Environmental Impact Study (Revised)
66 Thomas Street
City of Mississauga

Prepared For:

De Zen Realty

Prepared By:

Beacon Environmental Limited

Date:	*Project:*
2024-12-20	**219104**

BEACON ENVIRONMENTAL

GUIDING SOLUTIONS IN THE NATURAL ENVIRONMENT

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Report Versions Issued

Version	Date	Revisions
1.	June 2019	
2.	December 2024	Address agency comments

1. Introduction

Beacon Environmental Limited (Beacon) was retained by De Zen Realty to prepare an Environmental Impact Study (EIS) for the proposed re-development of lands north of the intersection of Thomas Street and Joymar Avenue in the City of Mississauga and 65-95 Joymar Avenue and 66 Thomas Street, herein cumulatively referred to as the subject property (**Figure 1**). The subject property is approximately 2.77 ha in area and is adjacent to Mullet Creek.

The requirement for an EIS is triggered by the proximity of a proposed development to certain components of the City's Natural Heritage System. In this case, Mullet Creek is identified as "Significant Natural Areas" and "Natural Green Space" on the City of Mississauga Official Plan (MOP) Schedule 3. The purpose of an EIS is to demonstrate, to the satisfaction of the City of Mississauga and Credit Valley Conservation Authority (CVC), that the proposed development and/or site alteration will not have a negative impact on natural heritage features, their ecological functions, or natural hazards and to also identify opportunities for protection, restoration, and enhancement of the Natural Heritage System (NHS).

The existing conditions on the subject property and proposed development plans were used in an analysis of natural heritage functions and features and checked for conformity with the Region of Peel and City of Mississauga Official Plans, and the guidelines and policies of regulatory agencies, including the Ministry of Natural Resources (MNR), and the CVC.

This second EIS submission is a revision of the previous EIS submitted in 2019. This revision includes updated flood modelling, and targeted surveys for avifauna and endangered bats.

2. Methodology

Background Review

Natural Heritage policies, legislation, and regulations were reviewed and considered in preparation of this EIS including but not limited to the following:

- Provincial Planning Statement;
- Ontario *Endangered Species Act*;
- Region of Peel Official Plan;
- City of Mississauga Official Plan;
- Ontario *Conservation Authorities Act* and regulations*;* and
- CVC policies and guidelines.

Field Investigations

A reconnaissance visit of the subject property was conducted by Beacon staff on April 5, 2019, to document the existing site conditions and to generally characterize the natural heritage features on and adjacent to the subject property.

Breeding Bird Surveys

Breeding bird surveys were conducted May 28 and June 7, 2024, on days with low to moderate winds, no precipitation, and temperatures within 5°C of the normal average temperature. The breeding bird community was surveyed using a roving type survey, in which all parts of the study area were walked to within 50 m and all birds heard or observed and showing some inclination toward breeding were recorded as breeding species. All birds heard and seen were recorded in the location observed on an aerial photograph of the site.

Chimney Swift Survey

Chimney Swift (*Chaetura pelagica*) are a highly vocal with a distinct flight pattern and can be observed descending into chimneys in which they are nesting just before sunset. Potentially suitable habitat for the species was detected on site and Beacon biologists completed a crepuscular survey on June 27, 2024, during appropriate weather conditions that were optimal for detection (i.e., no wind, rain or fog). This survey was completed concurrently with the first bat exit survey (see below; **Figure 2**).

Bat Exit Surveys

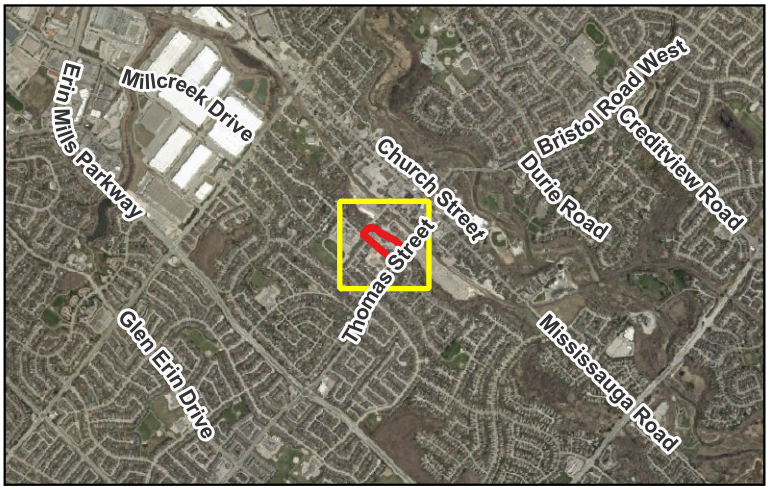
Two buildings that currently occupy the subject property were noted during onsite field investigations as having the potential to provide suitable habitat for endangered bat species in Ontario. On the evenings of June 27, July 8 and July 15, 2024, visual and acoustic exit surveys were conducted for these two buildings on the subject property. Exit surveys were used to determine whether endangered bat species are present in the buildings that are proposed for removal.

Beacon staff completed bat exit surveys for the two buildings using the methodology provided within the MNRF Guelph District *Use of Buildings by Species at Risk Bats: Survey Methodology* (2018). Surveys were conducted on warm clear nights with no precipitation or heavy winds a half hour before sunset and continued for an hour after sunset. Three surveyors were stationed in front of the potential entry/exit holes of the two buildings to enable sightlines for surveying all potential entry/exit points concurrently (**Figure 2**).

An EMTouch 2 Pro™ plug-in device for tablets was used to record echolocations of bat species. The echolocation data recorded by the monitor was analyzed using KaleidoscopePro software by an ecologist knowledgeable in bat call identification. This specialized software analyzes the frequency and tones of the calls using algorithms which are then able to identify the species. It should be noted that the software analyzes the quality of the recorded call to assign a level of confidence to the species identification. In addition to this auto-identification, manual analysis was applied to call files to make species determinations.

Vegetation Communities and Flora

General vegetation communities were mapped and described according to the *Ecological Land Classification for Southern Ontario* (Lee *et al*. 1998), which involves delineating vegetation communities on an aerial photograph and recording pertinent information concerning the structure and composition



Site Location	Figure 1
66 Thomas Street EIS	
BEACON ENVIRONMENTAL	Project: 219104 Last Revised: December 2024
Client: De Zen Realty	Prepared by: BD Checked by: CS
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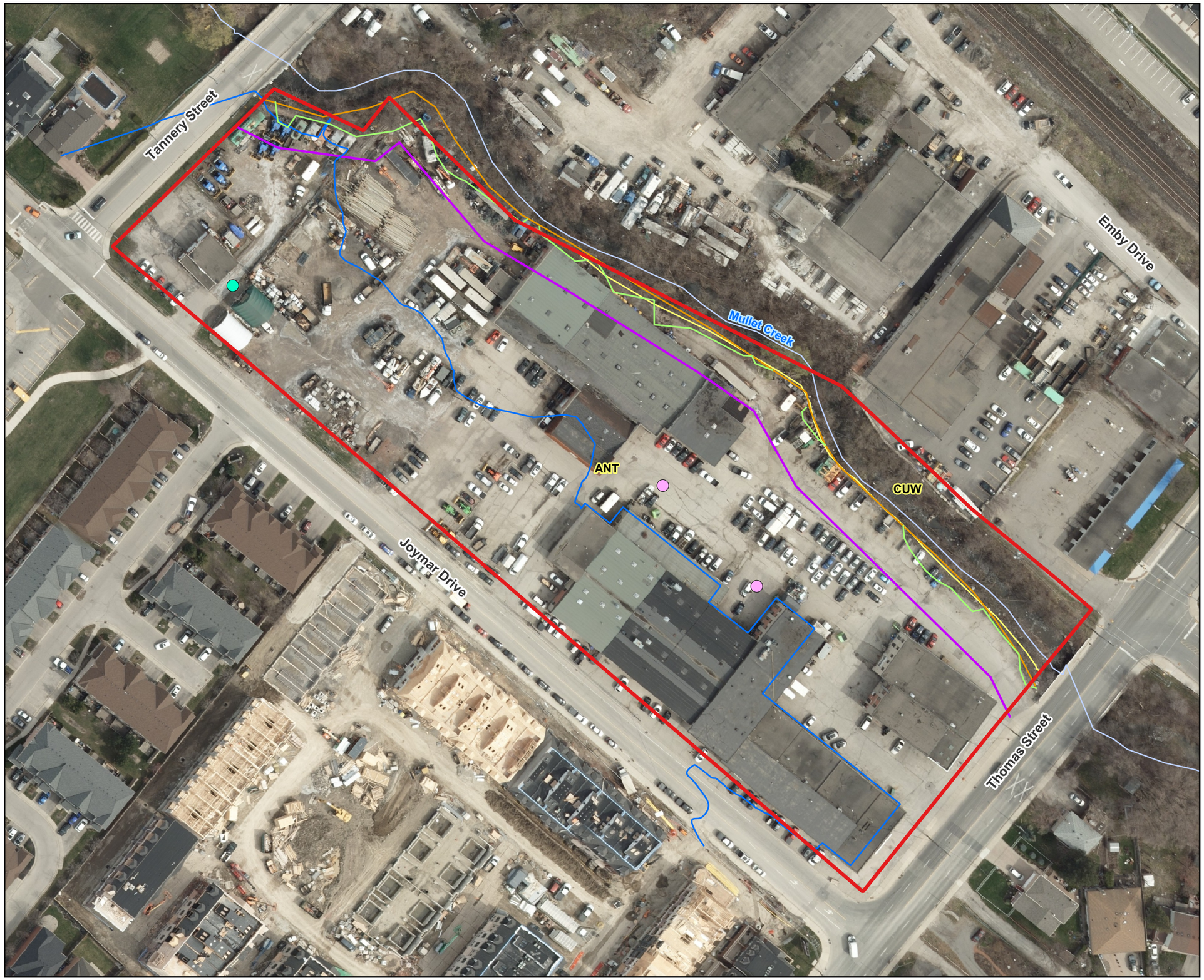

Existing Conditions

Figure 2

66 Thomas Street EIS

Legend

- Subject Property
- Staked Dripline (CVC, April 5 2018)
- Existing Floodline (CFCA 2024)
- Long Term Stable Top of Slope (Sirati 2023)
- Staked Top of Bank (CVC, April 5 2018)
- Watercourse (MNRF 2019)
- ELC and Land Use
- Bat Exit Survey Location
- Chimney Swift and Bat Exit Survey Location

ELC and Land Use Code	Community Description
ANT	Anthropogenic
CUW	Cultural Woodland

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of the vegetation in each community**.** Botanical identification to species level was limited given the seasonal restrictions of performing field investigations in the wintertime.

Feature Staking

A feature staking took place with the CVC on April 5, 2018, where both the top of bank and the woodland dripline were staked.

Other Wildlife

Incidental observations of wildlife species made during field investigations were recorded for the purposes of the EIS.

3. Policy Review

This section includes an overview of key provincial and local environmental policies, legislation, and regulations that are directly relevant to this EIS.

The following review is intended to highlight key policy, regulatory and legislative requirements as they relate to natural heritage planning to ensure that the proposed re-development is in conformity with the existing policy framework.

3.1 Provincial Planning Statement (2024)

The Provincial Planning Statement (PPS) (MMAH 2024) provides direction to municipalities regarding planning policies for the protection and management of natural heritage features and resources. Policy 4.1 identifies several natural heritage features, some of which are protected from development and site alteration, while for others it is necessary to demonstrate that there will be no negative impacts on the feature or its ecological functions. Planning policies are provided for each feature as follows:

- Significant wetlands;
- Coastal wetlands;
- Significant woodlands;
- Significant valleylands;
- Significant wildlife habitat; and
- Significant Areas of Natural and Scientific Interest (ANSI).

Development and site alteration are generally not permitted in the above features. However, development may be permitted in the following features if it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions:

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

Significant wetlands are determined through an evaluation using the Ontario Wetland Evaluation System (OWES), where they have scored sufficient points to be classed as 'significant'. Significant woodland is given a broad definition by the PPS, and this definition is usually given criteria by municipalities (i.e., Official Plans). ANSI are designated by MNR. Significant wildlife habitat is designated by the planning authority; however, it is usually based on provincial guidelines (i.e., the *Significant Wildlife Habitat Technical Guide* [OMNR 2000] and the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E* [MNRF 2015]) and evaluated by a proponent. Significant valleylands are typically by the conservation authority and/or planning authority; however, they may be evaluated using the *Natural Heritage Reference Manual* (MNR 2010).

In addition to the above noted features, development and site alteration is not permitted in the following, except in accordance with provincial and federal requirements (i.e., the federal *Fisheries Act,* the provincial *Endangered Species Act*, and in some instances the federal *Species at Risk Act* [SARA]):

- Fish habitat; and
- Habitat of endangered species and threatened species.

The PPS refers to the federal *Fisheries Act* for a definition of fish habitat, while habitat of endangered species and threatened species is defined by the provincial *Endangered Species Act*.

In general, the *Natural Heritage Reference Manual* (MNR 2010) is a technical document used to help assess natural features in accordance with the PPS.

As pertains to the subject property, there is the potential for habitat of endangered species or threatened species or fish habitat. Confirmation of such features was conducted, as evaluated in **Section 4** and summarized in **Section 5** below.

3.2 Region of Peel Official Plan (2024 Consolidation)

The Region of Peel Official Plan is intended to provide a strategic and holistic framework for regional planning through sustainable development and the integration of environmental, social, economic and cultural imperatives.

On July 1, 2024, as a result of Bill 185, the City of Mississauga became responsible for the interpretation and implementation of the Region Official Plan (ROP) as it applies to Mississauga.

The following schedules and figures were reviewed to determine what sections of the ROP pertain to the subject property:

- Schedule C-2 - *Core Areas of the Greenlands System in Peel* does not depict any of these features on the subject property;
- Schedule C-1 – *Greenlands System* depicts Greenlands that appear to correspond to woodland area associated with Mullet Creek;
- Schedule E-1 – *Regional Structure* illustrates that the subject property is within an Urban System;
- Schedule E-3 - *The Growth Plan Policy Areas in Peel* depicts the subject property as within the Built-up Area; and
- Figure 2 – *Watershed Boundaries* presents the subject property within the Credit River watershed.

The Official Plan identifies a Regional Greenlands System consisting of Core Areas, Natural Areas and Corridors (NAC) and Potential Natural Areas and Corridors (PNAC). The components of this system are intended to address habitat fragmentation and facilitate the dispersal of pioneer species in disturbed areas and contribute to the enhancement of existing populations and ecosystems.

Core Areas of the Greenlands System are mapped on Schedule C-2 of the ROP. There are no Core Areas identified on or adjacent to the subject property.

Table 1 of the ROP lists criteria and thresholds for the identification of Core, Natural Areas and Corridors, and Potential Natural Areas and Corridors woodlands. Table 2 of the ROP lists criteria and thresholds for the identification of core valley and stream corridors.

As the woodland area associated with Mullet Creek on the subject property is present on Schedule C-1, and not Schedule C-2, the Region has identified this area as either NAC or PNAC.

3.2.1 Natural Areas and Corridors and Potential Natural Areas and Corridors

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 ANSI;
- Provincially significant earth science ANSI;
- 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 ESA's 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 and locally important. Regional policies pertaining to NAC's and PNAC's defer their interpretation, protection, restoration, enhancement, proper management and stewardship to local municipalities.

Based on the criteria outlined in Table 1 of the ROP, the riparian corridor vegetation satisfies the NAC and PNAC criteria based on size (>0.5 ha) and being within 30 m of a watercourse (Mullet Creek).

As per Section 2.14.39, it is the Region's policy to direct municipalities to require an EIS for development and site alteration within and on adjacent lands to the Greenlands System and to include policies in their official plans for the protection of the Greenlands System in accordance with the policies of this Plan and Provincial policy.

3.3 City of Mississauga Official Plan (August, 2024)

The office consolidation of the Mississauga Official Plan (MOP) was recently updated to include Local Planning Appeal Tribunal (LPAT) decisions and City Council approved Official Plan Amendments as of August 7, 2024.

The following schedules and figures of the Official Plan were reviewed to determine the sections that pertain to the subject property including the following:

- Schedule 1 – Urban System depicts part of the subject property as within a Community Node, Neighbourhood designation, and partially within the Green System along the eastern extent;
- Schedule 2 – Intensification Areas presents the subject lands within a Community Node;
- Schedule 3 – Natural System identifies the subject property as including a Natural Hazard along the eastern portion of the property and Significant Natural Area and Natural Green Space;
- Schedule 4 – Parks and Open Space identifies the property as including a narrow band of Public and Private Open Space in the east; and
- Schedule 10 - Land Use Designations identifies the tableland portion of the property as being within a Residential Medium Density Area, along with the valleyland represented by both Greenlands and Natural Hazard Lands.

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. The Natural Heritage System is conceptually illustrated on Schedule 3 of the MOP.

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

As per policy 6.3.1, the city will give priority to actions that protect, enhance, restore and expand the Green System. Policy 6.3.7 states that buffers are intended to perform functions such as woodland interior enhancement via native species plantings, attenuate stormwater runoff and reduce the erosion of valley slopes.

As per Policy 6.3.8, buffers will be determined on a site-specific basis as part of an EIS to the satisfaction of the City and the appropriate conservation authority. Per 6.3.10, the exact limit of components of the Natural Heritage System will be determined through site specific studies/EIS. Per 6.3.11, minor refinements to the boundaries of the Natural Heritage System may occur through an EIS or other appropriate studies accepted by the City without and official plan amendment. Natural Heritage System Policies are applicable to the Urban Forest (6.3.40).

Policy 6.3.27 states:

> *"Development and site alteration as permitted in accordance with the Greenlands designation within or adjacent to a Significant Natural Area will not be permitted unless all reasonable alternatives have been considered and any* negative impacts *minimized. Any* negative impact *that cannot be avoided will be mitigated through restoration and enhancement to the greatest extent possible. This will be demonstrated through a study in accordance with the requirements of the* Environmental Assessment Act*. When not subject to the* Environmental Assessment Act*, an* Environmental Impact Study *will be required."*

Policy 6.3.29 states:

> *"Development and site alteration on lands adjacent to a Provincially* significant wetland*, Provincially* significant coastal wetland *and habitat of endangered species and threatened species or other Significant Natural Area will require an Environmental Impact Study, demonstrating no* negative impact *to the* natural heritage features *or on their ecological function, to the satisfaction of the City and appropriate conservation authority."*

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 not fulfill the requirements of a significant valleyland, even if they are predominantly engineered; 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.

The criteria for significant woodland status are presented in Policy 6.3.12(f) and include both size, function and proximity criteria. The woodland on the subject property exceeds 0.5 ha and is within 30 m of a watercourse (Mullet Creek) and are thus deemed to be significant. Significant Woodlands are considered Significant Natural Areas in the City of Mississauga. Similarly, Policy 6.2.12(h) states significant valley lands are also treated as Significant Natural Areas and are associated with the main branches or major tributaries of watercourse corridors including the Credit River.

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.

Chapter 14 of the OP discusses Community Nodes and indicates that the subject property is within Special Site 2 of the the Streetsville Community Node; therefore, the property is subject to the Special Site Policies. These areas are within the Character Area and merit special attention. Per the policies of Policy 14.10.6.2.2 (a), the suitable development area will have regard for the extent of the regulatory storm floodplain and erosion hazards associated with Mullet Creek, whichever is greater. The extent of area required for conservation purposes are to be determined to the satisfaction of the CVC and City.

3.3.1 City of Mississauga Natural Areas Survey

The Natural Areas Survey (NAS) is a study undertaken to identify and inventory the natural areas within the City of Mississauga and includes reviewing existing reports, site visits, public survey and database updates. The intention of this is to maintain the long-term ecological integrity of the remaining natural areas and that this shall have primacy over all other considerations to the extent that is feasible. A number of recommendations of the NAS are incorporated into the City's Official Plan.

The subject property falls within the SV10 Natural Area and is situated west of the Credit River and south of Britannia Road West and encapsulates a portion of Mullet Creek.

SV10 is a natural area spanning 5.34 ha and is partially within the floodplain of Mullet Creek. The condition of SV10 has been ranked as poor, with a number of disturbances including residential encroachment, airplane noise, invasive species and dumping of yard waste. Urban tolerant flora and fauna species persist. The corresponding fact sheet for area SV10 (2015) notes the management needs of the area are invasive species control and a need for riparian vegetation restoration.

3.4 Credit Valley Conservation Authority

3.4.1 Conservation Authorities Act (Ontario Regulations 41/24 and 686/21)

Ontario Regulation (O. Reg.) 41/24 of the *Conservation Authorities Act* (1990) came into effect on April 1, 2024. Under this new regulation, CVC is responsible for reviewing development proposals and approving works within and adjacent to natural hazards (i.e., areas subject to flooding and erosion) such as slopes, watercourses, floodplains, and wetlands. The subject property is regulated due to the presence of Mullet Creek and its flood plain.

In addition to CVC's regulatory responsibilities described above, CVC also has provincially delegated responsibilities under O. Reg. 686/21, including acting on behalf of the province, to ensure that decisions under the *Planning Act* are consistent with the Natural Hazards policies (4.2, 5.1, and 5.2) of the PPS.

Under the *Conservation Authorities Act*, development within the flood limit of a watercourse is prohibited in absence of a permit from CVC. CVC will generally require that all watercourses remain in their natural state with respect to development proposals. Any development proposed within the "regulated" area adjacent to a watercourse or wetland would trigger the need for an EIS that must demonstrate that the no interference to the feature will occur before a permit is issued. The definition of a watercourse under O. Reg. 41/24 is: "*a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs*."

3.4.2 CVC Regulation Policies

CVC policies are outlined in their *Watershed Planning and Regulation Policies* (CVC 2010). Beacon understands that CVC is, as of the date of this EIS, in the process of a comprehensive policy review to update their 2010 policies, with the goal of completion by the end of 2025. As CVC does not have transitional policies in place, they will refer to the 2010 policies recognizing that O. Reg. 41/24 supersedes some sections of the policy, particularly those related to non-hazard items (e.g., woodlands, environmentally significant areas, significant wildlife habitat, fish habitat). This section provides a summary of the CVC (2010) policies that relate to the subject property in the context of O. Reg. 41/24.

As identified in Section 6.2.1 - Development Limits of the CVC (2010) policies, the following applies.

> *a) 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.*
> *b) In addition to policy 6.2.1 a), 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:*
> *i. 10 metres from the limit of flood hazards;*
> *ii. 10 metres from the limit of erosion hazards;*
> *iii. 10 metres from the limit of dynamic beach hazard;*
> *iv. …*
> *v. 10 metres from the limit of other wetlands;*
> *vi. 30 metres from the limit of provincially significant wetlands;*
> *c) Notwithstanding policy 6.2.1 b), CVC may recommend lots be set back a distance other than those identified in 6.2.1 b) based on the results of a comprehensive environmental study or site-specific technical report completed.*

As pertains to the subject property, there is the potential for flood hazards and erosion hazards associated with Mullet Creek. Identification of such features was conducted in consultation with CVC.

3.5 Endangered Species Act (2007)

Ontario's *Endangered Species Act, 2007* (ESA) came into effect on June 30, 2008 and replaced the former 1971 Act. The ESA protects species listed as threatened or endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO). Under the 2008 ESA over 200 species in Ontario are identified as extirpated, endangered, threatened, or of special concern. Section 9 of the ESA generally prohibits the killing or harming of a threatened or endangered species. Section 10 of the ESA prohibits the damage or destruction of the habitat of threatened or endangered species.

A permit from Ministry of the Environment and Conservation and Parks (MECP) is required under Section 17(2) (c) of the ESA for any works proposed within the habitat of a threatened or endangered species. Searches for these species require seasonal field work.

As pertains to the subject property, there is the potential for habitat or presence of endangered species or threatened species or fish habitat. Confirmation was conducted, as evaluated in **Section 4** and summarized in **Section 5.**

4. Existing Conditions

As noted in **Section 2**, site investigations by Beacon ecologists were conducted in 2019 and 2024 to document natural heritage features, targeted surveys for endangered or threatened species, and general conditions of the subject property.

The tableland on the subject property is entirely paved and occupied by impervious surfaces associated with a number of commercial enterprises. The subject property is bounded by residential development to the north, west and south (**Figure 2**).

4.1 Aquatic Resources

The subject property contains a portion of a valley corridor along the east of the that is associated with Mullet Creek and is part of the City of Mississauga's NHS. Mullet Creek is classified as a Type 2 fishery within the SV10 area of the City of Mississauga's NAS.

4.2 Terrestrial Resources

4.2.1 Ecological Land Classification

Ecological Land Classification (ELC) was conducted as described in **Section 2**.

The subject property is situated in an urbanized industrial and commercial neighbourhood and was determined to be predominantly anthropogenic (ANT; **Figure 2**), which is not a community under ELC methodology. The built-up area consisted of a number of businesses including automotive facilities and a number of paved parking areas.

A narrow band of vegetation resides within the property limits and is associated with the Mullet Creek riparian corridor. This vegetation was characterized as a Cultural Woodland (CUW) due to its heavily disturbed nature and irregular canopy. It was comprised of species such as Siberian Elm (*Ulmus pumila*), Crack Willow (*Salix fragilis*), Norway Maple (*Acer platanoides*) and Manitoba Maple (*Acer negundo*), along with a small number of White Ash (*Fraxinus americana*). The slopes were steep towards the watercourse where a substantial amount of debris was noted, including garbage and concrete debris. The presence of this debris has greatly suppressed the growth of lower vegetation layers.

The riparian Cultural Woodland (CUW) community spans approximately 30 m at its widest point along this portion of the watercourse and is 0.7 ha in total area between Tannery Street and Thomas Avenue.

The vegetation associated with this riparian corridor comprised predominantly non-native and invasive species and it offers limited wildlife function, representing a narrow band of edge habitat. Edge habitat is subject to amplified environmental pressure and introduces reduction in habitat quality on the outermost edges of features. Limited habitat is present here beyond species that are tolerant to urban environments and perhaps marginal stopover and foraging habitat for migratory birds.

Photograph 1. Developed Tableland of Subject Property, Looking North (April 5, 2019)

Photograph 2. Mullet Creek and CUW Community, Looking East (April 5, 2019)

4.2.2 Breeding Birds

A total of 14 species of birds was recorded exhibiting nesting behaviour on the subject property during the 2024 breeding season, along with three noted as foraging only (**Appendix A**). This species diversity is reflective of the habitats present which consist of predominantly anthropogenic areas and a narrow cultural woodland, as described in the previous sections of this report. Avian observations were concentrated within the wooded edge habitat on site.

All of the breeding records were commonly occurring species regularly found in disturbed and urban landscapes. House Sparrow (*Passer domesticus*) and European Starling (*Sturnus vulgaris*) were the two most abundant species, with seven pairs each, and were in association with the numerous buildings on site. Other abundant species with multiple territories included American Robin (*Turdus migratorius*), Song Sparrow (*Melospiza melodia*), Northern Cardinal (*Cardinalis cardinalis*) and Mourning Dove (*Zenaida macroura*). Single observations of other species were made and these included Chipping Sparrow (*Spizella passerina*) and Blue Jay (*Cyanocitta cristata*). Avian species associated with and presumed nesting within the cultural woodland community included Black-capped Chickadee (*Poecila atricapillus*) and Downy Woodpecker (*Dryobates pubescens*).

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. No such species were encountered.

No species provincially ranked as S1 through S3 (Critically Imperiled through Vulnerable) were recorded breeding on the subject property, nor were any provincially endangered or threatened species.

Chimney Swift

Potentially suitable habitat for Chimney Swift was identified on the subject property and birds were observed foraging over the property during breeding bird surveys. This aerial insectivore is threatened both at the federal and provincial level and nests and roosts in vertical structures such as an uncapped chimney, or hollow trees outside of the urban realm. Crepuscular surveys are required to accurately assess for the potential presence or absence of these birds.

Beacon staff completed this exercise on June 27, 2024, and no Chimney Swift were observed entering any structures. Chimney Swift were heard and seen off site to the east and are presumed to be nesting elsewhere in that general direction.

4.2.3 Bat Exit Surveys

No bats were observed exiting or entering the buildings during surveys.

The results of the acoustic analysis are summarized in **Table 1** below.

Table 1. Acoustic Monitoring Results

Date	Big Brown Bat	Hoary Bat	Silver-Haired Bat	Total
June 27, 2024	0	0	0	0
July 8, 2024	0	0	0	0
July 15, 2024	4	1	1	6
Total	**4**	**1**	**1**	**6**

As outlined in **Table 1,** three species of bats were recorded during the exit surveys. The species recorded were: Big Brown Bat (*Eptesicus fuscus*), Hoary Bat (*Lasiurus cinereus*) and Silver-haired Bat (*Lasionycteris noctivagans*). No endangered species of bat were recorded by the detectors during the surveys.

Given that no bats were observed exiting the buildings at the time of the surveys and that no regulated bat species were recorded by the detectors during the surveys, endangered bat habitat is not associated with the buildings and no further action related to the ESA is required in this regard.

4.3 Endangered or Threatened Species

The MNRF was contacted to obtain existing records for species to which the ESA applies on the subject property. The MNRF issued a response on March 20, 2019 (**Appendix B**) and emphasized the responsibility of the proponent to undertake appropriate field study with the assistance of a consultant. A comprehensive list of species at risk (SAR) observations within the City of Mississauga was provided as guidance. Based on our review of background information sources and knowledge of the subject property and habitat and site conditions we offer the following analysis:

Avian SAR

Potentially suitable Chimney Swift habitat was identified on site and crepuscular surveys were completed. This species was not breeding on the subject property.

Vegetation

Butternut (*Juglans cinerea*) are one of the more commonly encountered species protected under the ESA in this part of the province. This is an endangered tree species that has experienced declines by way of a fungal disease called Butternut canker. No Butternut were observed.

Endangered Bats

The methodology of the MNRF Guelph District's *Use of Buildings by Species at Risk Bats: Survey Methodology* (2018) was implemented to determine the potential for suitable bat habitat to occur within the subject property. This document describes treed communities such as woodlands and treed swamps as potential habitat warranting further study. These community types are not present within the proposed development envelope. Given tree removals will not occur within the cultural woodland unit, which is the only community that could potentially provide habitat, further study was not deemed to be required based on the guideline.

The buildings were also inspected for potential openings leading to open warm spaces such as attics. Two buildings on the subject property had openings and were surveyed for potential bat habitat. No endangered species of bat was recorded during these surveys and no bats were observed exiting the buildings during the surveys.

4.4 Other Wildlife

Due to the subject properties relatively urban surroundings there is a limited amount of wildlife habitat available, with the potential habitat being predominantly occupied by urban-tolerant species including Gray Squirrel (*Sciurus carolinensis*), Raccoon (*Procyon lotor*), Striped Skunk (*Mephitis mephitis*) and Coyote (*Canis latrans*). Additionally, Eastern Cottontail (*Sylvilagus floridanus*) and Virginia Opossum (*Didelphis virginiana*) were observed on the subject property during field investigations. These species are commonly observed in the rural and urban landscapes of southern Ontario.

A small number of urban tolerant breeding bird species were noted during the single site visit and included European Starling (*Sturnus vulgaris*), House Finch (*Haemorhous mexicanus*), House Sparrow (*Passer domesticus*). No others beyond a very few and common urban species would be anticipated.

5. Summary of Natural Heritage Features and Evaluation of Significance

The following subsections describe the process for evaluating the significance of the various natural heritage features and ecological features that associated with the study area.

The relative significance of natural heritage features, ecological functions and attributes is generally determined by applying significance criteria that have been developed at the local and regional level. Where such criteria are not available, provincial criteria and guidelines have been considered.

Key sources of guidance for determining significance of the natural features and areas include: the PPS (MMAH 2024), the Peel Region Official Plan, the Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study (NSEI *et al.* 2009), and Mississauga Official Plan (2024). The following sections provide a summary of which natural heritage features and areas within the study area would be considered significant according to the policies, criteria and guidance provided in the above noted guidance documents.

Portions of the subject property are mapped as part of the City's NHS; however, this mapping is based on coarse scale desktop analyses. One of the key tasks of the EIS is to verify which features and areas satisfy regional and local significance criteria using detailed and current site-specific data.

5.1.1 Habitat of Endangered or Threatened Species

Habitat of endangered or threatened species is defined by the PPS (2024) as "*habitat within the meaning of section 2 of the* Endangered Species Act, 2007". Section 2 of the *Endangered Species Act* defines habitat as follows:

> *(a)" with respect to a species of animal, plant or other organism for which a regulation made under clause 56 (1) (a) is in force, the area prescribed by that regulation as the habitat of the species, or"*
> *(b)" with respect to any other species of animal, plant or other organism, an area on which the species depends, directly or indirectly, to carry on its life processes, including life processes such as reproduction, rearing, hibernation, migration or feeding, and includes places in the area described in clause (a) or (b), whichever is applicable, that are used by members of the species as dens, nests, hibernacula or other residences."*

There is no habitat for endangered or threatened species associated with the subject property.

5.1.2 Significant Woodlands

Significant Woodlands are recognized as components of the City's NHS. Significant Woodlands are defined in the PPS, ROP and MOP. These policy definitions are consistent with respect to attributes and functions that make a woodland significant, however there is some variability in how they are to be identified.

This EIS has applied the Regional and Municipal woodland definitions and criteria from the ROP and MOP to the one treed community to determine if it meets the definition of "woodland". While this treed feature exceeds 0.5 ha as outlined in the MOP it does not satisfy the woodland criteria in the ROP or MOP as it is too narrow. Treed areas must have a minimum average width of 40 m to be considered woodlands and the wooded area on the subject property is 31 m at its widest. Additionally, this feature is highly disturbed dominated by non-native species. The Mississauga Official Plan states (text in square brackets added for clarity]:

> *"Woodlands may exclude treed communities which are dominated by invasive non-native tree or shrub species such as [Common] Buckthorn (*Rhamnus cathartica*) and Norway maple (*Acer platanoides*) that threaten the ecological diversity of native communities, good forestry practices and environmental management. "*

While this EIS has recommended that the Cultural Woodland (CUW) be excluded as part of the significant woodland for the reasons noted above, this feature is directly associated with the Mullet Creek; therefore, the feature is still protected and will be enhanced through setbacks applied and is outside the proposed development limit.

5.1.3 Significant Wetlands

In regard to wetlands, significant is defined by the PPS (2024) as:

> *"… an area identified as provincially significant using evaluation procedures established by the Province, as amended from time to time…"*

There are no Provincially Significant Wetlands (PSWs) or evaluated wetlands within or adjacent to the subject property. The closest evaluated wetland is the Creditview PSW, which is situated more approximately 2.4 km to the east of the subject property.

5.1.4 Significant Valleylands

In regard to valleylands, significant is defined by the PPS (2024) as:

> *"… ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or* natural heritage system *…"*

Significant valleylands are normally identified by municipalities with input from their agency partners. Significant valleylands are also recognized regionally as Core Areas of the Greenlands System and locally as Significant Natural Areas and part of the City's NHS.

The MOP describes significant valleylands within the City as follows:

> *"6.3.12 g 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."*

As Mullet Creek has direct confluence with the Credit River, it has been treated as Significant Valleyland.

The limit of the valleyland is the long-term stable top of slope (LTSTOS), which has been determined by Sirati & Partners Consultants Ltd. (Sirati; 2023a).

5.1.5 Significant Wildlife Habitat

Significant wildlife habitat (SWH) represents a combination of natural heritage features, attributes and functions that are intended to capture the best examples of wildlife habitat within a planning area such as an upper or lower tier municipality. This responsibility for confirming SWH is assigned to the planning authority (i.e., the Region or the City).

The Mississauga Official Plan definition of SWH defers to the ROP definition; however, the ROP does not include a definition for SWH, so it is presumed that it is to be defined by the PPS as follows:

> *"… ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or* natural heritage system …"

To determine if any of the features in the study area support candidate SWH, the provincial *Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E* (MNRF 2015) can be consulted, and, with lesser weight, the older *Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study* (NSEI *et al*. 2009).

According to the *Significant Wildlife Habitat Technical Guidelines* (MNRF 2015), there are four broad categories of SWH:

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

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

Based on the review of the provincial schedules, Beacon has determined the subject property does not have the potential to support seasonal wildlife concentration areas, rare vegetation communities, specialized habitat, or habitat for species of conservation concern. Although, the Mullet Creek valley may qualify as a local movement corridor for wildlife; however, it is our opinion that the potential corridor function along Mullet Creek alone is insufficient to designate the valley as SWH.

5.1.6 Significant Areas of Natural and Scientific Interest (ANSI)

In regard to Areas of Natural and Scientific Interest (ANSIs), significant is defined by the PPS as:

> *"… an area identified as provincially significant using evaluation criteria and procedures established by the Province, as amended from time to time…"*

The study area does not overlap with any designated ANSIs.

5.1.7 Fish Habitat

The PPS (2024) treats all fish habitat equivalently regardless of significance. Fish habitat is defined by the *Fisheries Act* (1985).

Mullet Creek directly provides fish habitat and is classified as a Type 2 Fishery within the study area (City of Mississauga 2015).

6. Proposed Development Plan

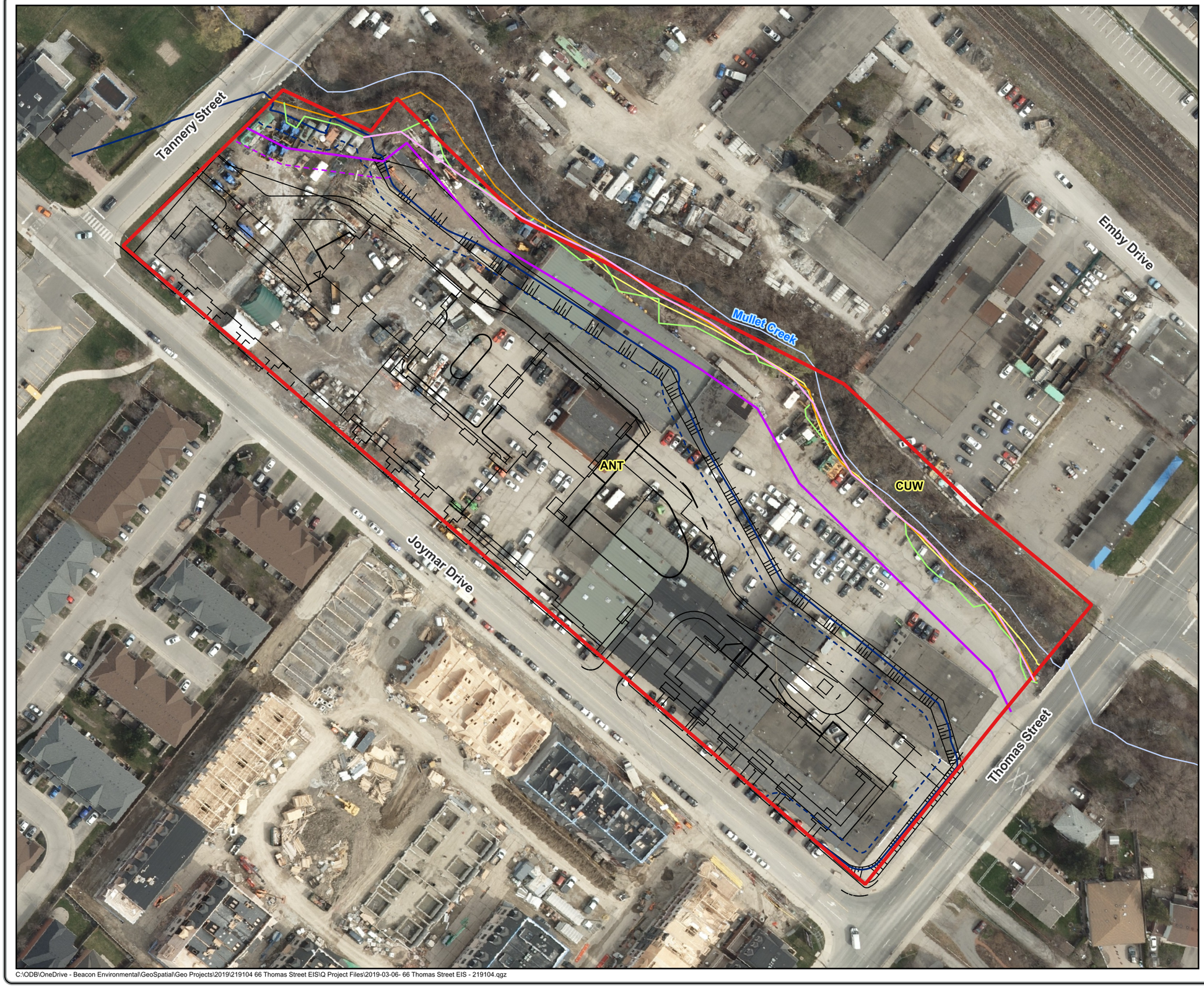
The proponent intends to demolish the entirety of the existing development to redevelop the property for residential purposes (**Figure 3**). The existing buildings, structures and debris on the site, including the buildings currently within or abutting the existing floodplain limits, are to be removed. The existing asphalt within the site that currently extends to the top of bank of Mullet Creek (and is therefore within the floodplain) will also be removed.

A floodplain analysis was conducted by C.F. Crozier and Associates ("Crozier"), as documented in a memo dated March, 2024, to evaluate potential floodproofing on the subject property. Crozier (2024a) summarizes the current floodplain, natural hazard conditions, correspondence with CVC, potential opportunities to regularize and re-naturalize the natural hazard area, and provides the proposed post-development flood limit based on HEC-RAS modeling. The memo proposes a balanced cut and fill solution that demonstrates no adverse flooding impacts to any properties upstream or downstream of the site. The proposed approach alters the pre-development conditions to balance flood storage within the floodplain to provide post-to-pre-development levels of flood storage in the regulatory storm event. This method also moves the proposed development out of the floodplain, consistent with CVC's policies and vision for the subject property. The regularized flood limit is consistent with the LTSTOS that was determined by Sirati (2023a) and the woodland limit, as staked by CVC in 2018.

The location of the proposed floodline generally serves as the outermost feature constraint on the subject property to which a 5 m setback was applied, due to the proposed development being infill (Crozier 2024a). An additional internal 5 m development setback is also incorporated into the site plan, such that no permanent or temporary structures are permitted within 10 m of the hazards (Crozier 2024a).

7. Impact Assessment and Mitigation

The following section identifies the potential limited impacts of the proposed site development and recommends appropriate mitigation measures to address these impacts.



Proposed Development	Figure 3

66 Thomas Street EIS

Legend

- Subject Property
- Proposed Development
- Grading Limit
- Watercourse (MNRF 2019)
- Staked Dripline (CVC, April 5 2018)
- Proposed Regional Floodline (Crozier 2024)
- Proposed Regional Floodline + 5 m
- Long Term Stable Top of Slope (Sirati 2023)
- Long Term Stable Top of Slope + 5 m
- Staked Top of Bank (CVC, April 5 2018)
- ELC and Land Use

ELC and Land Use Code	Community Description
ANT	Anthropogenic
CUW	Cultural Woodland

BEACON ENVIRONMENTAL

Project: 219104
Last Revised: December 2024

Client: De Zen Realty

Prepared by: BD
Checked by: JS

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Due to the fact that the subject property is already almost entirely built out with buildings and parking, the impacts of the proposed redevelopment are expected to be very limited. The proposed mitigation measures include will offer an overall benefit to the natural system, with these concepts expanded upon below. Post development there will be a marked improvement in the area and function of the riparian corridor on the subject property.

7.1 Impact Assessment

One of the primary design principles adopted for this proposal was to protect and enhance the NHS features and functions in accordance with Regional, CVC and City goals, objectives and policies. As impact avoidance is generally the most effective means of reducing the risk of development impacts on the natural environment, it is recommended that development limits be established outside the boundaries of any significant natural heritage features and natural hazards, if present. As discussed in the preceding section, the existing constraints are the proposed floodline associated with Mullet Creek and the LTSTOS. No permanent future development is proposed within any of these features, thereby avoiding any direct impacts. The natural heritage features associated with the subject property are exclusively associated with the creek valley (**Figure 2**).

The proposed development is confined to the tableland portions of the site, which are already occupied by existing development and when re-developed will be situated farther away from the natural system. The subject property is surrounded by commercial and residential developments to the north, west and south and the property is already actively used and paved up to the valley edge. Therefore, the proposed re-development is not expected to result in any negative impacts to the natural heritage features associated with the adjacent riparian and valley corridor.

Tree Removals

The accompanying arborist work (Strybos Barron King Ltd. [SBKL] 2024a) notes the proposed removal of 11 trees, most of which are Siberian Elm (*Ulmus pumila*) along with Manitoba Maple (*Acer negundo*), Norway Maple (*Acer platanoides*), and two dead trees. This includes trees that are city owned and those that are subject to the private tree by-law. The arborist noted a naturalized grouping of trees along the creek slope that may need to be selectively removed (immature, poor condition or invasive) as part of the floodplain restoration and naturalization plantings.

Vegetation or tree removals can result in the disturbance of breeding birds, in contravention of federal and provincial law.

Temporary Disturbance to Restore Valleyland

Temporary grading is proposed between the top of slope and the LTSTOS as illustrated on **Figure 3**. The existing asphalt extends into the natural features and their associated buffers and this line demarcates the extent that will be temporarily disturbed in order to remove asphalt and associated aggregate, in order to provide a long-term benefit to the natural heritage system, as discussed under **Section 7.2**.

The approach to re-engineering the flood limit involves minor excavation (cut) near the LTSTOS. There is potential that excavation in the floodplain could facilitate erosion that would cause the top of slope to deviate from the LTSTOS in the long-term. Similarly, the removal of asphalt has potential to facilitate erosion near the top of slope and sedimentation of the watercourse.

7.2 Recommended Mitigation Measures

The following mitigation measures are recommended to address the potential impacts identified in **Section 7.1**.

The post-development condition will be in of itself mitigation and provide an overall benefit to the natural heritage system by increasing the quality of the significant valleyland and associated features (i.e., flood water interaction with naturalized areas rather than industrial hardscapes) and quantity of woodland habitat.

Mitigation by Design

As the natural heritage functions and features of the subject property are largely contained within the valley system, it is anticipated that the site-specific effects have to a large extent been mitigated by the design of the development plan. No permanent development is proposed within the identified natural features and temporary disturbance adjacent to features will serve to benefit the natural system in the post development condition.

The re-engineered floodline design by Crozier has been confirmed to not impact the LTSTOS by Sirati (2023b), in a technical memorandum *Grading Change Impact on Long Term Stable Top of Slope (LTSTS)*, provided that erosion control measures are maintained within the floodplain and the flood containment berm is maintained at a 3H:1V inclination.

Sediment and Erosion Control

Construction works such as grading, grubbing and excavation have the potential to result in the movement of sediment into the valley and watercourse. An erosion and sediment control plan was prepared by Crozier (2024b) and should be applied.

Any site alteration related activities should be confined to the established limit of development. Fencing at the limit of disturbance should be installed prior to site modification, regularly inspected and maintained in good working order throughout the construction period. Fencing should be removed upon completion of construction after exposed soils have been stabilized.

Standard Best Management Practices, including the provision of sediment control measures, should also be employed during the construction process.

Feature Buffers

Natural heritage features have been identified including a watercourse and valleyland. It is the policy of the City of Mississauga that ecological buffers to natural features be determined on a site-specific basis through an EIS or similar study to the satisfaction of the City and CVC.

CVC's policies recommend applying a 30 m buffer to the watercourse and 10 m from hazard lands; however, also allow for consideration of buffers or setbacks of other distances based on site specific studies. The current condition of the subject property includes extensive pavement and affords less than 10 m through the extent of the watercourse at this location and is 3 m from the paved edge at its closest. A new buffer will be applied to the watercourse that at some points exceeds the recommended 30 m. The watercourse will be approximately 22 m from the development limit at its closest point and is approximately 45 m at its farthest (**Figure 3**). This represents a significant improvement over current conditions.

The extent of the treed dripline was staked by the CVC. Based on the narrow form and limited function of this feature discussed under **Section 5.1.2**, this riparian corridor vegetation is not being explicitly buffered however it will be between 9 m and 35 m from the development envelope.

Geotechnical and hazard setbacks are addressed by Crozier (2024b). A 5 m setback has been applied to the proposed floodline location and establishes the limit of naturalization and fencing (SBKL 2024b).

Stormwater Management and Water Balance

Per the Stormwater Management report prepared by Crozier (2024b), no stormwater quantity control is required for the environmental floodplain area; therefore, quantity controls will only be implemented within the private site to restrict discharge to predevelopment rates.

Water quality objectives are proposed for the development area only which can be met with underground storage tanks and a treatment train approach including a media filtration unit to achieve 80% removal of total suspended solids . Following treatment, all collected stormwater runoff will be directed to a cistern for water balance and quality control. A drainage swale is also proposed along the eastern portion of the site.

Water balance will be achieved on site through infiltration, evapotranspiration and re-use. This will be achieved through the environmental floodplain area as it will be entirely naturalized to retain the first 5 mm of rainfall, with the leftover water balance deficit being addressed via an underground storage tank.

A dry swale, with no underdrain, is proposed along the top of bank that will convey runoff over grassed surfaces towards a proposed catchbasin on the south side of the site to provide natural infiltration, water quality and erosion benefits. Areas proposed for re-naturalization with shallow slopes will slow down runoff and filter out sediment.

Restoration Plan

A Restoration Plan has been developed by SBKL (2024b) and depicts the location and species composition of the proposed native tree and shrub plantings (**Figure 4**). Proposed species includes the following deciduous trees in decreasing order of abundance: Red Oak (*Quercus rubra*), Honey Locust (*Gleditsia triacanthos*), Red Maple (*Acer rubrum*), Bur Oak (*Quercus macrocarpa*), and native species. The plan also proposes conifers including Balsam Fir (*Abies balsamea*), White Spruce (*Picea glauca*), Tamarack (*Larix decidua*), and White Cedar (*Thuja occidentalis*). Two different native seed mixes are proposed as well throughout the restoration area to support herbaceous plant growth.

The robust restoration and re-naturalization plan results in an increase in size and quality of the natural heritage system and will provide compensation for the minor tree loss associated with the development works. The restoration area totals approximately 0.85 ha and is illustrated on **Figure 4**.

We recommend that, through detailed design, the restoration plan be revised to include the removal of garbage and concrete debris within the watercourse corridor. The restoration plan will be revised at detailed design to address agency comments related to soil treatments, species of plantings, etc.

Tree Inventory and Protection Plan

There is potential for damage to occur to trees during construction if proper precautions and protection measures are not implemented. Trees can be negatively impacted through grade changes, soil compaction, root cutting, and mechanical damage to trunks and branches resulting from the operation of construction equipment.

Tree Protection Zones (TPZs) should be established on the ground consistent with tree protection fencing as outlined in the accompanying arborist report prior to the start of construction and shall remain in good condition throughout the duration of all site work. No grading, soil disturbance or surface treatments shall occur within the TPZ. No equipment or materials shall be stored inside the TPZ. If grading or site alteration is required within the TPZs and ISA certified arborist should be consulted. Where trees have been identified for retention, tree protection fencing will be erected and maintained throughout the duration of all construction activity. There shall be no disturbance within the tree protection zone.

More specific and comprehensive tree preservation recommendations are provided within the accompany arborist report, including pre-construction, during construction and post-construction measures.

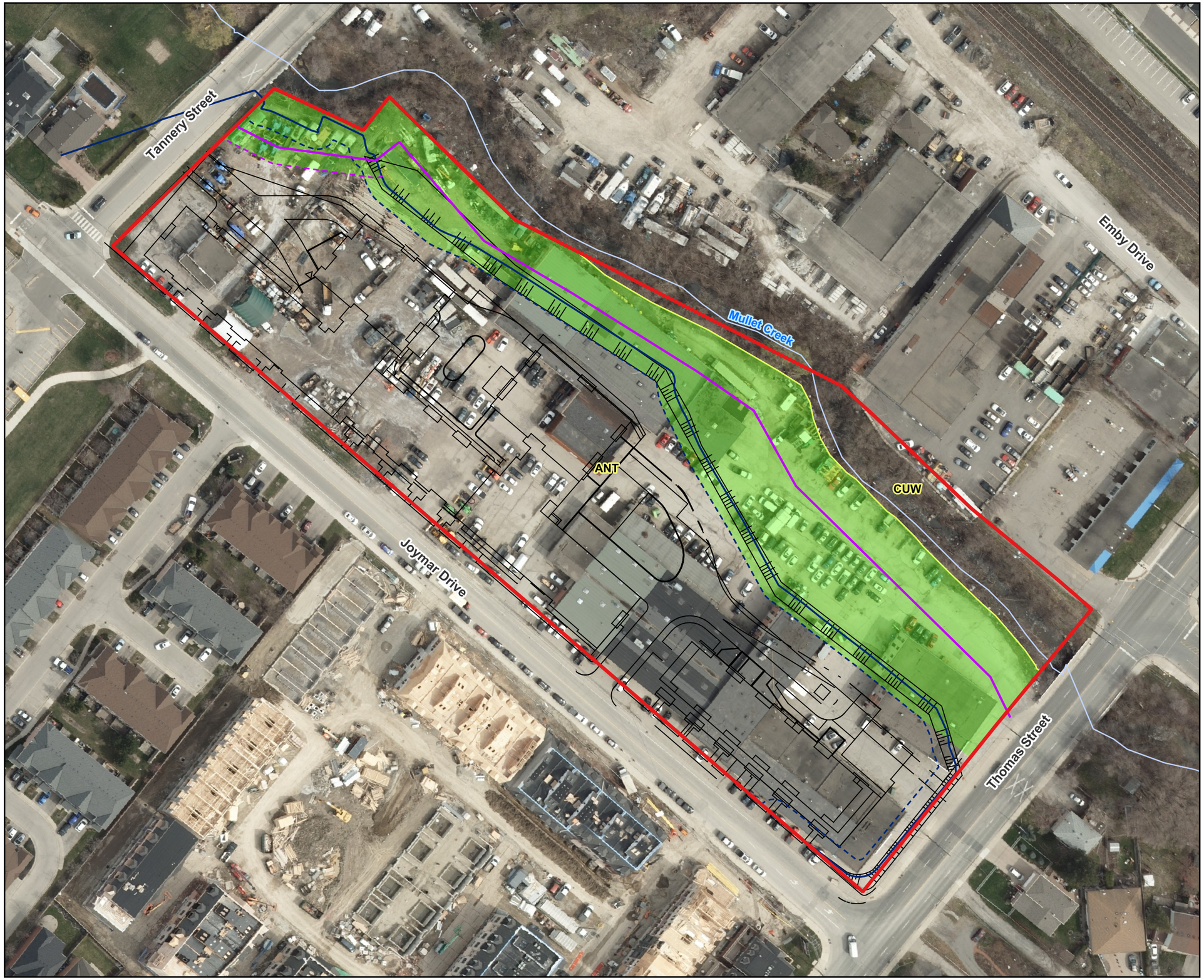
Fencing Installation

A 1.5 m high black vinyl chain link fence is to be built to current municipal standards along the newly established development limit, set back 5 m from the floodplain. Fence installation is required and serves multiple benefits to the natural system including mitigating against rear-yard dumping and minimize the flow of people and their companion animals into the adjacent natural system for recreation.

Restoration Area

Figure 4

66 Thomas Street EIS



Legend

- Subject Property
- Proposed Development
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- Proposed Regional Floodline (Crozier 2024)
- Proposed Regional Floodline + 5 m
- Long Term Stable Top of Slope (Sirati 2023)
- Long Term Stable Top of Slope + 5 m
- ELC and Land Use
- Restoration Area per Strybos Barron King

ELC and Land Use Code	Community Description
ANT	Anthropogenic
CUW	Cultural Woodland

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Timing of Vegetation Removal

At least ten trees are planned to be removed. The federal *Migratory Birds Convention Act (*1994) 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 late March to late-August; hence it is recommended that any clearing of vegetation or tree removals should be outside of these dates. For any proposed clearing of vegetation within these dates, or where birds may be suspected of nesting outside of typical dates, an ecologist should undertake detailed nest searches immediately prior (within three days) to site alteration searching for active nests. However, in general, all natural or semi-natural areas, (and most urban environments) have breeding birds. Therefore, we strongly recommend that vegetation be removed either prior to, or after, the breeding bird season.

8. Policy Conformity

Section 2 above provided an overview of the natural heritage policies and regulations of the Provincial Planning Statement, Region of Peel, City of Mississauga, CVC and the *Endangered Species Act*, while **Section 5** of this report provided an evaluation of the subject property within the context of environmental policies. A summary of how the proposed re-development complies with the applicable environmental policies and legislation is summarized below in **Table 2**.

Table 2. Policy Compliance Assessment

Applicable Policy / Legislation	Relevant EIS Findings and Recommendations
***Endangered Species Act* (2007)**	N/A. There is no habitat of threatened or endangered species.
Provincial Policy Statement (2014) Section 4.1 – Natural Heritage	
1. Habitat of Endangered Species or Threatened Species	N/A. No threatened or endangered species were present or nesting on the subject property.
2. Significant Valleylands	The slope hazard associated with Mullet Creek has been treated as a significant valleyland. The valley has been delimited and its functions will not be negatively impacted, provided the grading plan will not impact the LTSTOS as per Sirati (2023b).
3. Significant Wetlands	N/A. There is no wetland habitat.
4. Significant Woodlands	N/A. There are no significant woodlands.
5. Significant Wildlife Habitat	In Beacon's opinion, the Mullet Creek Valley adjacent to the subject property is not SWH.
6. Significant Areas of Natural and Scientific Interest	N/A. There are no Areas of Natural of Scientific Interest.
7. Fish Habitat	No impacts to fish habitat are anticipated provided that the mitigation recommendations in this report are implemented.
Region of Peel Official Plan	There are no Core Areas associated with the subject property or adjacent lands.

Applicable Policy / Legislation	Relevant EIS Findings and Recommendations
Mississauga Official Plan (2024)	
1. Natural Heritage System	
Significant Natural Areas	Portions of the subject property and adjacent lands were treated as: • Fish Habitat • Significant Valleyland No development is proposed within Mullet Creek or the valleyland; therefore, there no direct impacts are anticipated. Indirect impacts can be avoided or minimized by implementing the mitigation recommendations of his report. The implementation of the restoration plan, as revised through detailed design, will serve as an enhancement to the Green System.
Natural Green Spaces	Natural Green Spaces correspond with the valley and will not be negatively affected. The corresponding fact sheet for area SV10 notes the management needs of the area are invasive species control and a need for riparian vegetation restoration. The restoration plan is consistent with these management needs (SBKL 2024b).
2. Natural Hazard Lands	Development of the subject property will be limited to areas outside natural hazards (i.e., valley slopes associated with Mullet Creek).
***Conservation Authorities Act* (1990), Regulations, and CVC Policies**	
Ontario Regulation 41/24 Ontario Regulation 686/21 Watershed Planning and Regulation Policies (CVC 2010)	Development of the subject property has regard for regulated features and will require a permit from the CVC. The EIS has recommended ecologically appropriate natural heritage buffers, as per CVC policy, noting that the post-development condition will represent a significant improvement in conditions.

9. Summary

This EIS is based on information derived from review of available background resources, field assessments and supporting technical studies prepared by others. Based upon the findings presented in this report and contingent upon the implementation of the recommendations made herein, it is our conclusion that the proposed development and associated activities will not adversely affect any natural heritage features and functions, and an overall benefit will be gained to the natural system following restoration.

The current site conditions are extensively developed up to and within the natural feature. With the implementation of the recommended mitigation measures, the post development condition will result in an improvement in the riparian corridors form and function and increase the overall area of the natural system.

This EIS has been prepared in accordance with the City of Mississauga's EIS Checklist. The EIS has a) characterized the natural heritage features and ecological functions associated with the subject property and surrounding area, b) evaluated the significance of the natural heritage features, c) identified development constraints and impact avoidance measures, d) assessed the potential direct and indirect impacts of the proposed re-development on these features and functions, and e) provided recommendations for mitigation and enhancement measures that can be implemented to protect and restore the ecological integrity of the Natural Heritage System.

It is our opinion that the proposed development limit which incorporates the re-engineered floodline and associated setback/buffer, will provide sufficient protection to natural heritage features identified on and adjacent to the subject property and offers ecological improvements from the existing intensively developed condition.

In our professional opinion the proposed development can occur as planned in conformity with the natural heritage policies of the Region of Peel Official Plan, the City of Mississauga Official Plan, and CVC policies.

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Reviewed by:
Beacon Environmental Ltd.

Brian E. Henshaw
CEO, Senior Ecologist

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Restoration Plan. L101. December 2024.

Appendix A

Breeding Bird List

Appendix A

Breeding Birds of 66 Thomas Street

Common Name	Scientific Name	Status		Provincial breeding season SRANK [b]	Area-sensitive (OMNR)c	# Breeding Pairs/Territories Observed
		National Species at Risk COSEWICa	Species at Risk in Ontario Listing a			
Killdeer	*Charadrius vociferus*			S5		1
Ring-billed Gull	*Larus delawarensis*			S5		Foraging
Rock Pigeon	*Columba livia*			SNA		2
Mourning Dove	*Zenaida macroura*			S5		3
Chimney Swift	*Chaetura pelagica*	THR	THR	S4		F
Downy Woodpecker	*Dryobates pubescens*			S5		2
Blue Jay	*Cyanocitta cristata*			S5		1
Black-capped Chickadee	*Poecile atricapillus*			S5		2
American Robin	*Turdus migratorius*			S5		4
European Starling	*Sturnus vulgaris*			SE		7
Northern Cardinal	*Cardinalis cardinalis*			S5		2
Chipping Sparrow	*Spizella passerina*			S5		1
Song Sparrow	*Melospiza melodia*			S5		2
Red-winged Blackbird	*Agelaius phoeniceus*			S4		Foraging
Common Grackle	*Quiscalus quiscula*			S5		1
American Goldfinch	*Spinus tristis*			S5		1
House Sparrow	*Passer domesticus*			SNA		7

Field Work Conducted On: May 28 and June 7, 2024
Number of Species: 17
Number of (provincial and national) Species at Risk: 0
Number of S1 to S3 Species: 0
Number of Area-sensitive Species:

KEY
a COSEWIC = Committee on the Status of Endangered Wildlife in Canada
a 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
b 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)
c Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide (Appendix G). 151 p plus appendices.

Appendix B

Species at Risk Inquiry

Outlook

RE: SAR Request - 66 Thomas Street, City of Mississauga

From ESA Aurora (MNRF) <ESA.Aurora@ontario.ca>
Date Wed 3/20/2019 3:05 PM
To Chana Steinberg <csteinberg@beaconenviro.com>

2 attachments (753 KB)
InfoRequestGuide_2018-12-18-FINAL.PDF; CITY_OF_MISSISSAUGA.xlsx;

Natural Heritage Information Request Response

Thank you for your request for information on natural heritage features. In order to provide the most efficient service possible, the attached *Natural Heritage Information Request Guide* has been developed to assist you with accessing natural heritage data and values from convenient online sources.

It remains the proponent's responsibility to complete a preliminary screening for each project, to obtain available information from multiple sources, to conduct any necessary field studies, and to consider any potential environmental impacts that may result from an activity. We wish to emphasize the need for the proponents of development activities to complete screenings prior to contacting the Ministry or other agencies for more detailed technical information and advice.

The Ministry continues to work on updating data housed by Lands Information Ontario and the Natural Heritage Information Centre, and ensuring this information is accessible through online resources. Species at risk data is regularly being updated. In order to ensure access to reliable and up to date information, the attached list provides a summary of species at risk that have been observed, or may potentially be present, at a geographic township / municipal level.

This information will assist in scoping the necessary field assessments for an area if development or site alteration is proposed. This information is not meant to circumvent the responsibility of the proponent to undertake species and / or habitat surveys. Surveys or additional site level assessment are often required to confirm presence or absence of natural heritage features and values. Environmental consulting firms have the professional and technical expertise to assess sites for natural heritage features and can gauge the potential for such features to exist.

Absence or lack of information for a given geographic area does not necessarily mean the absence of natural heritage features. Many areas in Ontario have never been surveyed and new plant and animal species records are still being discovered for many localities. In addition, new species may be listed and new natural heritage features may be defined over time. For these reasons, the Ministry cannot provide a definitive statement on the presence, absence or condition of natural heritage features in all parts of Ontario.

Thank you for your inquiry.

From: Chana Steinberg <csteinberg@beaconenviro.com>
Sent: March 13, 2019 11:54 AM
To: ESA Aurora (MNRF) <ESA.Aurora@ontario.ca>

Cc: Brian Henshaw <bhenshaw@beaconenviro.com>
Subject: SAR Request - 66 Thomas Street, City of Mississauga

Good morning,

Please find a SAR screening request and corresponding map attached to this email for your reference. The properties we are interested in are located in the City of Mississauga at 65-95 Joymar Drive and 66 Thomas Street.

Thank you in advance,

Chana Steinberg, B.Sc. (Hons) / Ecologist
BEACON ENVIRONMENTAL
80 Main St. North, Markham, ON L3P 1X5
T) 905.201.7622 x242 F) 905.201.0639 **C) 416.305.5991***
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