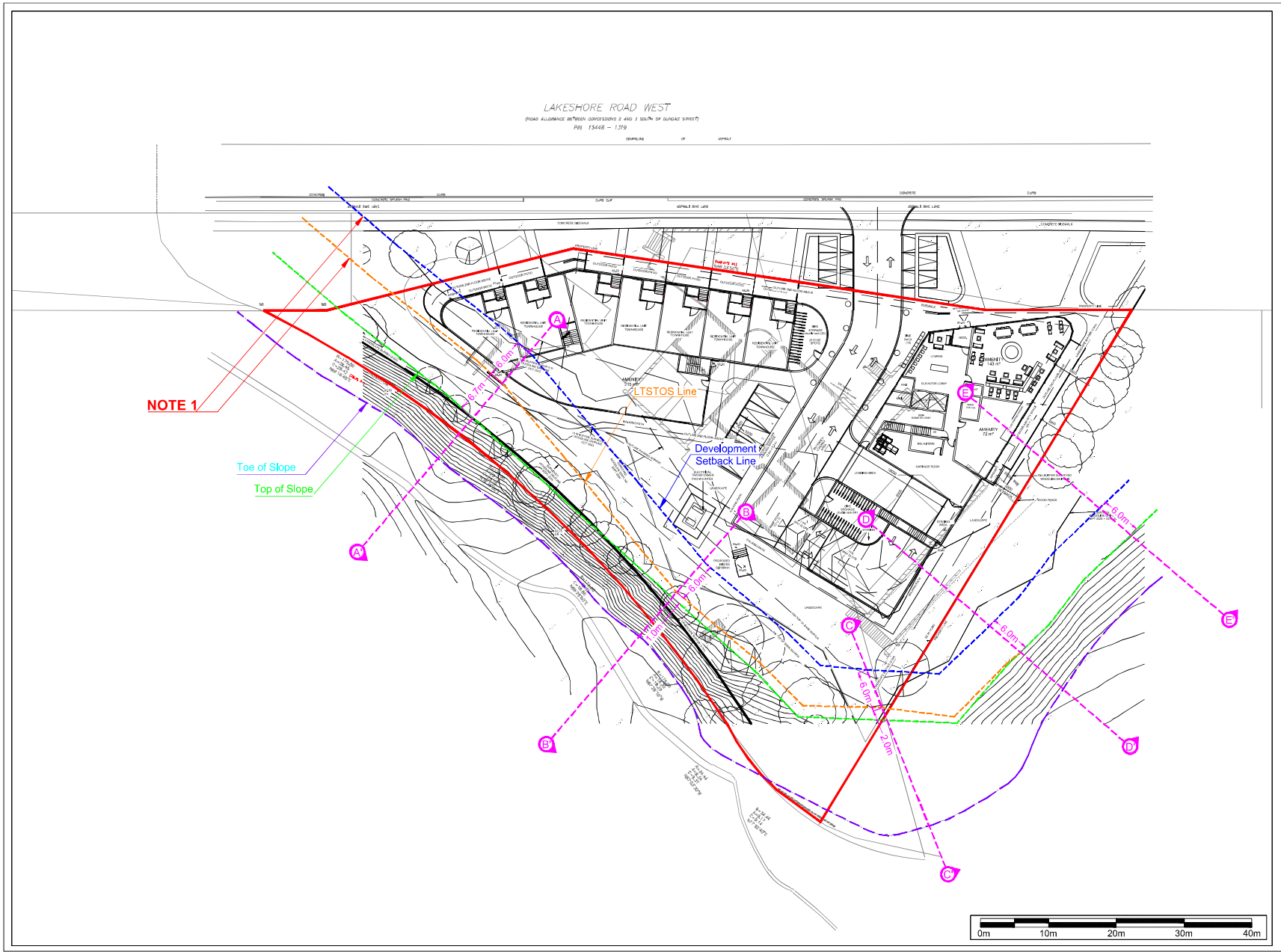
A1 post
0.04 ha
STORM DRAINAGE AREA NUMBER
DRAINAGE AREA (ha)

POST-DEVELOPMENT STORM DRAINAGE AREA
PROPERTY LINE

DRAINAGE DIRECTION - BOTH MANOR AND MAJOR DRAINAGE PATTERNS

WETLAND FEATURE STORM DRAINAGE AREA PLAN - POST DEVELOPMENT
RESIDENTIAL-USE DEVELOPMENT
900 LAKESHORE ROAD WEST
MISSISSAUGA, ONTARIO

DATE: OCT 2025 | PROJECT No: UD23-058
SCALE: N.T.S. | FIGURE No: DAP2.3



FISHER ENGINEERING
400 Esna Park Dr,. #15
Markham, Ontario
L3R 3K2
Tel: 905 475-7755

NORTH

LEGEND

- SITE BOUNDARY
- A-A CROSS SECTION FOR SLOPE STABILITY
- TOP OF SLOPE
- LTSTOS LINE
- DEVELOPMENT SETBACK LINE
- TOE OF SLOPE

NOTE1: Development setback land prior to slope stability measures.

PROJECT NAME AND ADDRESS

SLOPE STABILITY ASSESSMENT

900 Lakeshore Road West, Mississauga, Ontario

FIGURE E3:

SITE PLAN WITH CROSS SECTIONS AND DEVELOPMENT SETBACK

PROJECT NO.	SHEET NO.
FE 25-15006	E3
DATE: 30 January 2026	
SCALE: AS SHOWN	

APPENDIX C

Provincial and Federal Information

From:	Scott Tarof
To:	SAROntario@ontario.ca
Cc:	Luca Chandler; nikki yashpal; Kosta Derbish; Lisa Moran
Subject:	23-290 Butternut Health Assessment Report - 900 Lakeshore Road West, Mississauga
Date:	July 16, 2024 11:31:26 AM
Attachments:	image001.png 23-290 BHE Report Issued 240716.pdf Butternut Data Collection Form Issued 240716.pdf Tree Pic 9168.JPG Tree Pic 9169.JPG Tree Pic 9171.JPG AEC23-290 Butternut Location.pdf

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To whom it may concern:

Azimuth Environmental Consulting, Inc. has completed a Butternut Health Evaluation for one (1) Butternut tree located at 900 Lakeshore Road West, Mississauga, ON. The evaluation concluded that the Butternut is a Category 1 (non-retainable) tree. The tree has also been identified as a "hazard" tree.

The Butternut Health Evaluation Report documents are attached, marking the start of the 30-day audit period.

Please confirm receipt of the report.

Regards,

Dr. Scott Tarof (Ph.D. Biology)
Senior Terrestrial Ecologist
Azimuth Environmental Consulting, Inc.
642 Welham Road Barrie, ON L4N 9A1
Office: 705-721-8451 x230
Cell: 705-715-7105
www.azimuthenvironmental.com

Ontario

Ministry of the Environment, Conservation and Parks

Butternut Health Expert's Report Template – Version 2022

Instructions to Butternut Health Experts (BHEs):

Please enter the 6-character BHE Report number: 450-025

BHE Report numbering format:
BHE Report numbers are to be assigned by the BHE using the first 3 letters of BHE's last name, followed by BHE's own 3-digit report numbering system. If the BHE's last name has fewer than 3 letters, use the full last name and numbers for the remaining characters.

  Disponible en français

Cover letter to client:
Insert your cover letter to your client here and include the below list of enclosures.

Nikki Yashpal (Representative)
1000537351 Ontario Inc.
17b Cosmo Road
Etobicoke, Ontario
M8X 1Z3

Dear Ms. Yashpal:

As requested, Azimuth has completed an assessment of one hazard Butternut tree (Butternut #1) on lands located at 900 Lakeshore Road West, Mississauga, Ontario.

A copy of this BHE report has been submitted to the Ministry of Environment, Conservation and Parks (MECP) via email via their SAROntario.ca portal as per current direction from the MECP.

Please retain this information and a copy of this BHE Report (including copies of all data forms) for your records.

If you have questions or require additional information please do not hesitate to contact me.

Lisa Moran, BHE Report #450-025
c/o Azimuth Environmental Consulting, Inc.
642 Welham Road
Barrie, Ontario
L4N 9A1

Enclosures:

1. Information from the Ministry of the Environment, Conservation and Parks about Butternut and the *Endangered Species Act, 2007*
2. Butternut Health Expert's Report, including the completed Butternut Data Collection Form

Ministry of the Environment, Conservation and Parks

Species at Risk Branch
40 St. Clair Avenue West
14th Floor
Toronto ON M4V 1M2

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des espèces en péril
40, avenue St. Clair Ouest
14e étage
Toronto ON M4V 1M2

Ontario

Information for the Property Owner (or person(s) who requested the enclosed Butternut Health Expert's Report):

The enclosed Butternut Health Expert's Report (BHE Report) documents the results of the Butternut health assessment that was conducted by the Butternut Health Expert (BHE) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be impacted by a proposed activity that are not identified in the enclosed BHE Report, they too must be assessed by a BHE before commencing any actions that may impact those Butternut trees or their habitat.

Butternut (*Juglans cinerea*) is listed as an endangered species in Schedule 2 of Ontario Regulation (O. Reg.) 230/08 "the Species at Risk in Ontario List". As an endangered species, the *Endangered Species Act, 2007* (ESA) prohibits adversely impacting Butternut and its habitat. A permit or agreement under the ESA is required before engaging in an activity that is otherwise prohibited under the ESA. The activity may be eligible for the Butternut conditional exemption in Part V of O. Reg. 830/21, provided the requirements of the regulation are met.

If the proposed activity is eligible for the conditional exemption in Part V of O. Reg. 830/21, the next step is to submit the BHE Report and the Butternut Data Collection Form enclosed in this package to the Ministry of the Environment, Conservation and Parks (MECP).

If the enclosed BHE Report does not identify which Butternut tree(s) are proposed to be killed, harmed or taken and the reasons for doing so (e.g., if "unknown" is indicated in Table 1) or if the information in the last two columns of Table 1 has changed since the date this BHE Report was produced, **do not edit the BHE Report to update this information**. Instead, the report must be submitted together with a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed or taken (by referencing the tree identification numbers) when you submit the BHE Report to MECP.

The BHE Report must be submitted to MECP at least 30 days before registering an activity in respect of the Butternut conditional exemption. MECP may need to examine the Butternut trees subject to the report during this 30-day period. **Adversely impacting Butternut trees during this 30-day period or before registration is completed is prohibited by the ESA**. Further, the conditional exemption for Butternut does not apply unless the requirements of Part V of O. Reg. 830/21 are being followed.

If the proposed activity is eligible for the Butternut conditional exemption, you may register the proposed activity using the "**Notice of Butternut Impact**" form after the 30-day period has elapsed.

If the proposed activity is not eligible for a regulatory exemption, please contact MECP to determine whether the proposed activity would require a permit or agreement under the ESA in order to proceed.

Please retain this information and a copy of the BHE Report for your records, along with any other documentation you may receive from MECP should an examination of the trees occur.

This information should not be relied upon to determine legal obligations. To determine your legal obligations, consult the *Endangered Species Act, 2007* and the relevant regulations made thereunder. These may be found at www.ontario.ca/laws. If legal advice is required, consult a legal professional. In the event of an error on this template or a conflict between this template and any applicable law, the law prevails.

If you have any questions, please contact MECP at SAROntario@ontario.ca.

Butternut Health Expert's Report (BHE Report)

BHE Report Number: 450-025

Butternut Health Expert Contact Information

Name of Butternut Health Expert

Last Name	First Name
MORAN	LISA

Mailing Address

Unit Number	Street Number	Street Name	PO Box
	642	Welham Road	

City/Town	Province	Postal Code
Barrie	Ontario	L4N 9A1

Telephone Number	Email Address
705-721-8451	lisa@azimuthenvironmental.com

Summary of qualifications as a Butternut Health Expert

a) expertise in relation to butternut

Terrestrial Ecologist with Azimuth Environmental since 2006. Completion of site assessments including natural heritage inventories (i.e. plants, birds, amphibians) and delineation of vegetation communities in conjunction with Ecological Land Classification protocols. Assessments include the identification of potential constraints to development including but not limited to species protected according to Ontario's Endangered Species Act, such as Butternut.

b) expertise, education, training and experience necessary to assess the health of butternut trees

Certified Butternut Health Assessor/Expert #450 through the completion of the provincial Butternut Health Assessment(BHA) Workshop (2014) in addition to the completion of the BHA Refresher course (2019). Completed BHA for hundreds of Butternut individuals with 22 BHA reports submitted to and accepted by the province to date.

Property Owner Contact Information

Name of Property Owner (or representative)

Last Name	First Name
Yashpal	Nikki

Mailing Address

Unit Number	Street Number	Street Name	PO Box
	17b	Cosmo Road	

Lot Number	Concession	Township	Rural Route

City/Town	Province	Postal Code
Etobicoke	Ontario	M8X 1Z3

Telephone Number	Email Address
416-402-9462	nikki@saach.co

Site Location

Unit Number	Street Number	Street Name	PO Box
	900	Lakeshore Road West	

Lot Number	Concession	Township	Rural Route

City/Town	Province	Postal Code
Mississauga	Ontario	L5H 1H9

Additional Site Location Information

Tree located approximately 9.4m south of first house at the site location address above.

Date(s) of Butternut health assessment

Start Date (yyyy/mm/dd) 2024/06/18

End Date (yyyy/mm/dd) 2024/06/18

Date BHE Report prepared (yyyy/mm/dd) 2024/07/16

Map datum used: ☑ NAD83 ☐ WGS84

Total number of trees assessed in this BHE Report 01

The assessed trees were numbered on site using white paint and tree ID number.

The numbers at the site correspond to the tree identification numbers referenced in this report.

This BHE Report includes the following tables:

- Table 1: Butternut trees assessed by the BHE
- Table 2: Trees determined by the BHE to be Butternut hybrids
- Table 3: Summary of Butternut health assessment results

Table 1: Butternut trees assessed by the BHE

Tree ID #	UTM coordinates	Accuracy (+/-)	Category[1] (1, 2 or 3)	Tree stem diameter[2] (cm)	Is tree stem shorter than 1.37 m? (Yes/No)	Cultivated? (Yes/No)	Proposed to be: (killed, harmed, taken, or unknown[3])	If tree is proposed to be killed, harmed or taken, indicate reason tree is to be killed, harmed or taken, if known
1	17T 612881E, 4821201N	5 m	1	59	No	No	killed	Hazard tree; needs to be removed for safety
		m						
		m						

[1] Details regarding the extent to which the tree is affected by Butternut Canker is presented in the Butternut Data Collection Form that accompanies this BHE Report.

[2] Diameter of the tree stem rounded to nearest cm, measured in accordance with the Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the *Endangered Species Act, 2007*

[3] In this column, "unknown" indicates that at the time of assessment and reporting, there are no proposals to kill, harm or take this tree that are known to the BHE.

Table 2: Trees determined by the BHE to be Butternut hybrids

Tree ID #	UTM coordinates	Method used (genetic testing or field identification)	Additional Comments on Method Used
			NA

Tree ID #	UTM coordinates	Method used (genetic testing or field identification)	Additional Comments on Method Used

Table 3: Summary of Butternut health assessment results

Result	Total number of trees in this category	Information for persons planning activities that may impact Butternut
Category 1	1	• Category 1 Butternut tree — the Butternut tree is affected by Butternut Canker to such an advanced degree that retaining the tree would not support the protection or recovery of Butternut trees in the area in which the tree is located.
		• If the proposed activity will kill, harm or take one or more Butternut trees of any category (including Category 1), the BHE Report must be submitted to MECP at SARontario@ontario.ca.
Category 2	0	• Category 2 Butternut tree — the Butternut tree is not affected by Butternut Canker or the Butternut tree is affected by Butternut Canker but the degree to which it is affected is not as advanced as a Category 1 Butternut tree and retaining the tree could support the protection or recovery of Butternut trees in the area in which the tree is located.
		• Activities that may kill, harm or take up to a **maximum of fifteen (15)** Category 2 trees may be eligible for the conditional exemption in Part V of Ontario Regulation 830/21. Refer to the regulation for eligibility conditions and requirements that must be fulfilled.
		• If the proposed activity will kill, harm or take more than fifteen (15) Category 2 trees, **contact MECP** for information on how to seek an ESA authorization (e.g., a permit).
Category 3	0	• Category 3 Butternut tree — the Butternut tree may be useful in determining sources of resistance to Butternut Canker.
		• Activities that may kill, harm or take up to a **maximum of five (5)** Category 3 trees may be eligible for the conditional exemption in Part V of Ontario Regulation 830/21. Refer to the regulation for eligibility conditions and requirements that must be fulfilled.
		• If the proposed activity will kill, harm or take more than five (5) Category 3 trees, contact MECP for information on how to seek an ESA authorization (e.g., a permit).

Result	Total number of trees in this category	Information for persons planning activities that may impact Butternut
Cultivated	0	• An activity that will kill, harm or take a cultivated Butternut tree that was required to be planted to fulfil a condition of an ESA permit or agreement, or a conditional exemption, is **not** eligible for the exemption for cultivated trees that is provided by subsection 25 (5) of O. Reg. 830/21. Refer to the regulation for eligibility conditions.
Hybrid	0	• Hybrid Butternut trees are not protected under the ESA but impacts to these trees may be subject to local municipal by-laws and other legislation.

Additional Information on Cultivated Tree Determination

Please note:

- A BHE Report that is submitted to MECP must include the completed Butternut Data Collection Form. As appropriate, please also ensure additional relevant documentation to support the assessment (e.g., completed Data Sheets for Field Identification of Butternut Hybrids, evidence that the Butternut was cultivated) and all relevant maps and photographs are provided.
- During the 30-day period that follows the submission of this BHE Report to MECP, no Butternut trees (of any category) may be killed, harmed or taken. MECP may need to examine the Butternut trees subject to the report during this 30-day period.

Butternut Health Expert's Comments

Butternut tree is a Category 1 tree and considered a hazard tree. Due to risk to public safety, the tree has been recommended for removal by others on the project team.

Ontario

Ministry of Natural Resources

Make-a-Map: Natural Heritage Areas

Provincial Natural Heritage Features

Map created:10/18/2024

Notes:

900 Lakeshore Road West

Legend

- Assessment Parcel
- Ecoregion
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland

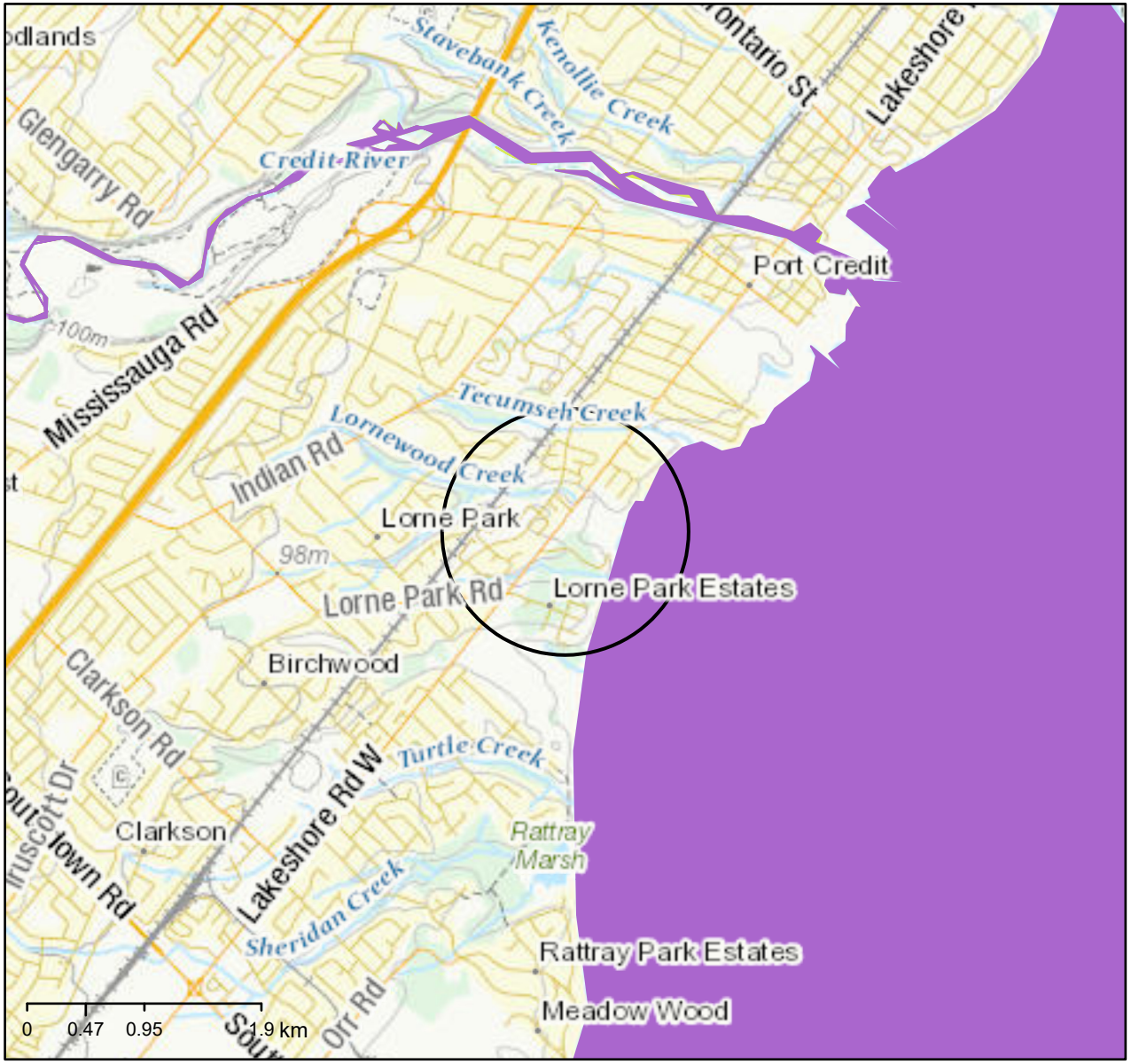
0.1 0 0.04 0.1 Kilometres

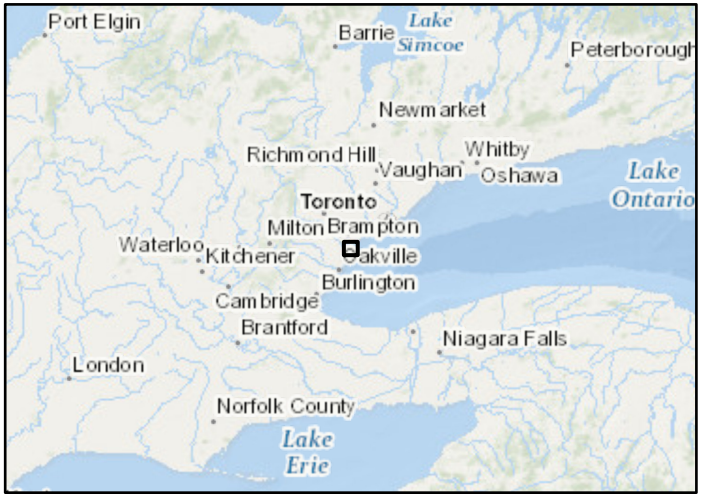
Absence of a feature in the map does not mean they do not exist in this area.

Fisheries and Oceans Canada | Pêches et Océans Canada

Aquatic Species at Risk Report

Canada





One or more aquatic species listed under the Species at Risk Act are found (or potentially found) within the coloured areas.

- Critical Habitat
- Extirpated, Endangered, or Threatened
- Special Concern

How to use this information:

1. The map and species list are intended to provide a general overview of aquatic species at risk and their critical habitat that may occur within the mapped area.

2. To assess your project go to: www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html

If you encounter an aquatic species at risk in an area that is not currently mapped, please notify your regional Fisheries Protection Program office to ensure that you are compliant with the Species at Risk Act. The official source of information for species at risk is the Species at Risk Public Registry https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html

To protect fish and fish habitat, including aquatic species at risk, their residences, and their critical habitat, efforts should be made to avoid, mitigate and/or offset harm. Following the measures to avoid harm will help you comply with the Fisheries Act and the Species at Risk Act.

Critical habitat for these species is found within the outlined area

Critical habitat is identified in recovery strategies or action plans for species listed under Schedule 1 of the Species at Risk Act as extirpated, endangered or threatened.

Name	Where Found	Species Status
	No critical habitat	

Species found (or potentially found) within the outlined area

Name	Where Found	Species Status
Shortnose Cisco	Lake Ontario/Lac Ontario	Endangered