BEACON ENVIRONMENTAL

GUIDING SOLUTIONS IN THE NATURAL ENVIRONMENT

Scoped Environmental Impact Study
900 Mississauga Heights Drive

Prepared For:

Diamond Developments (900 Mississauga Heights) Inc.

Prepared By:

Beacon Environmental Limited

Date: *Project:*

December 2021 **218165**

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1. Introduction

Beacon Environmental Limited (Beacon) was retained by Diamond Developments (900 Mississauga Heights) Inc. to prepare a Scoped Environmental Impact Study (EIS) required for an Official Plan Amendment/Zoning By-law Amendment (OPA/ZBA) application for a common element condominium development at 900 Mississauga Heights Drive in the City of Mississauga. The site location is shown on **Figure 1**. The subject property abuts the Credit River valley to the south and a smaller wooded ravine to the east.

The subject property contains components of the City's Natural Heritage System (NHS). The valleylands are designated "Significant Natural Areas and Natural Green Spaces" on Schedule 3 of the City's Official Plan, which corresponds with the boundary of Natural Area CRR8 in the City's Natural Area Survey. A "Natural Hazards" overlay was also applied to the Credit River valleyland and

The proposed re-development of the subject property consists of five residential lots and a common element condo road.

The policies of the City of Mississauga Official Plan require that an EIS be prepared in support of development and site alteration on lands that are within or adjacent to Significant Natural Areas and Natural Green Spaces. The purpose of the EIS is to demonstrate that the proposed development and/or site alteration will not have a negative impact on natural heritage features or ecological functions associated with the property. Policy 19.4.5 of the City of Mississauga Plan lists an EIS as one of the types of studies that may be required a part of a complete application submission for an official plan amendment, rezoning, draft plan of subdivision or condominium or consent application.

The EIS requirements were scoped with the City of Mississauga (Sarah Piett, Natural Heritage Coordinator). The EIS scoping checklist is provided in **Appendix A.**

2. Policy Review

This section includes an overview of key federal, provincial, and local environmental policies, legislation, and regulations that are directly relevant to this EIS and land use planning for the subject property. Key legislation, policies and regulations that have been reviewed and considered in preparing the EIS include the following:

- Ontario *Endangered Species Act* (2007);
- Provincial Policy Statement (2014);
- Region of Peel Official Plan;
- City of Mississauga Official Plan; and
- *Conservation Authorities Act* – O. Reg. 166/06.

The following review is not intended to be comprehensive, but has been included to highlight key policy, regulatory and legislative requirements as they relate to environmental planning to ensure that the proposed re-development is in conformity with the existing policy framework.

Section 8 of this EIS includes a summary that describes how the proposed development conforms to the various environmental policies, legislation and regulations described above and apply to the subject property.

2.1 Ontario *Endangered Species Act* (2007)

Species at Risk in Ontario are those listed as provincially Endangered, threatened, or special concern at the provincial level, however the act only regulates the habitat of those that are Endangered or Threatened.

The Ontario *Endangered Species Act* (2007) provides legal protection to Endangered and Threatened species and their habitat. The ESA states that no person shall:

- *kill, harm, harass, capture, or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered, or threatened species.*
- *damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species.*

However, under subsection 17(1) of the ESA, MNRF may authorize a person to engage in an activity that would otherwise be prohibited under the ESA. Such activities would require a permit, agreement, or regulatory exemption.

2.2 Provincial Policy Statement (2020)

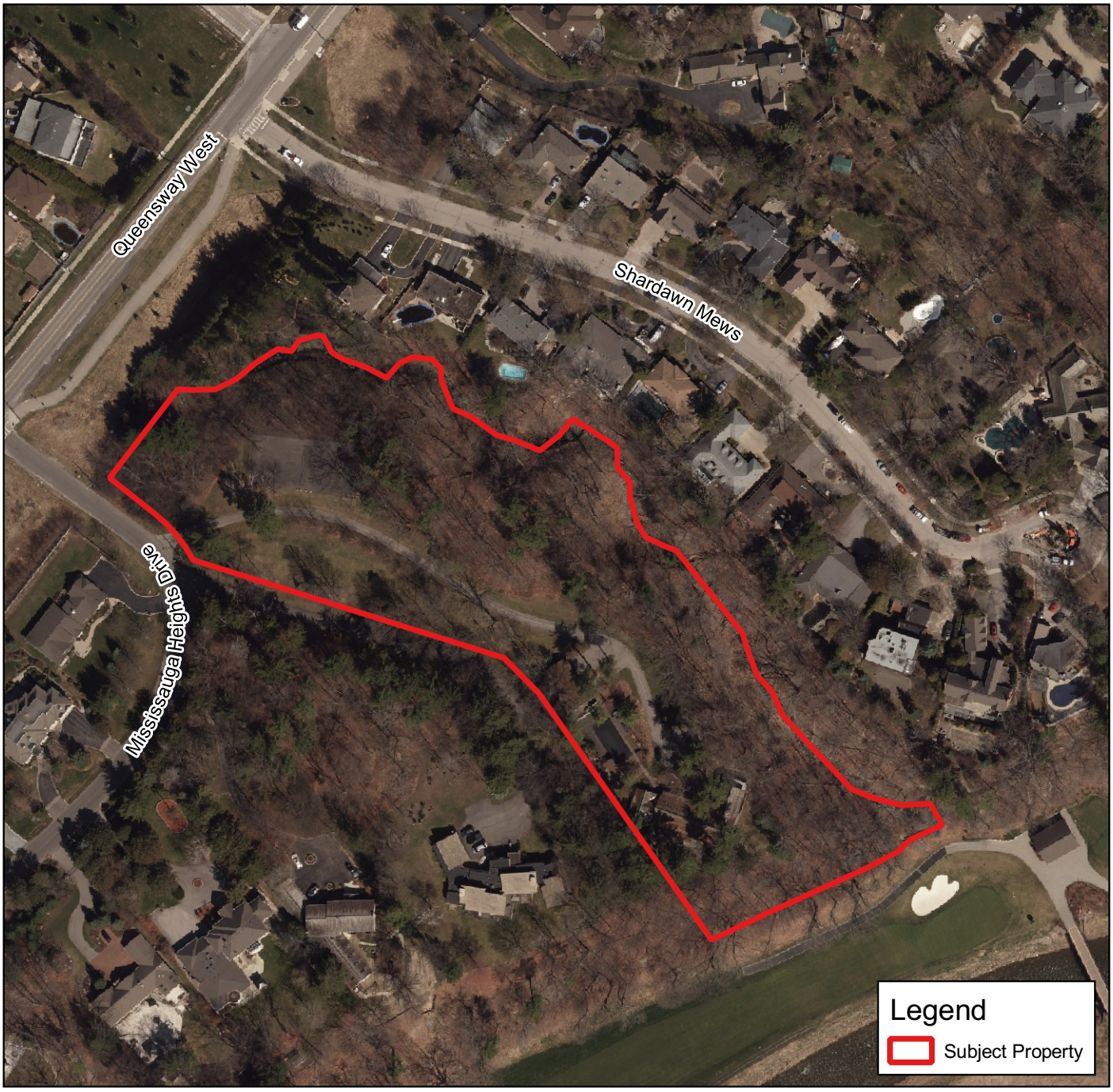
Section 2.1 of the Provincial Policy Statement (PPS) provides direction to municipalities regarding planning policies specifically for the protection and management of natural heritage features and resources. The PPS identifies seven natural heritage components of interest and establishes policies to ensure their protection as part of land use planning exercises. Natural heritage features include:

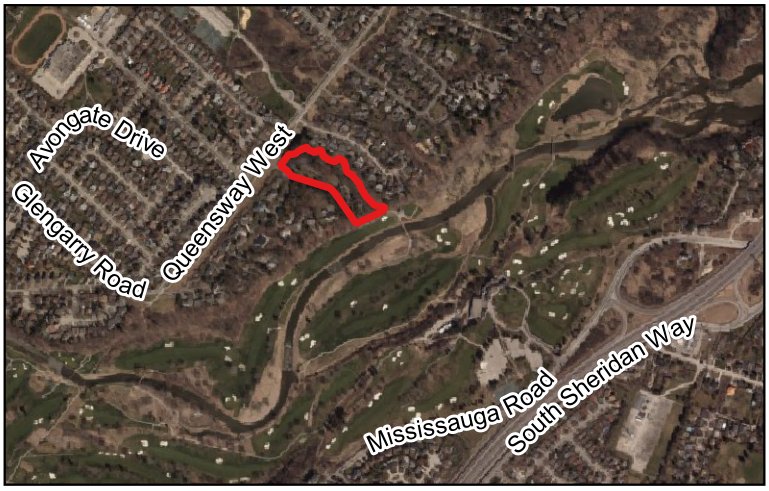
- Significant wetlands;
- Significant coastal wetlands;
- Significant habitat of endangered and threatened species;
- Fish habitat;
- Significant woodlands;
- Significant valleylands;
- Significant Areas of Natural and Scientific Interest (ANSIs); and
- Significant wildlife habitat.

The policies of Section 2.1 are as follows:

2.1.1 Natural features and areas shall be protected for the long term.

2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained,





Site Location	Figure 1
900 Mississauga Heights Drive EIS	
BEACON ENVIRONMENTAL	Project: 218165 Last Revised: December 2021
Client: Norman Lee & Associates Ltd.	Prepared by: SZ Checked by: DW
N 1:2,000	Inset Map: 1:20,000

Contains information licensed under the Open Government License–Ontario Orthoimagery Baselayer: FBS Peel Region (2020)

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restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

2.1.3 Natural heritage systems shall be identified in Ecoregions 6E & 7E1, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.

2.1.4 Development and site alteration shall not be permitted in:

a) significant wetlands in Ecoregions 5E, 6E and 7E 1 ; and

b) significant coastal wetlands.

2.1.5 Development and site alteration shall not be permitted in:

a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E 1;

b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)significant wildlife habitat; significant areas of natural and scientific interest; and coastal wetlands in Ecoregions 5E, 6E and 7E 1 that are not subject to policy 2.1.4(b)

Unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

Policy 3.1 of the PPS provides direction to municipalities regarding land use planning in natural hazard areas. These policies generally prohibit or restrict development in areas prone to flooding and erosion. Conservation Authorities also regulate these lands.

2.3 Regional Municipality of Peel Official Plan (2008)

The Peel Region Official Plan contains policies aimed at protecting, maintaining, and restoring a Greenlands System consisting of “Core Areas”, “Natural Areas and Corridors (NAC’s)”, and “Potential Natural Areas and Corridors (PNAC’s)”. Key elements of the Region’s Greenlands System include the following:

- Areas of Natural and Scientific Interest (ANSI);
- Environmentally Sensitive or Significant Areas (ESA);
- Escarpment Natural Areas;
- Escarpment Protection Areas;
- Fish and wildlife habitat;
- Habitats of threatened and endangered species;
- Wetlands;
- Woodlands;
- Valley and stream corridors;
- Shorelines;
- Natural lakes;
- Natural corridors;
- Groundwater recharge and discharge areas;
- Open space portions of the Parkway Belt West Plan; and
- Other natural features and functional areas.

The above key elements are to be interpreted, identified, and protected in accordance with the policies of the Regional Official Plan.

2.3.1 Core Areas

Core Areas represent those features and areas that are considered to be significant at the provincial and regional levels. They generally correspond with significant features and areas listed in the PPS and include:

- Significant Wetlands;
- Significant Coastal Wetlands;
- Core Woodlands;
- Environmentally Sensitive or Significant Areas;
- Provincial Life Science ANSI;
- Significant Habitat of Threatened and Endangered Species;
- Escarpment Natural Areas of the Niagara Escarpment Plan; and
- Core Valley and Stream Corridors.

Core Areas of the Greenlands System are mapped on Schedule A of the ROP. Criteria for identifying additional core features of the Greenlands System are provided in the ROP.

Policy 2.3.2.6 prohibits development and site alteration within the Core Areas of the Greenlands System in Peel except for:

- Forest, fish, and wildlife management;
- Conservation and flood or erosion control projects, but only if they have been demonstrated to be necessary in the public interest and after all reasonable alternatives have been considered;
- Essential infrastructure exempted, pre-approved or authorized under an environmental assessment process;
- Passive recreation;

- Minor development and minor site alteration;
- Existing uses, buildings, or structures;
- Expansions to existing buildings or structures;
- Accessory uses, buildings, or structures; and
- A new single residential dwelling on an existing lot of record, provided that the dwelling would have been permitted by the applicable planning legislation or zoning by-law on the date the Regional Official Plan Amendment 21B came into effect. A new dwelling built after the Regional Official Plan Amendment 21B came into effect in accordance with this policy shall be deemed to be an existing building or structure for the purposes of the exceptions permitted in clauses above.

Area municipalities are directed to adopt appropriate policies to allow the above exceptions when it can be demonstrated that there is no reasonable alternative location outside of the Core Area and the use, development or site alteration is directed away from the Core Area feature to the greatest extent possible; and the impact to the Core Area feature is minimized and any impact to the feature or its functions that cannot be avoided is mitigated through restoration or enhancement to the greatest extent possible.

2.3.2 Natural Areas and Corridors (NAC) and Potential Natural Areas and Corridors (PNAC)

Natural Areas and Corridors (NAC) include:

- Evaluated non-provincially significant wetlands;
- Woodlands meeting one or more of the criteria in Table 1 of the ROP;
- Significant wildlife habitat;
- Fish habitat;
- Regionally significant life science Areas of Natural and Scientific Interest;
- Provincially significant earth science Areas of Natural and Scientific Interest;
- Escarpment Protection Areas of the Niagara Escarpment Plan; and
- The Lake Ontario shoreline and littoral zone and other natural lakes and their shorelines.

Potential Natural Areas and Corridors (PNAC) include:

- Unevaluated wetlands;
- Cultural woodlands and cultural savannahs within the Urban System and Rural Service Centres meeting one or more of the criteria in Table 1 of the ROP;
- Any other woodlands greater than 0.5 hectares (1.24 acres);
- Regionally significant earth science Areas of Natural and Scientific Interest;
- Sensitive groundwater recharge areas;
- Portions of Historic shorelines;
- Open space portions of the Parkway Belt West Plan Area;
- Potential ESAs identified as such by the conservation authorities; and
- Any other natural features and functional areas interpreted as part of the Greenlands System Potential Natural Areas and Corridors, by the individual area municipalities in consultation with the conservation authorities.

NAC's and PNAC's represent natural features and areas that are considered locally significant. NAC's and PNAC's are considered locally important. Regional policies pertaining to NAC's and PNAC's defer their interpretation, protection, restoration, enhancement, proper management, and stewardship to local municipalities.

2.4 City of Mississauga Official Plan (2016)

Section 6.3 of the Mississauga Official Plan contains policies pertaining to the protection of the Green System. The Green System is composed of 1) the Natural Heritage System, 2) the Urban Forest, 3) Natural Hazard Lands; and 4) Parks and Open Spaces.

Components of the Green System that overlap with the subject property include the Natural Heritage System, Natural Hazard Lands, and the Urban Forest. Policies pertaining to each of these Green System components are discussed below.

2.4.1 Natural Heritage System

The Natural Heritage System consists of 1) Significant Natural Areas, 2) Natural Green Spaces, 3) Special Management Areas, 4) Residential Woodlands, and 5) Linkages.

The valley portion of the property is mapped as "Significant Natural Areas and Natural Green Spaces" on Schedule 3 of the OP.

The exact limit of components of the Natural Heritage System will be determined through site specific studies such as an Environmental Impact Study. Minor refinements to the boundaries of the Natural Heritage System may occur through Environmental Impact Studies or other appropriate studies accepted by the City without and official plan amendment.

2.4.1.1 *Significant Natural Areas*

Significant Natural Areas include one or more of the following features:

- Provincially or regional significant life science areas of natural and scientific interest (ANSI);
- Environmentally sensitive or significant areas;
- Habitat of threatened species or endangered species;
- Fish habitat;
- Significant wildlife habitat;
- Significant woodlands;
- Significant wetlands, including Provincially Significant Wetlands (PSW), coastal wetlands, and other wetlands greater than 0.5 hectares; and
- Significant valleylands, including the main branches, major tributaries and other tributaries and watercourse corridors draining directly to Lake Ontario including the Credit River, Etobicoke Creek, Mimico Creek and Sixteen Mile Creek.

According to Policy 6.3.27, development and site alteration within or adjacent to a Significant Natural Area will not be permitted unless all reasonable alternatives have been considered and any negative impacts minimized through appropriate mitigation measures as determined by an Environmental Assessment or Environmental Impact Study. Negative impacts that cannot be avoided are to be mitigated through restoration and enhancement to the greatest extent possible.

2.4.1.2 *Natural Green Spaces*

Natural Green Spaces are areas that meet one or more of the following criteria:

- Woodlands greater than 0.5 hectares that do not qualify as significant woodland;
- Wetlands that do not qualify as significant wetland;
- Watercourses that do qualify as significant valleyland; and
- All natural areas greater than 0.5 hectares that have vegetation that is uncommon in the City.

Policy 6.3.32 states that development and site alteration will not be permitted within or adjacent to Natural Green Spaces unless it has been demonstrated through an Environmental Assessment or Environmental Impact Study that there will be no negative impact to the natural heritage features and their ecological functions and opportunities for their protection, restoration, enhancement, and expansion have been identified.

2.4.2 Natural Hazard Lands

Natural Hazard Lands are associated with valley and watercourse corridors and the Lake Ontario shoreline. These areas are prone to flooding and erosion and are generally unsuitable for development.

Development adjacent to valleylands and watercourse features must incorporate measures to ensure public health and safety; protection of life and property; as well as enhancements and restoration of the Natural Heritage System.

Policy 6.3.47 states that development and site alteration will not be permitted within erosion hazards associated with valleyland and watercourse features. Where development or site alteration is proposed adjacent to erosion hazards, an appropriate buffer must be applied to the satisfaction of the City and conservation authority.

2.4.3 Urban Forest Policies

Official Plan polices pertaining to the urban forest are as follows:

> *6.3.44 Development and site alteration will demonstrate that there will be no negative impacts to the Urban Forest. An arborist report and tree inventory that demonstrates tree preservation and protection both pre and post construction, and where preservation of some trees is not feasible, identifies opportunities for replacement, will be prepared to the satisfaction of the City in compliance with the City's tree permit by-law.*

6.3.45 Where tree replacement cannot be accommodated on-site, the City may require cash-in-lieu for replacement trees elsewhere or replacement plantings at a location approved by the City.

6.3.46 Mississauga may require ecologically based woodland management plans of a landowner prior to municipal acquisition.

2.5 Credit Valley Conservation (CVC) Authority Policies and Regulations

CVC regulates activities within and adjacent to wetlands, watercourses, and hazard lands under Ontario Regulation 160/06 – "Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses" under Section 28 of the *Conservation Authorities Act*. A permit must be obtained from CVC for development or site alteration within regulated areas.

CVC's *Watershed Planning and Regulation Policies* (CVC 2010) document contains policies pertaining to the protection of natural heritage features and natural hazards. In general, CVC will not support development or site alteration within the natural heritage system, including natural heritage features and areas (valleylands, environmentally significant areas, ANSI, woodlands, wetlands, watercourse, and fish habitat), significant natural areas, or natural hazards except in accordance with Chapters 6 and 7.

The policies contained in Chapter 6 provide guidance for CVC's review of proposals submitted pursuant to the *Planning Act.*

Policy 6.1(j) states:

CVC will not support modifications to components of the natural heritage system, including natural heritage features and areas, significant natural areas, hazardous land, erosion access allowances and associated buffers, to create additional useable area or to accommodate or facilitate development and site alteration unless the modifications have been appropriately addressed through an environmental assessment, comprehensive environmental study, or technical report, to the satisfaction of CVC.

Policy 6.1(l) states:

CVC recognizes that certain types of development and site alteration by their nature must locate within the natural heritage system, including natural heritage features and areas, significant natural areas, hazardous land, erosion access allowances and associated buffers. Considering this, CVC may support such works where they have been addressed through an environmental assessment, comprehensive environmental study, or technical report, completed to the satisfaction of CVC. This may include, but is not limited to, the following:

- *i. Infrastructure, including stormwater management facilities;*
- *ii. Development and site alteration associated with passive or low intensity outdoor recreation and education;*
- *iii. Development which by its nature must locate within hazardous land;*

iv. *Development and site alteration associated with conservation or restoration projects or management activities following sustainable management practices;*
v. *Hazardous land remediation or mitigation works required to protect existing development; and*
vi. *Modifications to components of the natural heritage system to implement the recommendations of an environmental assessment, comprehensive environmental study or technical report that has been completed to the satisfaction of CVC.*

According to Section 6.2.1:

> *CVC will not support the creation of new lots through plan of subdivision or consent that extend into, or fragment ownership of, the natural heritage system, including natural heritage features and areas, significant natural areas, hazardous land, and erosion access allowances, in consideration of the long-term management concerns related to risks to life and property and natural heritage protection.*

CVC will recommend that lots created through plan of subdivision or consent are set back a minimum of whichever is the greatest of the following buffers:

- 10 metres from the limit of flood hazards;
- 10 metres from the limit of erosion hazards;
- 10 metres from the limit of dynamic beach hazard;
- 10 metres from the drip line of significant woodlands;
- 10 metres from the limit of other wetlands;
- 30 metres from the limit of provincially significant wetlands;
- 30 metres from the bankfull flow location of watercourses;
- 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:
    - Significant wildlife habitat;
    - Significant habitat of threatened species and endangered species;
    - Regionally and provincially significant life science ANSIs;
    - ESAs; and/or
    - Significant habitat of species of conservation concern.

CVC may recommend lots be set back a distance other than those identified above based on the results of a comprehensive environmental study or site-specific technical report completed to the satisfaction of CVC, and consistent with provincial and municipal policy.

3. Methodology

3.1 Background Review

The following background information sources were consulted for this study:

- MNRF Aurora District;
- City of Mississauga Natural Areas Survey (2015);
- Geotechnical Study (Terraprobe 2018);
- Arborist Report (SBK 2021);
- Natural Heritage Information Centre Database;
- Ontario Amphibian and Reptile Atlas; and
- Functional Servicing and Stormwater Management Report (Skira 2021).

3.2 Field Investigations

Field investigations were undertaken as part of this study to characterize the natural heritage features and functions associated with the property, which included vegetation surveys, breeding bird surveys, and surveys for endangered bats.

3.2.1 Ecological Communities and Flora Inventory

A vegetation inventory of the subject property was conducted on May 16 and August 21, 2018. Ecological communities on the subject property were mapped and described following the protocols of the Ecological Land Classification (ELC) system for Southern Ontario (Lee *et al.* 1998). This involved delineating ecological communities on aerial photos of the property and recording pertinent information on the community structure and composition.

A flora inventory was completed on the subject property in the spring and summer in conjunction with ELC surveys. A list of all vascular plant species was compiled for each ecological community.

3.2.2 Breeding Bird Surveys

Breeding birds were surveyed on May 29 and June 10, 2018. The surveys were conducted between 5:30 am and 9:00 am, on days with low to moderate winds (0-3 Beaufort Scale), no precipitation, and temperatures within 5 ^{O}C of normal average temperature. The entire site was surveyed such that all singing birds or those demonstrating breeding behaviour could be heard or observed and were subsequently recorded. That is, the surveyor is within 50 -100 m of all parts of the site depending on habitat. All birds encountered were recorded in the location observed on an aerial photograph of the site.

3.2.3 Bat Habitat Assessment

An assessment of the subject property was completed to determine if there is habitat for endangered bats. The *Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis & Tri-Colored Bat* (Guelph District MNRF 2017) was used for the assessment.

As per Phase 1 of this protocol, Ecological Land Classification (ELC) was completed for the property. Any coniferous, deciduous, or mixed wooded ecosites, including treed swamps, that included trees at least 10 cm diameter-at-breast height (DBH) are considered candidate maternity roost habitat. Based

on the ELC mapping, the subject property supports a deciduous forest community (ELC Unit 1), which represents potential habitat for endangered bats.

Snag surveys were then conducted in the forest community using the methods described in Phase 2 of the MNRF protocol. These surveys were completed in the spring of 2018 during the leaf off period and under suitable weather conditions (i.e., no precipitation, not immediately following heavy snowfall). Snag trees with characteristics favourable to Little Brown Myotis (*Myotis lucifugus*), Eastern Small-footed Myotis (*Myotis leibii*), Northern Myotis (*Myotis septentrionalis*) and Tri-coloured Bat (*Perimyotis subflavus*) were considered. Trees with cavities, loose bark, and/or cracks may support maternity roost habitat for Little Brown Myotis and Northern Myotis, while oak trees and, to a lesser extent, maple trees are preferred habitat for Tri-colored Bat (MNRF 2017).

All potential bat maternity roost trees observed were provided a unique code and the following parameters were documented:

- Species;
- Location;
- Approximate tree height;
- Diameter Breast Height (DBH);
- Number of cavities;
- Characteristics of cavity;
- Approximately height of cavities; and
- Tree condition.

Acoustic monitoring on the subject property was completed using the methods described within Phase 3 of the MNRF protocol.

One acoustic monitoring station was established on the subject property within the tableland forest and was monitored for the first two weeks in June of 2018 (**Figure 2**). At this station, a SM4BAT passive monitor equipped with an SMM-U1 ultrasonic microphone was deployed. The monitor was programmed to record bat calls each night for a period of six hours, beginning at sunset.

Recordings from the monitors were analyzed using KaleidoscopePro software. A combination of auto-identification and manual analysis was applied to call fields to make species determinations. All unclassified files (No ID Files) were manually reviewed for call frequency to determine if unclassified calls fell within the 40 kHz Myotis species and Tri-Coloured Bat range. If the call did not fall within the approximate 40 kHz range, it was not analyzed further as it was likely not a species at risk. Furthermore, a random selection of noise files was reviewed to ensure that the batch filters applied functioned as intended.

4. Study Findings

4.1 Soils

Based on borehole logs included in the geotechnical investigation undertaken by Terraprobe (2018), soils on the subject property consist of 10-15 cm topsoil underlain by sandy silt to silty sand earth fill extending to depths of 0.8 m to 2.3 m. Beneath the earth fill is undisturbed native clayey silt till extended to depths of about 3 m to 4.6 m. The till deposits grade into weathered shale bedrock of the Georgian Bay formation.

4.2 Terrestrial Natural Heritage

The valleylands associated subject property corresponds with the CRR8 Natural Area identified in the City of Mississauga Natural Areas Survey (NSEI and City of Mississauga 2020). CRR8 is classified as a "Significant Natural Area".

This site is located between Mississauga Road in the southwest and Stavebank Road in the east, along the Credit River from the Queensway in the north to the Queen Elizabeth Way in the south. The site encompasses the floodplain and valley slopes of the Credit River and associated tributary.

A golf course occupies the majority of the Credit River floodplain, while the valley slopes support mature hardwood forest.

4.2.1 Ecological Communities

Ecological communities on the subject property are illustrated in **Figure 2**. The mapping is based on site specific investigations conducted in between 2018 and 2020.

ELC Unit 1: Dry-Fresh Sugar Maple-Oak Deciduous Forest (5-3)

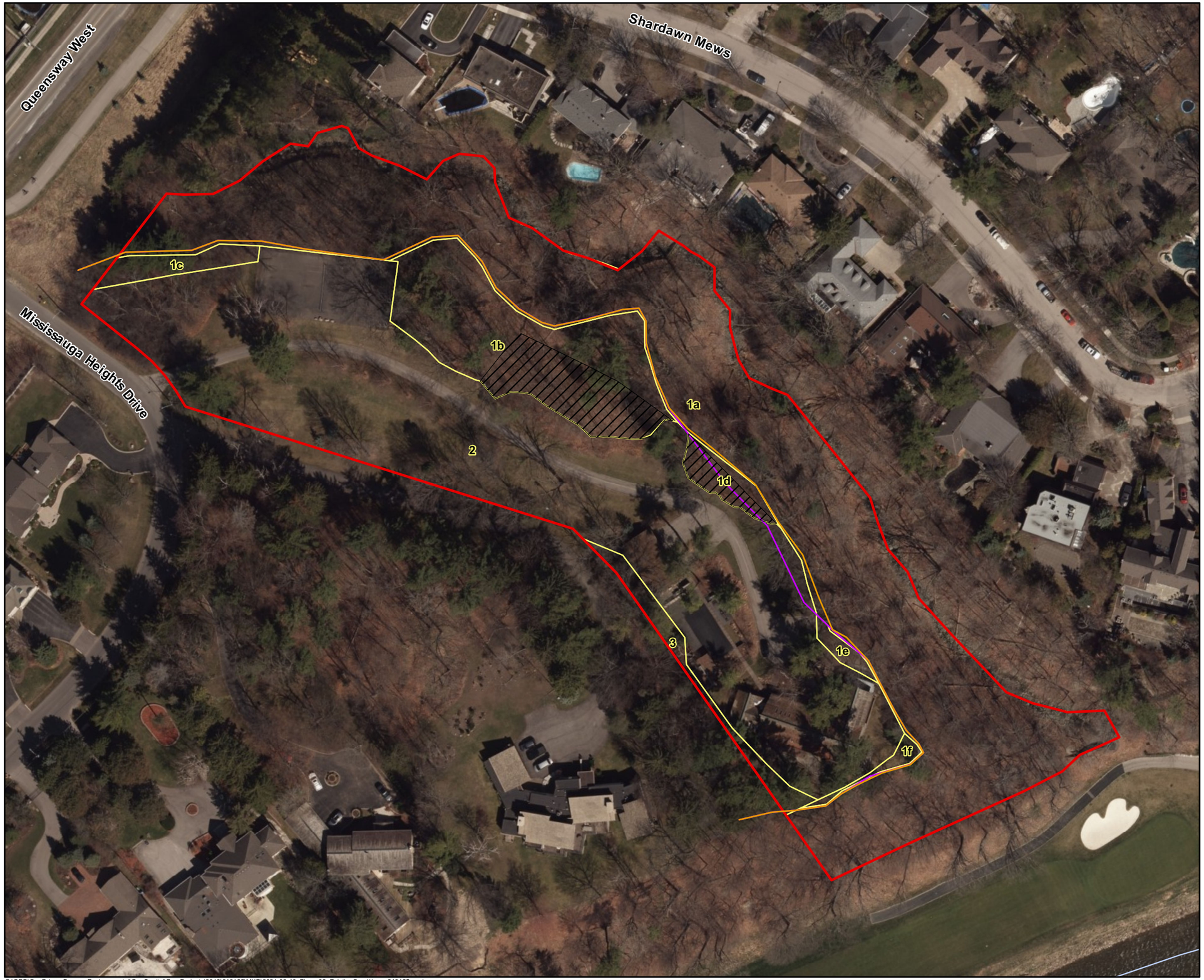
This mature deciduous forest community occurs on the valley slope (Unit 1a) and extends partially onto the tableland (unit 1b-e) in the eastern portion of the property. The canopy is dominated by Red Oak (*Quercus rubra*), Sugar Maple (*Acer saccharum*), Black Cherry (*Prunus serotina*), American Basswood (*Tilia americana*), and American Beech (*Fagus grandifolia*). The subcanopy consists of Sugar Maple, Ironwood (*Ostrya virginiana*), and Norway Maple (*Acer platanoides*). The understory includes Choke Cherry (*Prunus virginiana*), raspberries (*Rubus* spp.), Alternate-leaved Dogwood (*Cornus alternifolia*), and Gray Dogwood (*Cornus racemosa*). Ground covers include Yellow Trout Lily (*Erythronium americana*), Garlic Mustard (*Alliaria petiolata*), False Solomon's Seal (*Maianthemum racemosum*), Large-leaved Aster (*Eurybia macrophyllum*), Pennsylvania Sedge (*Carex pennsylvanica*), and May Apple (*Podphyllum peltatum*), among others.

ELC Unit 2: Anthropogenic

This unit consists of manicured lawn, paved surfaces, landscaped areas, and buildings were classified as anthropogenic. Vegetation associated with this area includes a mix of native and ornamental trees such as Red Oak, White Pine (*Pinus strobus*), Sugar Maple, Colorado Blue Spruce (*Picea pungens*), Paper Birch (*Betula papyrifera*), White Spruce (*Picea glauca*), Norway Maple, and Shagbark Hickory (*Carya ovata*).

ELC Unit 3: Cultural Woodland (CUW1)

This semi-natural (cultural) woodland feature overlaps the west property boundary. The canopy consists of a mix of planted trees and remnant native trees including White Spruce (*Picea glauca*), Scotch Pine (*Pinus sylvestris*), Norway Maple (*Acer platanoides*), Shagbark Hickory (*Carya ovata*), and White Pine (*Pinus strobus*). Groundcovers are primarily ornamental species such as hostas, Periwinkle (*Vinca*



Existing Conditions

Figure 2

900 Mississauga Heights Drive

Legend

- Subject Property
- Area of Disturbance/Tree Removals
- Vegetation Communities
- Physical Top of Slope (Terraprobe 2018)
- Long Term Stable Top of Slope (Terraprobe 2018)
- Watercourse (MNRF 2021)

Unit	Vegetation Community
1	Dry-Fresh Sugar Maple-Oak Deciduous Forest (FOD5-3)
2	Anthropogenic
3	Cultural Woodland (CUW1)

BEACON ENVIRONMENTAL

Project: 218165
Last Revised: November 2021

Client: Diamond Luxury Homes

Prepared by: BD
Checked by: DW

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minor), and Lily of the Valley (*Convallaria majalis*), with some native species such as False Solomon's Seal, Canada Mayflower (*Maianthemum canadense*), and Enchanter's Nightshade (*Circaea lutetiana*).

4.2.2 Flora

A total of 122 species of vascular plants were identified on the subject property, and six plants were identified only to genus. A plant list is presented in **Appendix B**. Of the 122 species identified, 50 (41%) are non-native to Ontario. Of the 72 native species identified, 70 are ranked S5 by the Natural Heritage Information Centre (NHIC) indicating that they are common and secure in Ontario. One species, Black Walnut, is ranked S4? Indicating it is apparently secure in Ontario. One species, Kentucky Coffee Tree (*Gymnocladus dioicus*) is ranked S2 (imperilled) and is also Threatened in Ontario. Kentucky Coffee Tree is not native to Mississauga and was introduced through planting. It has become commonplace to plant Kentucky Coffee Tree due to its tolerance of urban conditions. No regionally rare or uncommon plant species occur on the property.

4.2.3 Breeding Birds

A total of 20 species of breeding birds was recorded on the subject property, with an additional 3 noted as foraging (**Appendix C**). This is a moderate level of diversity that is reflective of the presence of both open anthropogenic habitat and a wooded valley with mature trees and understorey.

The majority of breeding records were common species regularly found in urban and urbanizing areas including the following: Black-capped Chickadee (*Poecile atricapillus*), Song Sparrow (*Melodia melodpiza*), American Robin (*Turdus migratorius*), and American Goldfinch (*Spinus tristus*). Other common species included, House Wren (*Troglodytes aedon*), House Sparrow (*Passer domesticus*), Brown-headed Cowbird (*Molothrus ater*) and Northern Cardinal (*Cardinalis cardinalis*). A number of birds more closely associated with woodlands were recorded given the woodlands on site and in the surrounding matrix. Birds of this sort included Northern Flicker (*Colaptes auratus*), Great Crested Flycatcher (*Myiarchus crinitus*), Red-bellied Woodpecker (*Melanerpes carolinus*) and Cooper's Hawk (*Accipiter cooperi*).

Area-sensitive birds require larger tracts of suitable habitat in which to breed or are those that have a higher breeding success in larger areas of suitable habitat. Two such species were recorded as breeding on the subject property. Cooper's Hawk and Red-breasted Nuthatch (*Sitta canadensis*) were both observed within the woodland feature north of the access driveway. The Cooper's Hawk was observed hunting during both site visits. These two species are also ranked as species of conservation concern within the Credit Valley Conservation Authority, according to the 2002 Birds of the Credit River Watershed review (CVC 2002). These both occur somewhat regularly in urban settings however are considered to be forest-sensitive species, requiring woodland habitat in which to breed successfully. Given that only a small portion of woodland extends onto the subject property relative to the surrounding matrix, it is likely that the majority of these birds' territories fall outside of the subject property boundaries. Three other area-sensitive species were encountered during the first site visit and are believed to be foraging birds at the tail end of migration: Scarlet Tanager (*Piranga olivacea*), Black-throated Green Warbler (*Setophaga virens*) and American Redstart (*Setophaga ruticilla*). These birds were not re-observed during the second breeding bird survey.

No species with rankings of S1 through S3 (Critically Imperiled through Vulnerable) by the Province, or species protected under the ESA, were encountered. A single Eastern Wood-pewee (*Contopus virens*)

was observed vocalizing along the northeastern boundary within the woodland. This species is Special Concern provincially and federally based on a declining trend over their range, however this species remains relatively common in both urban and urbanizing woodlands and is somewhat tolerant of forest fragmentation and known to occur along edge habitats as well as forest interior. Species with a Special Concern designation under the ESA are not afforded the same protection as Threatened or Endangered species.

4.2.4 Bat Habitat Assessment

A total of 29 potential bat maternity roost trees were identified from the tableland forest (ELC unit 1b). Of these, four trees represented potential roost habitat for Little Brown Myotis and Northern Myotis based on the presence of cavities and/or loose bark, while 25 Red Oak trees one Sugar Maple tree represented potential habitat for Northern Myotis.

Table 1 provides the monitoring results by species at each of the monitoring locations.

Table 1. Acoustic SAR Bat Monitoring Results Summary

ELC	Little Brown Myotis (*Myotis lucifugus*)	Unidentified 40kHz Call	Total
FOD2-4	1	1	**2**

A single call from Little Brown Myotis (*Myotis lucifugus*) was detected on June 3, 2018 at 12:19 am. Additionally, one unidentifiable 40 KHz call was noted on June 10, 2018 at 12:59 am. The 40 Khz call was not identifiable to the species level due to the length of the recordings and the similarities in SAR bat calls. However, given that Little Brown Myotis was the only other SAR species documented on the site it is likely that this call could be attributed to Little Brown Myotis as well. No other SAR bats (Northern Myotis, Small-footed Myotis, or Tri-colored Bat) were detected.

Two calls over a 10-night period is extremely low and suggests roosting habitat is not present. If there was roosting activity nearby, we would expect hundreds of calls over the monitoring period.

5. Evaluation of Significance and Constraints Assessment

The findings of the background review and field investigations have been relied upon to determine if the subject property supports any of the natural heritage components recognized under the PPS, as well as the Region's and City's Official Plans. The *Natural Heritage Reference Manual* (MNR, 2010) was consulted to provide additional technical guidance, where required. The subject property was screened for the following natural heritage features:

- Significant Wetlands;
- Habitat for Threatened or Endangered Species;

- Significant Areas of Natural and Scientific Interest (ANSI);
- Significant Valleylands;
- Significant Woodlands;
- Significant Wildlife Habitat; and
- Fish Habitat.

5.1 Significant Wetlands

There are no significant wetlands or other wetlands on or adjacent to the subject property.

5.2 Habitat for Threatened or Endangered Species

No habitat for threatened or endangered species has been identified on the subject property or adjacent lands.

5.3 Significant Areas of Natural and Scientific Interest (ANSI)

There are no ANSIs on or adjacent to the subject property.

5.4 Significant Valleylands

According to the City's OP, significant valleylands are associated with the main branches, major tributaries and other tributaries and watercourse corridors draining directly to Lake Ontario including the Credit River, Etobicoke Creek, Mimico Creek and Sixteen Mile Creek.

Based on this definition, the unnamed tributary to the Credit River and the Credit River are considered a significant valleylands in the Region of Peel and the City of Mississauga.

5.5 Significant Woodlands

Significant woodlands are defined by the City of Mississauga as any woodland greater than 0.5 hectares that:

- Supports old growth trees (greater than or equal to 100 years old);
- Supports a significant linkage function as determined through an Environmental Impact Study approved by the City in consultation with the appropriate conservation authority;
- Is located within 100 metres of another Significant Natural Area supporting a significant ecological relationship between the two features;
- Is located within 30 metres of a watercourse or significant wetland; or
- Supports significant species or communities.

The forest community (ELC Unit 1) on the subject property is contiguous with the forested slopes along the Credit River which extend offsite and includes an area greater than 0.5 ha which contains a watercourse and likely contains some trees that are older than 100 years old. Therefore, the forest feature (ELC Unit 1) qualifies as significant woodland in the City of Mississauga based on the above criteria.

In addition, the Peel Region Official Plan adopts the PPS definition of significant woodland and provides more specific criteria for identifying "Core" Woodlands. According to the ROP, Core Areas represent provincially and regionally significant features and areas and are considered a sub-set of what would be significant under the PPS. In the Urban System, woodlands that are ≥4 ha are considered Core Woodlands. The contiguous forest area, which corresponds with ELC unit 1 on the subject property, is over 4 ha; therefore, based on size, the woodland qualifies as a Core Woodland.

Prior to Beacon's involvement with this project, the edge of the valley and stream corridor was staked by CVC and the City utilizing the dripline of trees that were contiguous with the valley features. Beacon reviewed the previous limits and does not agree that the line corresponds with the limits of the natural feature as it included portions of the site that support existing development (residence, driveway, parking area, pool, tennis court and landscaped lawn. These areas are clearly outside the realm of what is considered natural. In our view, the limits of the natural area should correspond with the edge of the natural forest community and exclude the existing developed areas. Simply using the extent of tree canopy to define the limits of natural areas is not appropriate as it does not distinguish natural woodlands from the overall urban forest (residential lawns, street trees, parks).

In 2020, Beacon refined the limits of the valley and stream corridor using the boundaries of the valleylands or significant woodlands, whichever was greater. The boundary was established to exclude the existing developed areas noted above and to include only those areas where natural forest cover is reflected in the canopy, as well as in the sub-canopy, understory, and ground layer vegetation. The revised limits are illustrated in **Figure 3**.

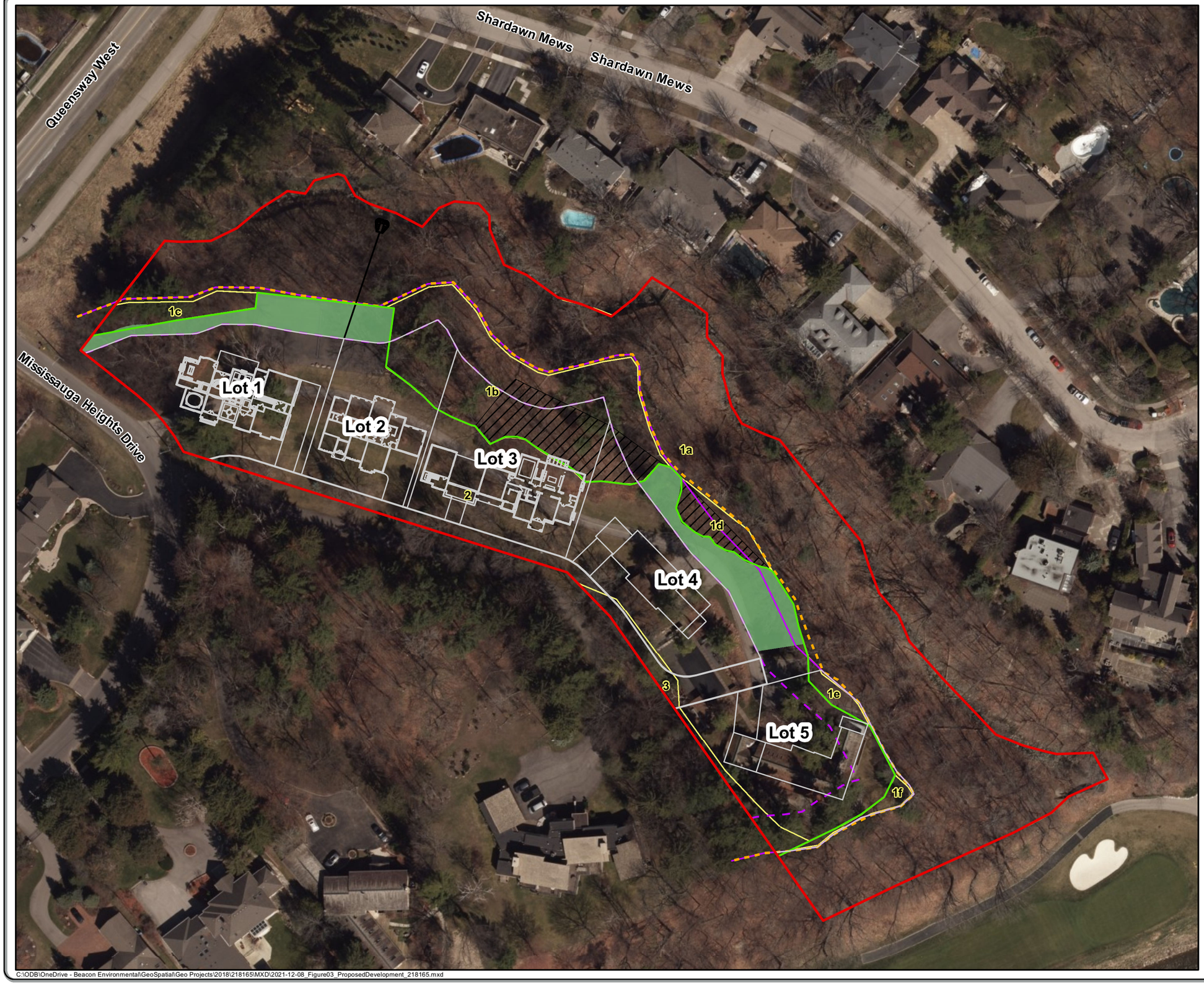
In 2021, Beacon was advised that some trees had been removed from two tableland areas of the significant woodland in ELC unit 1b and that these removals were in contravention of Mississauga's Private Tree By-law. It is Beacon's understanding that the City has notified the landowner regarding this violation, however we have not been informed of the status of the violation at this time. As such, this EIS does not address the violation, however, for information purposes, the areas affected by these tree removals are illustrated in **Figures 2** and **3**.

5.6 Significant Wildlife Habitat

According to the Significant Wildlife Habitat Technical Guidelines (MNR 2000), there are four broad categories of Significant Wildlife Habitat (SWH):

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

Within each of these categories, there are multiple types of SWH, each intended to capture a specialized type of habitat that may or may not be captured by other existing feature-based categories (e.g.,



Proposed Development	Figure 3
900 Mississauga Heights Drive	

Legend

- Subject Property
- Proposed Development
- Proposed Outfall
- Physical Top of Slope (Terraprobe 2018)
- Long Term Stable Top of Slope (Terraprobe 2018)
- Long Term Stable Top of Slope + 10 m
- Limit of Significant Natural Area
- ELC Communities
- Restoration and Enhancement Area
- Area of Disturbance/Tree Removals

BEACON ENVIRONMENTAL

Project: 218165
Last Revised: November 2021

Client: Diamond Luxury Homes	Prepared by: BD Checked by: DW

N | 1:1,000 | 0 — 20 — 40 m

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significant wetlands, significant woodlands). In 2015, MNRF published criteria to assist municipalities in identifying SWH in Ecoregion 7E (OMNR 2015).

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF 2015) was used as a preliminary screening for SWH on the property. A full SWH screening table is included in **Appendix D.**

Based on the ecoregional criteria, the forest community (ELC unit 1) on the subject property supports potential SWH for the following

- Bat maternity colonies for non-SAR bats;
- Landbird migratory stop-over habitat; and
- Special Concern and Rare Wildlife Species (Eastern Wood Pewee).

Additionally, based on the *Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study* (NSEI *et al.* 2009) the adjacent Credit River qualifies as an animal movement corridor. This study defines three classes of animal movement corridors at different spatial scales.

- Primary: Inter-regional movement corridors following major physiographic features (e.g., along the Niagara Escarpment or ORM);
- Secondary: Regional movement corridors (e.g., along natural linear features such as river valleys, or across active and abandoned agricultural lands in rural areas); and
- Tertiary: Local movement corridors (e.g., hedgerows, riparian strips).

Based on these criteria, the Credit River valley qualifies as a secondary animal movement corridor.

5.7 Constraints Summary

In summary, the subject property supports the following significant natural heritage features, which are part of the City's Natural Heritage System and the Region's Greenlands System.

- Significant Valleyland;
- Significant Woodland; and
- Potential Significant Wildlife Habitat (associated with Significant Woodland and Significant Valleyland).

For this property, development and site alteration has been proposed to be directed away from woodland and valleyland to avoid direct impacts on the features to the extent feasible.

The long-term stable slope of the valley features associated with eastern tributary and the Credit River to the south was determined through a slope stability study undertaken by Terraprobe, and a 10 m setback has been applied as per CVC policy.

As noted in **Section 5.5**, Beacon demarcated the limits of the significant woodland by including the natural portion of the forest community.

The physical separation of development from natural feature using buffers or vegetated protection zones is often used for softening or reducing the impacts of land use changes on adjacent natural

features (OMNR 2010). Buffers may sometimes be prescribed on the basis of policy, but the determination of a buffer should consider the sensitivity of the feature and the nature of the proposed adjacent land use. According to the Natural Heritage Reference Manual (OMNR 2010), to be consistent with the PPS, an evaluation of the ecological function of adjacent land is required if development and site alteration are proposed on them. Appropriate demonstration of no negative impacts on natural features or on their ecological functions could include the delineation of buffers that should be established and retained. Buffers must be determined and rationalized based on their ability to protect natural features and their associated functions.

The land adjacent to the natural heritage features on the subject property consists of existing residential development, which was established in the 1960's. Residential development also occurred along the east side of the valley feature in the late 1960's or early 1970's. The proposed development represents light intensification and is not a signficant departure from the current land use. It is not expected that the proposed new uses (residential lots) would introduce any additional long-term stressors that would impact the natural valleylands, woodlands and their ecological functions, notwithstanding short-term impacts related to the recent tree violation.

As the proposed new uses are comparable to existing uses, it is Beacon's opinion that an ecological buffer is not necessary and that the woodland can be protected using other measures such as edge management plantings, fencing, signage, and information to educate future homeowners as discussed in **Section 7.2**.

Trees located along the edge of the woodland with canopies extending over existing development can be protected by implementing the recommended tree protection measures (i.e., tree protection zones) outlined in the Arborist Report (SBK 2021).

6. Proposed Development

The proposed re-development of the subject property consists of five residential lots and a common element condo road as illustrated in **Figure 4**. Lots 1-4 will each support a new single detached dwelling, and the existing dwelling will be retained on lot 5. Conceptual building footprints are illustrated in **Figure 3**; however, the ultimate building footprints/locations may be refined for Site Plan Application. The condo road will be shared with a proposed redevelopment of the adjacent property at 904 Mississauga Heights Drive.

The proposed re-development can l be serviced by connecting to the existing sanitary sewer and water supply infrastructure along Mississauga Heights Drive.

Stormwater runoff from the lots will be conveyed to a storm sewer under the proposed private road and discharged by controlled release to the watercourse located on the east side of the property. Quality control can be achieved with an oil-and-grit separator. For details on the proposed site servicing and stormwater management, refer to the Functional Servicing Report (Skira 2021).

7. Impact Assessment and Mitigation

This section discusses the potential direct and indirect impacts that the proposed re-development may have on the natural heritage features on the property and mitigation measures to avoid, minimize, or off-set potential impacts are recommended.

7.1 Impact Assessment

7.1.1 Hazard lands/Valleyland

For Lots 1-4, the proposed development limits are setback 10 m from the long-term stable top of slope. For lot 5, the existing dwelling (which will remain) is situated within the setback to the long-term stable slope; therefore, the lot line has been established at the top of stable slope. Aside from a stormwater outfall to the watercourse, no new development is proposed within the valleyland or this 10 m setback.

The proposed stormwater outfall to the watercourse will be constructed using directional drilling as opposed to open trench in order to minimize impacts on valley form. This will greatly minimize the potential impact footprint.

7.1.2 Significant Woodland and Wildlife Habitat

The proposed development limits of lots 2, 3, and 4 overlap with portions of the significant woodland on the tableland of the subject property. It is recommended that the portions of the significant woodland that are retained within the proposed lots be protected through an appropriate zoning or designation with restrictive covenants prohibiting vegetation clearing and construction of buildings or accessory uses. It is understood that the proposed Zoning By-law Amendment introduces a Tree Preservation Area/overlay. The Tree Protection Area zoning permits only conservation purposes, and no buildings or structures, swimming pools, tennis courts or any like recreational facilities, except for fences along the lot lines, shall be permitted. These Tree Preservation Area regulations have been utilized in other areas in Mississauga (refer to Zoning Regulations for R2-24, R2-25, R3-9, R4-25, R4-26, R4-32, R4-33, and R5-21).

Notwithstanding, as discussed previously, it is acknowledged that a portion of the signficant woodland was recently disturbed, and it is understood that this was a violation of Mississauga's private tree by-law, which is currently being resolved through a legal process with the City. On lot 3, the building footprint slightly overlaps with the formerly wooded area. It is understood that the building footprints are conceptual and may be refined through a subsequent Site Plan Application.

As the proposed re-development is represents a modest intensification compared to the existing residential land use, the existing natural features have long adapted to the surrounding urban environment and it is not expected that the development will introduce novel disturbances or adverse impacts to the woodland feature or its habitat functions. The woodlands will continue to provide potential bat maternity roost habitat and migratory bird stop over habitat.

With the introduction of buildings adjacent to treed areas, there is a risk of birds colliding against windows. Birds are unable to perceive clear or reflective glass and sometimes fly into windows when trees or sky are reflected in the glass. Methods exist to limit such impacts and those are discussed in **Section 7.2**.

Trees along the edge of the woodland will be protected with tree protection zones as recommended in the Arborist Report (SBK 2021).

The stormwater outfall to the watercourse will be installed via direction drilling to avoid impacts on the woodland vegetation within the valley.

7.1.3 Removal of Tableland Vegetation

The Arborist Report (SBK 2021) identifies individual trees that will require removal to facilitate the proposed re-development. All proposed tree removals are limited to the tableland portions of the property and contained within the existing developed area. No trees are proposed for removal from the adjacent significant woodland.

7.1.4 Temporary or Permanent Disturbance to Urban Tolerant Wildlife

Habitat for a small number of bird species will be disturbed or removed as a result of tree removals discussed in section 7.1.3. The species associated with this area are all common in urban environments.

Wildlife associated with the valleylands and natural woodlands are considered well adapted to the existing disturbances and stressors of an urban matrix (e.g., noise, light) and the proposed re-development is not expected to introduce new types of stressors. The subject property and adjacent lands have supported residential uses for over 50 year, so the cumulative impact of any long-term stressors has already exceeded the sensitivity thresholds of the remaining species that utilize the valleylands and woodlands as habitat.

7.1.5 Soil Mobilization and Impacts on Aquatic Habitat

Construction works such as grading, grubbing and excavation has the potential to cause the movement of sediment into the adjacent watercourses, which can degrade water quality and impact downstream aquatic habitat. This impact can be mitigated as discussed in the following section.

7.1.6 Post-development Residential Impacts

Post construction, residential use of the property could potentially impact the adjacent natural areas. Potential impacts include:

- Dumping yard waste and accumulation of debris in natural areas;
- Informal trails and trampling of vegetation;
- Introduction of invasive species used in landscaping;

- Removal of natural vegetation; and
- Storage of materials, placement of structures.

7.2 Mitigation

Potential impacts to the significant natural heritage features can largely be avoided or minimized through the following mitigation recommendations:

- Signficant Woodlands associated with the tableland should be protected through an appropriate zoning or land use designation that prohibits tree removal or site alteration within the feature limits;
- Stormwater should be managed in accordance with the recommendations of the FSR (Skira 2021) to meet the requirements for quantity and quality control;
- The proposed SWM outfall to the watercourse should be installed via directional drilling to minimize impacts on the valley form and woodland vegetation the slope;
- Landscaping plans for the site should utilize a diversity of local native species that are complimentary to the adjacent valley corridor;
- An educational brochure should be prepared and distributed to purchasers to inform them about the natural heritage features on and adjacent to the property and provide stewardship recommendations that can be implemented to protect the health and integrity of the natural heritage system;
- An erosion and sediment control plan should be prepared for the construction phase of the development and approved by CVC prior to the start of construction works and to the standard of Erosion and Sediment Control Guideline for Urban Construction (December 2006). ESC measures should be regularly inspected and maintained in good working order throughout the construction period;
- All construction and development related activities must be confined to the approved limit of development, with the exception of those areas subject to naturalization and/or where landscaping works are approved;
- Trees should be preserved in accordance with the recommendations of the Arborist Report (SBK 2021);
- Following construction, temporary erosion and sediment control measures should be removed after soils are sufficiently covered and stabilized. Exposed soils should be stabilized as soon as possible through re-vegetation using native species or other appropriate methods;
- Permanent fencing should be established at the limit of development do discourage human encroachment into the adjacent valley. Signage should be designed and installed on the fence indicating that the area is a Significant Natural Area;
- Where the tableland woodlot extends into the proposed lots, instead of a fence, a series of bollards or monuments should be installed at the limit of the Tree Preservation Zone. A sign or plaque should be designed and affixed to each bollard identifying the area as Tree Preservation Zone and Signficant Natural Area;
- With the construction of buildings adjacent to treed areas, there is a risk of birds colliding against windows. Birds are unable to perceive clear or reflective glass d they sometimes fly into windows when trees or sky are reflected in the glass. There are a number of options available that help make glass visible to birds. For example, patterns or films applied to glass

can reduce reflection and provide visual markers that allow birds to perceive and avoid the windows. Window applications are especially important at the first 12 m above grade;
- The removal of trees from the site has the potential to disturb breeding birds that may be nesting in the trees. The federal *Migratory Birds Convention Act* protects the nests, eggs and young of most bird species from harassment, harm, or destruction. The breeding bird season in southern Ontario is generally from April 1 to August 31; therefore, the clearing of vegetation should be outside of these dates (i.e., between September 1 and March 31); and
- Existing developed areas (i.e., lawn, pavement) within the top of slope setback should be removed and restored with a diversity of native trees and shrubs that are complimentary to the NHS. Restoration and Enhancement Areas are illustrated in **Figure 3**. Recommendations have not been provided for the areas of woodland impacted by recent tree removals as it is Beacon's understanding that the matter is being addressed with the City.

8. Monitoring

To evaluate the effectiveness of mitigation measures recommended in the EIS, it will be necessary to implement some environmental monitoring. It is recommended that the monitoring program focus on mitigation measures such as erosion and sediment controls, landscaping, and encroachment.

8.1 Enhancement Area Monitoring

Following implementation of the restoration and enhancement plan, which was recommended for portions of the 10 m setback, the plantings should be inspected annually during the 2-year warranty period or more frequently during times of drought. Site inspections should focus on assessing and documenting the following:

- Survivorship and health of planted material;
- Presence and extent of weeds; and
- Quality and condition of growing media (soil and mulch).

Any issues or deficiencies (e.g., dead plant material, excessive growth of weeds) will be reported to the contractor in writing with recommendations to address such deficiencies (e.g., replacement of dead trees within the warranty period, watering, etc.).

8.2 Erosion and Sediment Control

Sediment laden runoff from construction sites can adversely impacts adjacent wetlands and watercourses. Inspection of sediment and erosion control measures should be undertaken to ensure exposed soils from the construction site to not reach the adjacent valleyland and watercourse.

8.3 Encroachment Related Impacts

A number of mitigation measures were identified to minimize or avoid encroachment related impacts on the significant woodland. To evaluate the effectiveness of these measures, monitoring is recommended along the edge of the significant woodland post-development. The significant woodland should be surveyed once annually for three years following build-out, noting the type and extent of human-related disturbances within the NHS (if any).

Findings may provide the basis for site-specific adaptive management recommendations to be undertaken by the Owner within the established monitoring period. The findings may also support suggestions for CVC and the City to consider in terms of long-term natural area management.

9. Policy Conformity

A summary of federal, provincial, and municipal environmental protection and planning policies and regulations applicable to the Subject Property were discussed in **Section 2**. An evaluation of how the proposed re-development complies with the applicable l policies and legislation is summarized in **Table 2.**

Table 2. Policy Compliance Assessment

Applicable Policy / Legislation	Relevant EIS Findings and Recommendations
Federal Fisheries Act (1985)	Not applicable. There is no fish habitat associated with the property.
Endangered Species Act (2007)	Not applicable. No habitat for threatened or endangered species was found to be associated with the property.
Provincial Policy Statement (2020) Section 2.1 – Natural Heritage	
1. Habitat for Threatened and Endangered Species	Not applicable. No habitat for threatened or endangered species was found to be associated with the property.
2. Significant Valleylands	The Credit River valley is a significant valleyland. No impacts on the Credit River valleylands are anticipated.
3. Significant Wetlands	Not applicable. There are no wetlands associated with the property.
4. Significant Coastal Wetlands	No applicable. There are no wetlands associated with the property.
5. Significant Woodlands	The subject property supports a signficant woodland that is mainly associated with the valleylands but does extends partially onto the tablelands. The proposed lot lines overlap with the tableland woodland. This portion of the woodland will be designated a Tree Preservation Area and zoned accordingly with restriction on vegetation removals. While there is overlap with the proposed lots, the proposed buildings and any accessory uses will be located outside the woodland. Where proposed lots overlap with significant woodland, the woodland will be zoned a “Tree Preservation Area” prohibiting construction of dwellings, accessory structures, outdoor amenities,

Applicable Policy / Legislation	Relevant EIS Findings and Recommendations
	or clearing of trees and other vegetation. Additional mitigation measures have been identified in this report to protect the woodland features.
6. Significant Wildlife Habitat	The subject property supports potential SWH associated with the significant woodland and valleylands. The development overlaps with SWH associated with the tableland woodland. This portion of the woodland will be designated a Tree Preservation Area and zoned accordingly with restriction on vegetation removals. While there is overlap with the proposed lots, the proposed buildings and any accessory uses will be located outside the woodland and associated SWH.
7. Significant Areas of Natural and Scientific Interest	Not applicable. There are no ANSIs associated with the property.
Provincial Policy Statement (2020) Section 2.3 – Natural Hazards	Development of the subject property will be limited to areas outside natural hazards and will be setback 10 m from the long-term stable top of slope.
Region of Peel OP	The Regional Greenlands System consists of "Core Areas", "Natural Areas and Corridors (NAC)", and "Potential Natural Areas and Corridors (PNAC)". Core Areas of the Greenlands System are mapped on Schedule A of the Regional Official Plan. Based on this mapping, the adjacent Credit River valley and the smaller forested ravine along the east side of the property has been designated a Core Area. No development is proposed within the Significant Valleyland. A 10 m setback has been provided to the greater of the physical and long-term stable top of slope. The development lot lines overlap with the tableland woodland. This portion of the woodland will be designated a Tree Preservation Area and zoned accordingly with restriction on vegetation removals. While there is overlap with the proposed lots, the proposed buildings and any accessory uses will be located outside the woodland and associated SWH.
Mississauga OP (2016)	
1. Natural Heritage System	The Credit River valley and associated tributary located on the east side of the subject property is part of the City's Natural Heritage System as it has been designated a Significant Natural Area and supports the following features: • Signficant Woodland • Potential Significant Wildlife Habitat • Significant Valleyland No development is proposed within the Significant Valleyland. A 10 m setback has been provided to the greater of the physical and long-term stable top of slope. The development lot lines overlap with the signficant woodland and corresponding potential SWH associated with the tableland woodland. This portion of the woodland will be designated a Tree Preservation Area and zoned accordingly with restriction on site alteration and vegetation removals. While there is overlap with the proposed lots, the proposed buildings and any accessory uses will be located outside the woodland and associated SWH.
2. Natural Hazard Lands	The proposed development is limited to areas outside natural hazards and will be setback 10 m from the long-term stable slope.
3. Urban Forest	A tree inventory and preservation plan was prepared for the subject property.

Applicable Policy / Legislation	Relevant EIS Findings and Recommendations
	Trees identified for preservation will be protected as per the recommendations in the arborist report (SBK 2021). Tree removals are required to accommodate the proposed development, which will result in reduction to the urban forest canopy. Accordingly, replacement trees will be planted on the subject property to restore the urban forest canopy.
CVC Regulation and Polices	A 10 m setback has been applied to the long-term stable slope as per CVC policy. No development is proposed within hazard limit or setback.

10. Conclusion

Diamond Developments (900 Mississauga Heights) Inc. Is proposing to redevelop the property located at 900 Mississauga Heights Drive in the City of Mississauga. The property currently contains an existing dwelling and accessory uses. The proposed re-development of the subject property consists of five residential lots and a common element condo road. Lots 1-4 will each support a single detached dwelling, and the existing single detached dwelling will be retained on lot 5.

The subject property abuts the Credit River valley to the south and overlaps with a woodland and small tributary valley feature to the east, which are part of the City's Natural Heritage System and the Region's Greenlands System. This EIS describes the natural heritage features and ecological functions associated with the property, assesses the potential direct and indirect impacts of the proposed re-development on these features and functions, and recommends mitigation and enhancement measures to protect and restore significant natural heritage features.

The proposed re-development will be limited to area currently occupied by existing residential development. The valleylands will be protected and a 10 m setback has been applied to the long-term stable slope limit. The lot lines overlap with signficant woodland on the tableland of the property. This portion of the woodland will be appropriately zoned with restrictions on vegetation removal and development. While there is overlap between portions of the signficant woodland and the proposed lots, the proposed buildings and any accessory uses will be located outside the woodland. In other parts of the site, notably lots 1 and 4, based on the 10 m setback to the top of slope, the proposed development provides greater separation from the NHS than currently exists. Where the existing development (lawn, pavement) overlaps with the 10 m setback to the top of slope, there is an opportunity to restore these areas with native species that are complimentary to the NHS.

In summary, the proposed redevelopment is not expected to adversely impact the natural heritage features and ecological functions associated with the Natural Heritage System provided that the mitigation and enhancement measures recommended in this report and companion studies (Arborist Report (SKB 2021) and, FSR (Skira 2021) are implemented.

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Proposed Condominium Development 900 Mississauga Heights City of Mississauga Regional Municipality of Peel. November 2021.

Appendix A

EIS Scoping Checklist

Environmental Impact Study Checklist
October 2017

MISSISSAUGA

Applicant: Jenny Chau
Env. Consultant: Beacon Environmental
Phone: **416.831.2800**
Phone: 519-826-0419
Email: jenkadesign@rogers.com
Email: dwesterhof@beaconenviro.com
PAM and/or DARC # and Date: DARC 17-362, Nov. 22, 2017

Development Application (check): ☑ Official Plan Amendment ☑ Zoning By-law Amendment ☑ Site Plan Application ☐ Subdivision ☑ Condominium ☑ Other *Exemption from Part-Lot Control*

Site / Property Address: 900 Mississauga Heights Drive

Process

- Applicant requests site meeting prior to initial submission
- After site meeting, environmental consultant completes EIS Checklist based on on-site discussion and submits to City for confirmation
- EIS, with EIS Checklist included as an appendix, becomes part of complete application
- Depending on application type, an addendum may be required with subsequent applications (eg. level of detail required at OPA versus Site Plan)
- Natural heritage records generally require updates or field verification after 5 years
- If additional questions, please contact _____

Content

The following is a checklist of all the potential sections that may need to be addressed as part of an EIS. However, depending on the scope and scale of the proposed development and/or site alteration, as well as the nature and extent of natural heritage features and areas to be considered, not all elements will necessarily be required. Components not included in the Terms of Reference, with a rationale for their exclusion, should be marked as "N/A".

1. Introduction

- ☑ Description of subject property (natural features and areas, land cover, existing hard surfaces or buildings)
- ☑ Description of the type and scale of the development proposal (including, but not limited to, servicing, above and below ground structures, proposed grading)
- ☑ Describe the historical and present uses of the subject property:
  - ☐ grading/filling activities
  - ☐ brownfield contamination
- ☑ Description of the site context/study area and the subject property's relationship to the surrounding landscape
- ☑ Include map(s) of the development location, subject property and study area
  - ☐ Orthographic map with known natural heritage features/areas overlaid

2. Planning Context

- ☑ Current land uses designation and zoning for the subject property and for the adjacent lands, including Upper and Lower Tier designations
- ☑ Identify the type of required development applications
- ☑ Include map(s) of the development location and extent of the area to be studied including current Land Use / Zoning
- ☑ Identify environmental legislative, regulatory and policy requirements that may affect the development proposal, including clauses relevant to the proposal (Federal, Provincial, Municipal – Upper and Lower Tier, and Conservation Authority)

3. Background Review

- ☑ Identify relevant information from existing studies, plans, databases and other sources to be analyzed as part of the EIS including, but not limited to, Natural Heritage and Urban Forest Strategy, Natural Areas Survey, Region of Peel data, Conservation Authority data, Natural Heritage Information Centre

4. Characterizing the Natural Environment: Approach and Methodology

- ☑ Detailed study methods for studying natural heritage features and areas, wildlife habitat and Species at Risk (including time of year, level of searcher effort, etc.)
- ☑ Identify and describe the approach and methods to be used to assess natural environment of the subject property and the adjacent lands for:
    - ☐ Geology and Soils *Background review*
    - ☐ Hydrology and Hydrogeology *Background review*
    - ☐ Aquatic and Fish Habitat *Background review*
    - ☐ Terrestrial Vegetation (including wetlands) *Site visit - spring*
    - ☐ Vegetation Communities (Ecological Land Classification) *Background review; Site visit - spring*
    - ☐ Wildlife *Breeding Birds, Spring*
    - ☐ Natural Hazards *Background review*
    - ☐ Connectivity and Ecological Linkages
- ☐ Identify whether there are potential natural heritage features and areas that do not need to be assessed, and provide a rationale for their exclusion
- ☑ Complete a screening for Significant Wildlife Habitat
- ☑ Include map(s) showing locations for field studies (i.e. points, plots, transects)
- ☐ Tree inventory and preservation plan for trees outside of the NAS completed by others

5. Data Analysis: Approach and Methodology

- ☑ Evaluation of Significance and Natural Hazards—identify that the following assessments are in scope and any known analysis that will need to be included
    - ☐ Natural heritage features and areas against the appropriate policies and guidelines to determine significance:
    - ☐ Natural heritage features and areas against the appropriate policies and guidelines related to natural hazards:
    - ☐ Appropriate buffers and/or setbacks to the natural heritage features
- ☑ Natural Heritage Opportunities and Constraints— identify that it is in scope
- ☑ Environmental Policy Analysis (confirmation of policies and legislation to be addressed)
- ☑ Impact Assessment—identify that the scope includes direct, indirect, and cumulative impacts
- ☐ Evaluation of Alternative Options/Measures—establish key analysis points to be addressed in the EIS
- ☑ Recommended Mitigation Measures (including, but not limited to avoidance, enhancement, restoration, education and stewardship)

6. Monitoring

- ☑ Monitoring Plan (outline of the types of monitoring to be included in the EIS)

7. Recommendations and Conclusion

- ☑ Recommendations Concluding Statement (confirm they are to be provided in the EIS)

Signatures

Env. Consultant: _____ Date: _____

City Of Mississauga: _____ Date: _____

From: Sarah Piett
To: Dan Westerhof
Subject: 900 Mississauga Heights Drive scoped EIS
Date: Friday, July 20, 2018 7:06:58 AM
Attachments: image001.png

Hi Dan,

My apologies for the delay in responding – the checklist looks good, with only one addition recommended. I'd request that an additional site visit be conducted to document summer vegetation and ELC due to the extensive nature of the proposed development at the site.

If you have any questions, please let me know.

Thanks,

Sarah

Sarah Piett, M.E.S.
Natural Heritage Coordinator | Forestry
ISA Certified Arborist ON-1812A
905-615-3200 ext.3379 | sarah.piett@mississauga.ca
City of Mississauga | Community Services Department
Parks and Forestry Division

onemilliontrees.ca
Follow us on Twitter: @MississaugaPF | ***#1milliontrees***

From: Dan Westerhof [mailto:dwesterhof@beaconenviro.com]
Sent: 2018/05/17 1:27 PM
To: Sarah Piett
Subject: 900 Mississauga Heights Drive scoped EIS

Hi Sarah,

Here is another scoping checklist for your review.

Thanks,

Dan Westerhof, B.Sc, MES
Terrestrial Ecologist, Certified Arborist
BEACON ENVIRONMENTAL
373 Woolwich Street, Guelph, ON N1H 3W4
T) 519.826.0419 x25 F) 519.826.9306 C) 519.362.8595
www.beaconenviro.com

Appendix B

Vascular Plant Species List

Appendix B

Vascular Plant Species List

Scientific Name	Common Name	COSEWIC	COSSARO	S-RANK
Rhus typhina	Staghorn Sumac			S5
Toxicodendron rydbergii	Western Poison Ivy			S5
Daucus carota	Queen Anne's Lace			SNA
Osmorhiza sp.	Sweet-cicely Species			
Apocynum androsaemifolium ssp. *androsaemifolium*	Spreading Dogbane			S5
Vinca minor	Periwinkle			SNA
Aralia nudicaulis	Wild Sarsaparilla			S5
Hedera helix	English Ivy			SNA
Cynanchum rossicum	European Swallow-wort			SNA
Achillea millefolium var. *millefolium*	Common Yarrow			SNA
Arctium lappa	Greater Burdock			SNA
Bidens frondosa	Devil's Beggar's Ticks			S5
Cirsium arvense	Creeping Thistle			SNA
Erigeron canadensis	Fleabane			S5
Eurybia macrophylla	Large-leaved Aster			S5
Solidago altissima var. altissima	Tall Goldenrod			S5
Solidago caesia	Bluestem Goldenrod			S5
Solidago canadensis	Canada Goldenrod			S5
Solidago flexicaulis	Broad-leaved Goldenrod			S5
Symphyotrichum cordifolium	Heart-leaved Aster			S5
Symphyotrichum ericoides var. *ericoides*	Heath Aster			S5
Symphyotrichum lateriflorum var. *lateriflorum*	Calico Aster			S5
Symphyotrichum novae-angliae	New England Aster			S5
Tanacetum vulgare	Common Tansy			SNA
Taraxacum officinale	Common Dandelion			SNA

Scientific Name	Common Name	COSEWIC	COSSARO	S-RANK
Tussilago farfara	Colt's Foot			SNA
Podophyllum peltatum	May Apple			S5
Betula papyrifera	Paper Birch			S5
Ostrya virginiana	Eastern Hop-hornbeam			S5
Cynoglossum officinale	Hound's-tongue			SNA
Alliaria petiolata	Garlic Mustard			SNA
Campanula rapunculoides	Creeping Bellflower			SNA
Diervilla lonicera	Northern Bush-honeysuckle			S5
Lonicera tatarica	Tartarian Honeysuckle			SNA
Viburnum acerifolium	Maple-leaf Viburnum			S5
Cerastium sp.	Chickweed Species			
Euonymus alata	Winged Spindle-tree			SNA
Euonymus fortunei	Winter-creeper			SNA
Hypericum perforatum	St. John's-wort			SNA
Cornus alternifolia	Alternate-leaf Dogwood			S5
Cornus racemosa	Gray Dogwood			S5
Echinocystis lobata	Wild Mock-cucumber			S5
Carex pensylvanica	Pennsylvania Sedge			S5
Carex sp.	Sedge Species			
Pteridium aquilinum var. *latiusculum*	Bracken Fern			S5
Dipsacus fullonum ssp. *sylvestris*	Common Teasel			SNA
Dryopteris carthusiana	Spinulose Wood Fern			S5
Dryopteris marginalis	Marginal Wood Fern			S5
Equisetum arvense	Field Horsetail			S5
Gymnocladus dioicus (planted)	Kentucky Coffee-tree	THR	THR	S2
Lotus corniculatus	Bird's-foot Trefoil			SNA
Medicago lupulina	Black Medic			SNA
Melilotus altissima	White Sweet Clover			SNA
Trifolium repens	White Clover			SNA
Vicia cracca	Tufted Vetch			SNA

Scientific Name	Common Name	COSEWIC	COSSARO	S-RANK
Fagus grandifolia	American Beech			S5
Ginkgo biloba	Maiden-hair Tree			SNA
Quercus alba	White Oak			S5
Quercus macrocarpa	Bur Oak			S5
Quercus rubra	Northern Red Oak			S5
Geranium maculatum	Wild Geranium			S5
Geranium robertianum	Herb-robert			S5
Ribes cynosbati	Prickly Gooseberry			S5
Hamamelis virginiana	American Witch-hazel			S5
Hydrophyllum virginianum	Virginia Waterleaf			S5
Juglans nigra	Black Walnut			S4?
Leonurus cardiaca ssp. *cardiaca*	Common Motherwort			SNA
Nepeta cataria	Catnip			SNA
Prunella vulgaris ssp. *vulgaris*	Common Heal-all			SNA
Convallaria majalis	European Lily-of-the-valley			SNA
Erythronium americanum ssp. *americanum*	Yellow Trout-lily			S5
Maianthemum canadense	Wild-lily-of-the-valley			S5
Maianthemum racemosum ssp. *racemosum*	False Solomon's Seal			S5
Polygonatum pubescens	Downy Solomon's Seal			S5
Scilla siberica	Squill			SNA
Trillium grandiflorum	White Trillium			S5
Malva neglecta	Cheeses			SNA
Forsythia viridissima	Golden-bells			SNA
Fraxinus americana	White Ash			S5
Syringa vulgaris	Common Lilac			SNA
Circaea lutetiana ssp. *canadensis*	Enchanter's Nightshade			S5
Oenothera biennis	Common Evening-primrose			S5
Oxalis stricta	Upright Yellow Wood Sorrel			S5
Picea glauca	White Spruce			S5
Pinus strobus	Eastern White Pine			S5

Scientific Name	Common Name	COSEWIC	COSSARO	S-RANK
Plantago major	Nipple-seed Plantain			SNA
Bromus inermis ssp. *inermis*	Smooth Brome			SNA
Dactylis glomerata	Orchard Grass			SNA
Elymus repens	Quack Grass			SNA
Poa nemoralis	Woods Bluegrass			SNA
Poa pratensis ssp. *pratensis*	Kentucky Bluegrass			SNA
Prenanthes sp.	Rattlesnake-root Species			
Actaea rubra	Red Baneberry			S5
Anemone quinquefolia var. *quinquefolia*	Wood Anemone			S5
Ranunculus abortivus	Kidney-leaved Buttercup			S5
Thalictrum dioicum	Early Meadowrue			S5
Rhamnus cathartica	Buckthorn			SNA
Amelanchier sp.	Serviceberry Species			
Crataegus punctata	Dotted Hawthorn			S5
Crataegus sp.	Hawthorn Species			
Geum aleppicum	Yellow Avens			S5
Geum urbanum	Clover-root			SNA
Potentilla recta	Sulphur Cinquefoil			SNA
Prunus serotina	Wild Black Cherry			S5
Prunus virginiana var. *virginiana*	Choke Cherry			S5
Rosa multiflora	Rambler Rose			SNA
Rubus allegheniensis	Allegheny Blackberry			S5
Rubus idaeus ssp. *strigosus*	Wild Red Raspberry			S5
Rubus occidentalis	Black Raspberry			S5
Rubus odoratus	Purple-flowering Raspberry			S5
Rubus pubescens	Dwarf Raspberry			S5
Galium mollugo	White Bedstraw			SNA
Populus deltoides ssp. *deltoides*	Eastern Cottonwood			S5
Acer japonicum	Japanese Maple			SNA
Acer negundo	Manitoba Maple			S5

Scientific Name	Common Name	COSEWIC	COSSARO	S-RANK
Acer platanoides	Norway Maple			SNA
Acer rubrum	Red Maple			S5
Acer saccharinum	Silver Maple			S5
Acer saccharum var. *saccharum*	Sugar Maple			S5
Linaria vulgaris	Butter-and-eggs			SNA
Veronica officinalis	Common Speedwell			SNA
Solanum dulcamara	Climbing Nightshade			SNA
Tilia americana	American Basswood			S5
Urtica dioica ssp. *dioica*	Stinging Nettle			SNA
Valeriana officinalis	Common Valerian			SNA
Viola sororia	Woolly Blue Violet			S5
Parthenocissus vitacea	Thicket Creeper			S5
Vitis riparia	Riverbank Grape			S5

Appendix C

Breeding Bird List

Appendix C

Breeding Bird List

Common Name	Scientific Name	Status				# Breeding Territories
		National Species at Risk COSEWICa	Species at Risk in Ontario Listing a	Provincial breeding season SRANK [b]	Area-sensitive (OMNR)c	
Cooper's Hawk	*Accipiter cooperi*			S4	A	1
Red-bellied Woodpecker	*Melanerpes carolinus*			S4		1
Downy Woodpecker	*Picoides pubescens*			S5		1
Northern Flicker	*Colaptes auratus*			S4		1
Eastern Wood-Pewee	*Contopus virens*	SC	SC	S4		1
Eastern Phoebe	*Sayornis phoebe*			S5		1
Great Crested Flycatcher	*Myiarchus crinitus*			S4		1
Blue Jay	*Cyanocitta cristata*			S5		1
Black-capped Chickadee	*Poecile atricapillus*			S5		1
Red-breasted Nuthatch	*Sitta canadensis*			S5	A	1
House Wren	*Troglodytes aedon*			S5		1
American Robin	*Turdus migratorius*			S5		3
Cedar Waxwing	*Bombycilla cedrorum*			S5		2
Red-eyed Vireo	*Vireo olivaceus*			S5		1
Black-throated Green Warbler	*Setophaga virens*			S5	A	F
American Redstart	*Setophaga ruticilla*			S5	A	F
Scarlet Tanager	*Piranga olivacea*			S4	A	F
Northern Cardinal	*Cardinalis cardinalis*			S5		2
Song Sparrow	*Melospiza melodia*			S5		2
Brown-headed Cowbird	*Molothrus ater*			S4		1
Baltimore Oriole	*Icterus galbula*			S4		1
American Goldfinch	*Spinus tristis*			S5		2
House Sparrow	*Passer domesticus*			SNA		1

Field Work Conducted On: May 29 and June 10, 2018
F indicates foraging birds (not breeding)
Number of Species: 23 (3 non-breeding)
Number of (provincial and national) Species at Risk: Eastern Wood-pewee (Special Concern)
Number of S1 to S3 Species: 0
Number of Area-sensitive Species: 2 breeding (Red-breasted Nuthatch and Cooper's Hawk)

KEY
a COSEWIC = Committee on the Status of Endangered Wildlife in Canada
END = Endangered, THR = Threatened, SC = Special Concern

[b] SRANK (from Natural Heritage Information Centre) for breeding status if:
S1 (Critically Imperiled), S2 (Imperiled),S3 (Vulnerable), S4 (Apparently Secure), S5 (Secure)

KEY
[a] COSEWIC = Committee on the Status of Endangered Wildlife in Canada
[b] Species at Risk in Ontario List (as applies to ESA) as designated by COSSARO (Committee on the Status of Species at Risk in Ontario)
END = Endangered, THR = Threatened, SC = Special Concern
[c] SRANK (from Natural Heritage Information Centre) for breeding status if:
S1 (Critically Imperiled), S2 (Imperiled),S3 (Vulnerable), S4 (Apparently Secure), S5 (Secure)
SNA (Not applicable…'because the species is not a suitable target for conservation activities'; includes non-native species)
[d] Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide (Appendix G). 151 p plus appendices.
[e] Breeding Status: X = Breeding; FO =flyover; NB = Not Breeding

Appendix D

Significant Wildlife Habitat Assessment

Appendix D

Significant Wildlife Habitat Assessment

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Seasonal Concentration Areas of Animals		
Waterfowl Stopover and Staging Areas (Terrestrial)	Fields with sheet water or fields utilized by Tundra Swans 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 used by Tundra Swans in the Long Point, Rondeau, Lk. St. Clair, Grand Bend and Pt. Pelee areas.	**No** Suitable habitat was not observed within the subject property
Waterfowl Stopover and Staging Areas (Aquatic)	Ponds, marshes, lakes, bays, costal inlets and watercourses that are used as stopover areas during migration. These habitat typically have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water).	**No** Suitable habitat was not observed within the subject property
Shorebird Migratory Stopover Area	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH	**No** Suitable habitat was not observed within the subject property
Raptor Winter Area	A combination of fields and woodlands that provide roosting, foraging and resting habitat for wintering raptors. These sites need to be larger than 20 ha in size, of which at least 15 ha needs to be comprised of idle/fallow or lightly grazed field/meadow.	**No** Suitable habitat was not observed within the subject property
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and karsts.	**No** Suitable habitat was not observed within the subject property
Bat Maternity Colonies	Maternity colonies can be found in tree cavities, vegetation and buildings. Deciduous and mixed forest communities with greater than 10 ha of large diameter (> 25 cm dbh) wildlife trees.	**Potential** Forest communities on and adjacent to the subject property are candidate for this type of habitat.

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Turtle Winter Areas	Over-wintering sites for turtles are typically in the same area as their core habitat. Waterbodies have to be deep enough to not frees and have soft mud substrates.	**No** Suitable habitat was not observed within the subject property
Snake Hibernaculucm	Snakes hibernate in sites located below frost lines in burrows, rock crevices and other natural locations. Rock piles, slopes, stones fences and crumbling foundations can also be used by hibernating snakes. Areas of broken and fissures rocks can also provides access to sites below the frost line.	**No** Suitable habitat was not observed within the subject property
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area.	**No** Suitable habitat not observed within the subject property
Colonially - Nesting Bird Breeding Habitat Breeding Habitat (Tree/Shrubs)	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and occasionally emergent vegetation may also be used.	**No** Suitable habitat not observed within the subject property
Colonially - Nesting Bird Breeding Habitat (Ground)	Nesting colonies of gulls and terns occur on rocky islands or peninsulas within a lake or larger river	**No** Suitable habitat was not observed within the subject property
Migratory Butterfly Stopover Areas	Cultural meadow, savannah and thicket communities that are within 5 km of Lake Ontario, at least 10 ha in size and contain a combination of field and forest habitat	**No** Suitable habitat was not observed within the subject property
Landbird Migratory Stopover Areas	Woodlands that are at least 10 ha in size and within 5 km of lake Ontario.	**Potential** Contiguous forest communities on and adjacent to the subject property are candidate for this type of habitat
Deer Yarding Areas	Deer yarding areas or winter concentration within a mixed or coniferous forest and swamp communities.	**No** Suitable habitat not observed within the subject property
Deer Winter congregation Areas	Deer movement in winter months within eco-region 6E are not constrained by snow depth, however they still congregate in suitable woodlands. These woodlands will typically be larger than 100 ha in size, however woodlands smaller than 100 ha may be considered significant based on MNR assessments.	**No** Suitable habitat was not observed within the subject property
Rare Vegetation Communities		

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Cliffs and Talus Slops	A cliff is a vertical to near vertical bedrock that is greater than 3 m in height. A talus slope is rock rubble at the base of a cliff made up of coarse rocky debris.	**No** Cliffs or tallus slopes were not observed within the subject property
Sand Barren	Sand barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little to no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah.	**No** Sand barren was not observed within the subject property
Alvar	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.	**No** Alvar was not observed within the subject property
Old Growth Forest	Old growth forests are characterized by heavy mortality or turnover of over story trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris. Stands must be 30 ha or greater in size with a minimum of 10 ha of interior habitat (interior habitat determined with a 100 m buffer).	**No** While some trees with the forest may be considered old growth, the forest feature is narrow and does not support interior habitat.
Savannah	Savannah is a tallgrass prairie habitat that has tree cover between 20 - 60%.	**No** Savannah habitat was not observed within the subject property
Tallgrass Prairie	Tallgrass Prairie has ground cover that is dominated by prairie grasses. An open tallgrass prairie has less than 25% tree cover.	**No** Tallgrass Prairie was not observed within the subject property
Other Rare Vegetation Communities	Rare vegetation communities may include beaches, fens, forests, marsh, barrens, dunes and swamps, as identified in Appendix M of the Significant Wildlife Habitat Technical Guide.	**No** Rare vegetation communities were not observed within the subject property
Specialized Habitat for Wildlife		
Waterfowl Nesting Area	Waterfowl nesting areas are upland areas adjacent to marsh, shallow aquatic and swamp habitat. In order to be considered significant these features must extend 120 m from of a wetland in order to deter predators	**No** Suitable habitat not observed within the subject property
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Nests for these species are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands or on structures over water. Osprey nests are usually at the top of a tree, while Bald Eagle nets are typically in super canopy trees.	**No** No Bald Eagle or Osprey nests were observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Woodland Raptor Nesting Habitat	Woodland raptor habitat can be found in all natural or conifer plantation woodland/forest stands that are greater than 30 ha in size with more than 10 ha of interior forest habitat (interior habitat determined with a 200 m buffer).	**No** Woodland communities on the subject property do not meet the size threshold
Turtle Nesting Areas	Ideal nesting habitat for turtles are close to water and away from roads and sites that are less prone to loos of eggs by predation. These areas are often associated with exposed mineral soil (sand or gravel) areas within 100 m of a marsh, shallow aquatic, bog or fen habitat.	**No** Suitable habitat was not observed within the subject property
Seeps and Springs	Seeps/springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats.	**No** Seeps/springs were not observed within the subject property
Amphibian Breeding Habitat (Woodland)	This type of habitat is associated with the presence of a wetland, lake or pond that is within or adjacent (within 120m) of a woodland. Woodlands with permanent ponds or those contain water until mid-July are more likely to be used as breeding habitat.	**No** Suitable habitat not was observed within the subject property
Amphibian Breeding Habitat (Wetlands)	Wetlands and pools that are greater than 500 m^2 and are isolated from woodlands (greater than 120 m)	**No** Suitable habitat was not observed within the subject property
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)		
Marsh Bird Breeding Habitat	This type of habitat occurs in wetlands with shallow water and emergent aquatic vegetation present	**No** Suitable habitat was not observed within the subject property
Woodland Area-Sensitive Bird Breeding Habitat	Habitats where interior forest breeding birds are breeding. These forests are typically larger mature forest stands or woodlands that are greater than 30 ha in size (interior habitat determined with a 200 m buffer).	**No** Two woodland area-sensitive species were documented within the woodland on the subject property; however, The woodland does not meet the size threshold for significance.
Open Country Bird Breeding Habitat	This type of habitat occurs in larger grassland areas (including natural and cultural fields and meadows) that are greater than 30 ha in size. Grasslands that are being actively used for farming (i.e. row cropping, intensive hay, livestock pasturing in the last 5 years) typically do not provide ideal habitat for open country bird species.	**No** No open country birds or suitable habitat was observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Shrub/Early Successional Bird Breeding Habitat	This type of habitat occurs in large field areas succeeding to shrub and thicket habitats that are greater than 10 ha in size.	**No** Suitable habitat was not observed within the subject property
Terrestrial Crayfish	This type of habitat occurs in meadows and edge of shallow marshes.	**No** Suitable habitat was not observed within the subject property
Special Concern and Rare Wildlife Species	This type of habitat occurs wherever special concern and provincially rare (S1, S2, S3 and SH) plant and animal species occur.	**Potential** A single Eastern Wood Pewee, a species of Special Concern, was recorded within the woodland on the subject property.
Animal Movement Corridors		
Amphibian Movement Corridors	This habitat consists of movement corridors between breeding habitat and summer habitat. Corridors may be found in all ecosystems associated with water.	**No** Suitable habitat was not observed within the subject property