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November 7, 2023

Project/File: 122120479

**Amir Hazar, Vice President, Construction**

The Rose Corporation  
156 Duncan Mills Road, Suite 12  
Toronto, Ontario M3B 3N2

Dear Amir Hazar,

**Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville**

Stantec Consulting Ltd. (Stantec) was retained by The Rose Corporation (Rose Corp.) to prepare a natural heritage assessment for the property located at 420 South Service Road East, Oakville, Ontario (herein referenced as the Subject Property). The Subject Property is currently owned by General Electric Canada Property Inc. (GE Canada). Rose Corp. is considering the potential purchase of the Subject Property from GE Canada. Should Rose Corp purchase the Subject Property, the long-term development plan will include a mixed-use (residential/commercial) property use. Short- to medium-term development would likely remain as industrial or commercial property use.

The objective of the natural heritage assessment is to identify potential natural heritage features that are a constraint to development. The natural heritage assessment provides the results of the desktop analysis and field investigations undertaken in 2023, including an assessment of Species at Risk (SAR), Significant Wildlife Habitat (SWH) and designated natural heritage features. The Study Area for the natural heritage assessment is the Subject Property plus 120 metre (m) Adjacent Lands (**Figure 1, Attachment 1**).

## Background Review

The following background documents and information sources were consulted to identify records of designated natural features and areas, SAR and species of conservation concern for the Study Area:

- Natural Heritage Information Centre (NHIC) Biodiversity Explorer and database (MNR 2023a)
- Land Information Ontario (LIO) database (MNR 2023b)
- Conservation Halton Regulated Areas Explorer (Conservation Halton 2023)
- Flood Mitigation Opportunities Study Lower Morrison and Lower Wedgewood Creeks (Town of Oakville and Wood 2020)
- Historical aerial imagery available online (Google Earth various dates)
- 2nd Ontario Breeding Bird Atlas (OBBA), (Cadman et al. 2007)
- Atlas of Mammals of Ontario (Dobbyn 1994)
- Ontario Reptile and Amphibian Atlas (ORRA), (Ontario Nature 2021)
- Ontario Butterfly Atlas (Macnaughton et al. 2022)
- eBird (2023)

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

- iNaturalist (2023)
- DFO SAR mapping (Government of Canada 2019)

The following provincial and municipal legislation and policy documents were reviewed to establish the natural heritage planning context for the Study Area:

- The *Planning Act, 1990* and the Provincial Policy Statement (PPS; MMAH 2020)
- Halton Region Official Plan (ROP; Regional Municipality of Halton 2022), including Map 1G (Key Features within the Greenbelt and Regional Natural Heritage Systems)
- Town of Oakville Livable Cities Official Plan (Town of Oakville 2021), including Schedule L1 (Midtown Oakville Land Use)
- The *Conservation Authorities Act, 1990* (CAA) and Conservation Halton’s Policies and Guidelines for the Administration of Ontario Regulation 162/06 and Land Use Planning Policy Document (Conservation Halton 2020)
- The *Endangered Species Act, 2007* (ESA)

Stantec also review correspondence from Conservation Halton pertaining to regulated areas on the Subject Property (**Attachment 2**).

## Natural Heritage Records

### FEATURES AND AREAS

The background review identified the following designated natural features and areas for the Subject Property and 120 m Adjacent Lands (**Table 1**).

**Table 1 Designated Natural Features and Areas for the Property and 120 m Adjacent Lands**

Feature	Present on the Subject Property	Present in the Adjacent Lands
Wooded Area (MNRF 2023b) ( <b>Figure 1, Attachment 1</b> )	Yes	Yes
Wetland Hazard surrounding Lower Morrison Creek (Halton Conservation 2023) ( <b>Attachment 3</b> )	No	Yes
Natural Area (Town of Oakville 2021) ( <b>Attachment 4</b> )	No	Yes
Flood hazard surrounding Lower Morrison Creek (Town of Oakville and Wood 2020)	No	Yes
Fish Habitat in Lower Morrison Creek (MNRF 2023a) ( <b>Figure 1, Attachment 1</b> )	No	Yes

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

The wooded areas mapped by MNRF (2023b) for the Subject Property (**Figure 1, Attachment 1**) are not identified on the Town of Oakville or Halton Region official plan schedules (**Attachments 4 and 5**); therefore, site investigations were completed to determine if they meet the criteria for being designated as woodlands and/or significant woodlands as per the official plan definitions (described further in the sections below).

Lower Morrison Creek is located to the immediate northeast of the Subject Property (**Attachment 1, Figure 1**). It has been designated as a Natural Area in the Town of Oakville Official Plan and a Wetland Hazard by Conservation Halton. The Flood Mitigation Study shows the 100-year flood line surrounding Lower Morrison Creek and designates the surrounding lands as a potential flood hazard (Town of Oakville and Wood 2020). The natural features (i.e., natural area, wetland, and flood hazards) surrounding Lower Morrison Creek are located to the east and are not present on the Subject Property.

There were no provincially designated natural features, such as areas of natural and scientific interest, crown reserves or provincial parks, identified for the Study Area during the background review.

## SIGNIFICANT SPECIES RECORDS

The background review identified eight (8) records of SAR and fourteen (14) records of species of conservation concern in the vicinity of the Study Area (**Table 2**). NHIC (2023a) records are from within 1 km of the Study Area and atlas records are from within 10 km of the Study Area. Records do not note the exact locations and are used as an indicator of potential occurrence in the Study Area. Once the field investigations were complete, significant species in **Table 1** were evaluated to determine if they have suitable habitat in the Study Area in **Attachment 6** (SAR) and **7** (species of conservation concern).

**Table 2 Background Records of Significant Species for the Study Area**

Common Name	Scientific Name	S-Rank	SARO Status	COSEWIC	Source
<b>Species At Risk</b>					
Bobolink	<i>Dolichonyx oryzivorus</i>	S4B	THR	THR	MNRF 2023a; Cadman et al. 2007
Chimney Swift	<i>Chaetura pelagica</i>	S3B	THR	THR	MNRF 2023a; Cadman et al. 2007
Endangered Bats	<i>Myotis ssp. and Perimyotis subflavus</i>	-	END	-	Dobbyn 1994
Eastern Meadowlark	<i>Sturnella magna</i>	S4B	THR	THR	MNRF 2023a; Cadman et al. 2007
Bank Swallow	<i>Riparia riparia</i>	S4B	THR	THR	Cadman et al. 2007
Whip-poor-will	<i>Antrostomus vociferus</i>	S4B	THR	THR	Cadman et al. 2007
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	S2	END	END	Ontario Nature 2021
American Eel	<i>Anguilla rostrata</i>	S1S2	END	THR	MNRF 2023a
Redside Dace	<i>Clinostomus elongatus</i>	S1	END	END	MNRF 2023a

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

**Table 2 Background Records of Significant Species for the Study Area**

Common Name	Scientific Name	S-Rank	SARO Status	COSEWIC	Source
<b>Species of Conservation Concern</b>					
Barn Swallow	<i>Hirundo rustica</i>	S4B	SC	THR	MNRF 2023a; Cadman et al. 2007
Common Nighthawk	<i>Chordeiles minor</i>	S4B	SC	SC	Cadman et al. 2007
Eastern Wood-Pewee	<i>Contopus virens</i>	S4B	SC	SC	Cadman et al. 2007
Wood thrush	<i>Hylocichla mustelina</i>	S4B	SC	THR	Cadman et al. 2007
Purple Martin	<i>Progne subis</i>	S3B	-	-	Cadman et al. 2007
Tufted Titmouse	<i>Baeolophus bicolor</i>	S3	-	-	Cadman et al. 2007
Grasshopper sparrow	<i>Ammodramus savannarum</i>	S4B	SC	SC	Cadman et al. 2007
Eastern Milksnake	<i>Lampropeltis triangulum</i>	S4	NAR	SC	Ontario Nature 2021
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	S4	-	SC	MNRF 2023a; Ontario Nature 2021
Northern Map Turtle	<i>Graptemys geographica</i>	S3	SC	SC	MNRF 2023a; Ontario Nature 2021
Snapping Turtle	<i>Chelydra serpentina</i>	S4	SC	SC	MNRF 2023a; Ontario Nature 2021
West Virginia White	<i>Pieris virginiensis</i>	S3	SC	-	Macnaughton et al. 2022
Monarch	<i>Danaus plexippus</i>	S4B, S2N	SC	END	Macnaughton et al. 2022
Virginia Bluebells	<i>Mertensia virginica</i>	S3	-	-	MNRF 2023a

S-RANK: Provincial status ranking  
 SARO: Species at Risk in Ontario  
 COSEWIC: Committee on the Status of Endangered Wildlife in Canada  
 S1: Critically imperiled in Ontario (often fewer than 5 populations)  
 S2: Imperiled in Ontario, very few populations (often 20 or fewer)  
 S3: Vulnerable in Ontario, relatively few populations (often 80 or fewer)  
 S4: Apparently Secure – Uncommon but not rare  
 S5: Secure – Common, widespread, and abundant in the province  
 S#B: Breeding status rank  
 S#?: Rank uncertain  
 SC: Species Concern  
 THR: Threatened  
 END: Endangered

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

## Natural Heritage Policy Context

### PROVINCIAL POLICY STATEMENT

The Provincial Policy Statement (PPS; MMAH 2020) was issued under Section 3 of the Planning Act (PA) and came into effect in 1996, with the most recent revision in March 2020. The PPS provides direction on land use planning and development projects and provides a useful framework for identifying and evaluating the significance of natural heritage features on other projects. According to Section 2.1.5 of the PPS, development and site alteration are not permitted in the following features:

- Significant wetlands
- Significant woodlands
- Significant valleylands
- Significant wildlife habitat
- Significant Areas of Natural and Scientific Interest
- Coastal wetlands

Development and site alteration are not also permitted in the following features, except in accordance with provincial and federal requirements:

- Significant portions of the habitat of endangered or threatened species
- Fish habitat

Further, development and site alteration are not permitted on lands that are adjacent to the natural heritage features and areas identified above unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

The background review identified potential for woodlands and SWH on the Subject Property, which were assessed further through site investigations as described below.

### HALTON REGION OFFICIAL PLAN

The Halton Region Official Plan contains policies and mapping to direct growth in the region and protect the natural environment, resources and agricultural land, and provide for infrastructure. Section 115.3 identifies a Regional Natural Heritage System (RNHS) that includes Key Features, enhancement areas and centers for biodiversity, linkages, buffers, watercourses, and wetlands (including non-significant wetlands). Key Features listed in the ROP are generally consistent with the natural heritage features listed in the PPS:

- a) Significant habitat of endangered and threatened species
- b) Significant wetlands
- c) Significant coastal wetlands
- d) Significant woodlands
- e) Significant valleylands
- f) Significant wildlife habitat
- g) Significant areas of natural and scientific interest
- h) Fish habitat

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

Key Features are mapped on Map 1G of the ROP; however, additional features may be identified during site specific studies such as an Environmental Impact Assessment (ROP Section 139.12).

According to Section 18(2) development is generally prohibited in Key Features, unless an Environmental Impact Assessment can demonstrate “that the proposed development...will result in no negative impacts to...the Regional Natural Heritage System or unmapped Key Features...and their associated or ecological functions,” and identify “opportunities for enhancement.”

According to section 295, a woodland is land with at least: 1000 trees of any size per ha, or 750 trees over 5 cm in diameter per ha, or 500 trees over 12 cm in diameter per ha, or 250 trees over 20 cm in diameter per ha but does not include orchards, plantations, hedgerows or nurseries. All tree measurements are taken at 1.37 m from the ground and trees in regenerating fields must have achieved that height to be counted. Invasive non-native woody shrubs are not considered trees for the purpose of density calculations, including Common buckthorn, Common apple and Tartarian honeysuckle.

To be considered significant, a woodland must be 0.5 hectares (ha) or larger determined through a Watershed Plan, a Sub-watershed Study or a site-specific Environmental Impact Assessment to meet one or more of the four following criteria (Section 277):

- the Woodland contains forest patches over 99 years old
- the patch size of the Woodland is 2 ha or larger if it is located in the Urban Area
- the Woodland has an interior core area of 4 ha or larger, measured 100m from the edge
- the Woodland is wholly or partially within 50 m of a major creek or certain headwater creek or within 150m of the Escarpment Brow

There are no Key Features mapped in the Official Plan (Map 1G) on the Subject Property. The background review identified potential for woodlands and SWH on the Subject Property, which were assessed further through site investigations as described below.

## **TOWN OF OAKVILLE OFFICIAL PLAN**

The Town of Oakville’s Official Plan (Town of Oakville 2021) designates Natural Areas that are intended to be preserved long-term. According to Section 16.1.2 Natural Areas include the following features plus buffers:

- a) Significant habitat of endangered species and threatened species
- b) Wetlands
- c) Woodlands
- d) Valleylands
- e) Significant wildlife habitat
- f) Environmentally Sensitive Areas
- g) Areas of Natural and Scientific Interest
- h) Fish habitat
- i) Natural corridors

Section 16 of the Official Plan indicates that development is generally not permitted in Natural Areas.

According to Section 16.1.8, development and site alterations is not permitted within a regionally significant woodland or required buffers, which should be a minimum of 10 meters measured from the drip line of the woodland. The final width of the buffer shall be established through an approved EIS.

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

According to Section 16.1.7, development and site alteration is not permitted within provincially, regionally or locally significant wetlands or required buffer, which should be a minimum of 30 meters measured from the boundary of the wetland. Additionally, unless otherwise directed by Conservation Halton, development proposed on lands within 120 meters of an individual wetland area will require a satisfactory EIS. To demonstrate no negative impact to the features or ecological functions of the wetland.

As illustrated in Schedule L1, there is a Natural Area mapped in the Official Plan on the Study Area. This Natural Area corresponds with Lower Morrison Creek, which is designated as a wetland hazard by Conservation Halton. The Natural Area is located in the Adjacent Lands, outside the Subject Property. The background review identified potential for woodlands and potential for SWH on the Subject Property, which were assessed further through site investigations as described below.

## **ENDANGERED SPECIES ACT, 2007**

The provincial ESA protects species on the SARO List which are threatened, endangered or extirpated and their habitats by prohibiting anyone from killing, harming, harassing or possessing protected species, as well as prohibiting any damage or destruction to their habitat. Under the ESA, all listed species are provided with general habitat protection aimed at protecting areas that species depend on to carry out their life processes such as reproduction, rearing, hibernation, migration or feeding. For some species, detailed habitat regulations have been passed that go beyond the general habitat protection to specifically define the extent and character of protected habitats.

Activities that may impact a protected species or its habitat require prior authorization from the Ministry of Environment, Conservation and Parks (MECP), such as an overall benefit permit under Section 17.2.c of the ESA or registration under Ontario Regulation (O. Reg.) 242/08. The current O. Reg. 242/08 identifies activities which are exempt from the permitting requirements of the ESA, but which are subject to controls outside of the permit process, including registration of the activity, compensation measures and/or preparation of a mitigation or management plan. Activities that are not exempt by O. Reg. 242/08 require a complete permit application process.

## **CONSERVATION AUTHORITIES ACT, 1990**

Ontario Regulation 155/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) of the CAA requires prior permission from Conservation Halton for any development or alteration within a floodplain, valleyland, wetland, or other hazardous land. As noted above, Conservation Halton designates Lower Morrison Creek, located on the northeast quadrant of the Study Area, as a Wetland Hazard (Conservation Halton 2023). The Hazard is located on the Adjacent Lands, outside the Subject Property.

## **Site Investigations**

A single site visit was conducted on June 28, 2023 to supplement and update background information by documenting vegetation communities, wildlife habitat and species. The site investigation was conducted on the Subject Property (**Attachment 1, Figure 2**) and Adjacent Lands were assessed from the edge of the property. A summary of the site investigation effort and weather conditions is provided in **Table 3**.

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

**Table 3** Summary of Site Investigations

Survey Date and Time	Surveyor(s)	Weather Conditions
June 28, 2023 (7:30 am – 9:30am)	S. Spisani E. Padvaiskas	19°C, wind = 2, 100% cloud cover, no precipitation

Vegetation communities were mapped and classified using the Ecological Land Classification (ELC) system for Southern Ontario (Lee et al. 1998) and the updated ELC Catalogue (2008) as guides. The ELC survey recorded plants encountered in the limit of site investigations.

A single breeding bird survey was completed during the field investigation by traversing the Property on foot and recording all bird species that were heard or seen.

A wildlife habitat assessment was conducted to identify candidate SWH features described by the Significant Wildlife Habitat Criteria Schedule for Ecoregion 7E (MNR 2015). The MNR Significant Wildlife Habitat Technical Guide (SWHTG) (OMNR 2000) describes SWH in four categories:

1. Seasonal concentration areas
2. Rare vegetation communities or specialized habitats for wildlife
3. Habitat for species of conservation concern (excluding habitat for endangered or threatened species)
4. Animal movement corridors

Candidate features such as hibernacula, bat roost habitat, stick nests, seeps, and vernal pools were recorded when identified during site investigations. Breeding bird and incidental observations of wildlife were recorded, including species that were seen or heard. Targeted species-use surveys are generally required to determine if candidate features qualify as confirmed SWH. Because targeted species-use surveys were not conducted (apart from the single breeding bird survey) identified SWH features were considered candidate, unless they were confirmed through direct observations or background review.

Habitat for potential SAR (**Table 2**) was assessed to determine likelihood of occurrence in the Study Area. The assessment compared the habitat preferences of each species to the habitat conditions in the Study Area.

## Vegetation

Vegetation communities documented during the site investigation are shown on **Figure 2, Attachment 1** and summarized in **Table 4** below. The focus of the ELC survey was the Subject Property; the remaining vegetation communities were characterized from the edge of the property and through aerial photos interpretation.



Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

**Table 4 Vegetation Communities**

ELC Description	Species Composition (dominant and abundant species)
Buckthorn Deciduous Shrub Thicket Type (THDM2-6)	There are two THDM2-6 communities, located on the southern and northeastern edge of the Study Area. Tree cover is sparse, with canopy coverage less than 25%. The canopy/sub-canopy is composed of Manitoba maple, eastern cottonwood, red ash and willow sp. The understory includes a dense shrub layer (shrub cover exceeding 25%) dominated by common buckthorn, with staghorn sumac and red ash as occasional associates. Small depressions are present the which support the growth of European reed (invasive Phragmites).
Dry - Fresh Deciduous Regeneration Thicket Ecosite (THDM4)	Regenerating fill piles and open land dominated by European reed and Manitoba maple. Other woody species present include eastern cottonwood, red ash and staghorn sumac.
Buckthorn Deciduous Hedgerow Thicket type (THDM3-1)	Narrow Hedgerow along western limit of the site. Dominant species include common buckthorn and European reed.
Cultural Meadow (CUM) / Dry - Fresh Deciduous Regeneration Thicket Ecosite (THDM4)	Open meadow dominated cool season grasses and invasive herbaceous species including Kentucky blue grass, garlic mustard, bird's-foot trefoil. Signs of regeneration are present, notably the growth of common buckthorn shrubs.
Thicket (TH)	Located outside Subject Property; refer to <b>Figure 2, Attachment 1</b> .
Fresh – Moist Deciduous Thicket Ecosite (THDM5)	Thicket community surrounding Lower Morrison Creek. Located outside of Subject Property; refer to <b>Figure 2, Attachment 1</b> .
Meadow Marsh (MAM)	Very small, wet depression dominated by European reed. Located on the edge of a parking lot, it is likely a relic of run-off from paved areas. Other woody species present include purple loosestrife, red-osier Dogwood, bittersweet nightshade, riverbank grape, and red ash.
Cultural Meadow (MEM)	Mowed lawn surrounded by cultural savanna and thicket communities. Mostly free of woody vegetation.
Meadow (ME)	Open meadow adjacent to highway on-ramp.
Cultural Savanna (CUS)	Open canopy (canopy cover less than 25%) with red ash, white elm, norway maple, and willow sp. The understory includes a dense shrub layer dominated by common buckthorn, with other invasive species such as Tatarian honeysuckle and European reed as frequent associates.
Constructed (CV)	Remnants of development remain, including paved concrete and the facade of a building. Signs of regeneration are visible, notably European reed and other herbaceous species growing in fill piles.
Transportation (CVI_1)	QEW highway and railway.
Business Sector (CVC_1)	Includes businesses and parking lots.
Residential (CVR)	Residential houses located to the Northeast of the Subject Property; refer to <b>Figure 2, Attachment 1</b> .
Green Lands (CGL)	Manicured lawn within the Subject Boundary with planted black pines and red maple.
Recreational (CGL_4)	Baseball field and sports park.

The following is a floristic summary of the plants recorded by Stantec within the limit of site investigations. A detailed list with scientific plant names and the provincial status of plant species is provided in **Attachment 8**.

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

- A total of 52 vascular plants were recorded.
- 16 species (31%) are native to Ontario, and 36 are exotic species not native to Ontario (69%).
- 14 native species have a provincial rank of S5, indicating they are common with a secure population in Ontario.
- Two native species have a provincial rank of S4 or S4?, indicating they are uncommon to common, but not rare in the province and populations are apparently secure.
- No provincially rare plants or plant SAR were observed during the site visit.

The Study Area has a very high proportion of exotic species. Some of the exotic species are invasive and compromise the ecological integrity of natural areas by aggressively outcompeting native species and limiting the biodiversity of native species. These problematic species include white mulberry, Norway maple, Manitoba maple, olive sp., common buckthorn, European reed, European privet, Tartarian honeysuckle, and garlic mustard.

## **Wildlife and Wildlife Habitat**

Seventeen wildlife species or evidence of wildlife were recorded during the site investigation including fifteen birds and two mammals (**Table 5**). All but one native wildlife species have a provincial rank of S4 or S5, indicating they are uncommon to common. The European Starling has a provincial rank of SNA indicating that it is an exotic species, and a conservation status rank is not applicable as it is not a suitable target for conservation activities. There were no SAR recorded during the survey.

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

**Table 5 Wildlife Record during the Site Investigation**

Common Name	Scientific Name	Provincial Rank	SARO Status
Mourning Dove	<i>Zenaida macroura</i>	S5	None
Killdeer	<i>Charadrius vociferus</i>	S4B	None
Willow Flycatcher	<i>Empidonax traillii</i>	S4B	None
Eastern Phoebe	<i>Sayornis phoebe</i>	S5B	None
American Robin	<i>Turdus migratorius</i>	S5	None
Gray Catbird	<i>Dumetella carolinensis</i>	S5B, S3N	None
Northern Mockingbird	<i>Mimus polyglottos</i>	S4	None
European Starling	<i>Sturnus vulgaris</i>	SNA	None
Cedar Waxwing	<i>Bombycilla cedrorum</i>	S5	None
American Goldfinch	<i>Spinus tristis</i>	S5	None
Song Sparrow	<i>Melospiza melodia</i>	S5	None
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S5	None
Common Grackle	<i>Quiscalus quiscula</i>	S5	None
Yellow Warbler	<i>Setophaga petechia</i>	S5B	None
Northern Cardinal	<i>Cardinalis cardinalis</i>	S5	None
Eastern Cottontail	<i>Sylvilagus floridanus</i>	S5	None
Coyote	<i>Canis latrans</i>	S5	None

The SAR habitat assessment (**Attachment 6**) indicates that the building on the Subject Property and large diameter (10 cm or greater) trees throughout the Study Area are potentially suitable maternity and summer roosting sites for endangered bats. The other potential SAR (**Table 2**) have only negligible to low potential to occur in the Study Area (**Attachment 6**).

**Table 6 Summary of Species at Risk with a moderate to high probability of being present in the Study Area**

Candidate Species at Risk	Present on the Subject Property	Present in the Adjacent Lands
Endangered bats	Yes	Yes

The wildlife habitat assessment (**Attachment 7**) documented the following candidate SWH types (**Table 7**).

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

**Table 7 Summary of Candidate Significant Wildlife Habitat Features**

Candidate Significant Wildlife Habitat Feature	Present on the Subject Property	Present in the Adjacent Lands
Turtle Wintering Areas	No	Yes
Turtle Nesting Areas	No	Yes
Snake Hibernacula	No	Yes
Habitat for Species of Conservation Concern – Midland Painted Turtle, Snapping Turtle, Virginia Bluebells	No	Yes
Habitat of Species of Conservation Concern – Common Nighthawk, Eastern Wood-pewee	Yes	Yes

The primary focus of the site investigation was the Subject Property; therefore, the Lower Morrison Creek and the surrounding deciduous thicket (THDM5) were not thoroughly investigated during the site investigation. While a comprehensive wildlife assessment was not completed, it is worth noting that Lower Morrison Creek, owing to its relatively small size and urban location, is an unlikely candidate for designation as a SWH. Nonetheless, conducting targeted species occupancy surveys would be necessary to ascertain the presence of the species of conservation concern and to determine if the candidate Turtle Wintering Areas and Turtle Nesting Areas qualify as confirmed SWH. Additional targeted species use surveys would also be required to determine presence absence of Common Nighthawk and Eastern Wood-pewee and determine if SWH habitat is present on the Subject Property or Adjacent Lands, and if present, to determine if the habitat qualifies as SWH. A summary of the SWH assessment can be found in **Attachment 7**.

## Policy Assessment and Recommendations

The primary natural heritage constraint in the Study Area is Lower Morrison Creek located in the northeastern edge of the Study Area. As noted above, Lower Morrison Creek and its surrounding lands are designated as a Natural area in the Town of Oakville Official Plan, and as a Wetland Hazard by Conservation Halton. Therefore, for the purpose of this evaluation, Lower Morrison Creek is considered a wetland.

As noted above, any development proposed within 120 m of a wetland area requires a satisfactory EIS conducted by the Town or a Conservation Authority (Section 16.1.7, Town of Oakville). Lower Morrison Creek is approximately 60 m from the Subject Property, thus a satisfactory EIS is required to demonstrate that the proposed development will result in no negative impact on the features or ecological functions of the wetland. Lower Morrison Creek is not expected to pose a constraint to development because it is contained within an urbanized context and separated from the Subject Property by existing development.

Based on the SWH assessment, Lower Morrison Creek may also support the following significant habitat functions in the Study Area:

- Turtle Wintering Areas
- Turtle Nesting Areas
- Snake Hibernacula
- Habitat for Species of Conservation Concern – Midland Painted Turtle, Snapping Turtle, and Virginia Bluebells

Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville

Targeted species occupancy surveys would be required to determine if the species of conservation concern are present and if candidate Turtle Wintering Areas and Turtle Nesting Areas qualify as confirmed SWH; however, they would not be expected to change the assessments in this report. If these significant species and habitat functions are present in the Study Area, they are adapted to the existing urban setting, and development would not be expected to create additional negative effects. As shown in the vegetation communities (**Attachment 1, Figure 1**), Lower Morrison Creek exists within an urban environment, surrounded by existing development (CVC\_1). As such, Lower Morrison Creek should not pose a constraint to the proposed development.

Another natural feature identified by the MNFR during the background review was the wooded areas. The site investigation revealed that these wooded areas do not qualify as woodland for the following reason:

- As previously stated, according to section 295 in the Halton Region Official plan, a woodland is land with at least: 1000 trees of any size per ha, or 750 trees over 5 cm in diameter per ha, or 500 trees over 12 cm in diameter per ha, or 250 trees over 20 cm in diameter per. Invasive non-native woody shrubs are not considered trees for density calculations.
- Considering that the wooded areas within the Subject Property have a sparse canopy and are dominated by invasive Common buckthorn, they do not meet the density requirements to be considered as a woodland community.

Therefore, the wooded areas on site cannot be classified as woodlands, but instead as cultural savannah (CUS) and Buckthorn tickets (THDM2). Previous correspondence with Conservation Halton revealed that this natural feature was not a wetland (**Attachment 2**). Further the wooded areas would not qualify as Significant Woodland as per the Halton Region Official Plan because they are too small (< 2 ha) and do not meet the other criteria. While, these communities do not pose a constraint on the proposed development, the following preliminary recommendations are provided to mitigate any impacts of development:

- Vegetation removal should occur outside timing restrictions to avoid sensitive periods for nesting birds and bats:
  - Vegetation removal should not occur between April 1 – August 15 to avoid nesting birds which are protected by the *Migratory Birds Convention Act, 1995*. However, birds may also nest outside this period and nests should be avoided until no longer active.
  - Removal of large trees (> 10 centimeter diameter at breast height) should not occur between April 1 and October 1 to avoid bats during the maternity and summer roost season.

## Summary and Conclusions

The Subject Property has the potential to support species of conservation concern in open areas (Common Nighthawk) and wooded areas (Eastern Wood-pewee). Constructed areas are generally not considered SWH and open constructed areas on the Subject Property (CV; **Figure 1 Attachment 1**) are not considered candidate SWH for Common Nighthawk. Wooded areas in the Study Area (THDM2-6, THD4 and CUS; **Figure 1, Attachment 1**) may qualify as SWH if breeding occurrences of Eastern Wood-pewee are present.

The existing building and large diameter trees on the Subject Property have the potential to support SAR that are protected by the *Endangered Species Act*; specifically endangered bats (i.e. Eastern Small-footed Myotis [*Myotis leibii*], Little Brown Myotis [*Myotis lucifugus*], Northern Myotis [*Myotis septentrionalis*], and Tri-coloured Bat [*Perimyotis subflavus*]).

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

If proposed development avoids the existing building, large diameter trees and wooded areas (THDM2-6, THD4 and CUS; **Figure 1, Attachment 1**) plus a 10 m buffer on the wooded areas (Town of Oakville 2021), impacts to SAR and candidate SWH are not anticipated. Work should be initiated outside the migratory breeding bird period to avoid breeding birds and their nests while they are active, including nests of Common Nighthawk; i.e., work such as vegetation clearing, grading and construction activity should not be initiated between April 1 and August 15.

If removal of the building or wooded areas (THDM2-6 and CUS; **Figure 1, Attachment 1**) is required, then targeted surveys are recommended to determine the presence or absence of SAR and species of conservation concern and determine mitigation requirements, if any. If SAR bats are present, authorization is required from the MECP prior to demolishing the building or removing large diameter trees.

Another important consideration is the presence of invasive species on the Subject Property, notably European reed (Invasive Phragmites). Invasive Phragmites will require a management plan to remove it from the Subject Project and prevent its spread during planned development or other activity. Soils contaminated with Invasive Phragmites cannot be reused for landscaping and should be deposited in designated landfills that accept and properly dispose of invasive species.

Conducting a tree inventory is recommended to gain a better understanding of the tree species composition on site and comply with the municipal bylaws, prior to vegetation clearing.

Regards,

**Stantec Consulting Ltd.**

---

**Erica Padvaiskas** B.Sc.  
Ecologist  
Mobile: (437) 233-3415  
erica.padvaiskas@stantec.com

---

**Sean Spisani** B.Sc., ERGC  
Senior Ecologist  
Mobile: (289) 208-6934  
sean.spisani@stantec.com

Attachments:   References  
1. Figures (1 Study Area; 2 Ecological Land Classification)  
2. Conservation Halton Correspondence  
3. Conservation Halton Regulation Mapping  
4. Oakville Official Plan Schedule L1  
5. Halton Region Official Plan Map 1G  
6. Species at Risk Assessment  
7. Significant Wildlife Habitat Assessment  
8. Vascular Plant List

Reference: **Natural Heritage Assessment, 420 South Service Road East, Oakville**

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- Ministry of Natural Resources and Forestry. 2023b. Land Information Ontario (LIO) Mapping. Accessed June 2023. Available online: [http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR\\_NHLUPS\\_NaturalHeritage&viewer=NaturalHeritage&locale=en-US](http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US)
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- Ministry of Municipal Affairs and Housing (MMAH). 2020. The Provincial Policy Statement (PSS). Accessed June 2023. Available online: <https://www.ontario.ca/page/provincial-policy-statement-2020>

**Reference: Natural Heritage Assessment, 420 South Service Road East, Oakville**

Oldham, M. 2017. List of the Vascular Plants of Ontario's Carolinian Zone (Ecoregion 7E) Terrestrial molluscs of Ontario View project Distribution and status of Ontario vascular plants View project. Available online: doi:<https://doi.org/10.13140/RG.2.2.34637.33764>.

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Town of Oakville. 2021. Livable Oakville: Town of Oakville Official Plan 2009. Last Updated: August 31, 2021.

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November 7, 2023  
Amir Hazar, Vice President, Construction

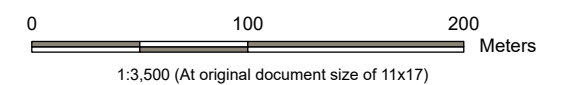
**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 1      Figures (1 Study Area; 2 Ecological Land Classification)**

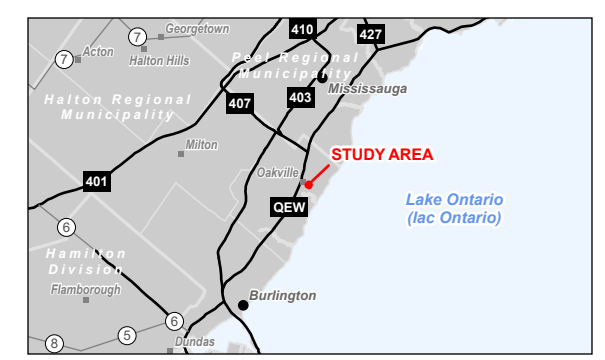




- Legend**
- Study Area
  - Site Boundary
  - Thermal Regime, Warm
  - Railway
  - Watercourse (Permanent)
  - Conservation Authority
  - Administrative Boundary
  - Wooded Area
  - Lot
  - Municipal Boundary, Upper
  - Municipal Boundary, Lower
  - 1 km UTM Grid



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
  2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.
  3. Orthoimagery © First Base Solutions. Image date: 2021.



Project Location: Oakville, ON  
 Prepared by tcoghlan on 2023-06-20  
 Technical Review by ABC on yyyy-mm-dd

Client/Project:  
 General Electrics  
 420 South Service Road East, Oakville  
 Natural Heritage Development Constraints Analysis

Figure No.  
**1**

Title  
**Background Data**



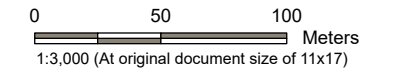


Legend

- Study Area
- Site Boundary
- Photo Location and Direction
- ELC Community
- Railway
- Watercourse (Permanent)

**ELC Communities**

- CGL:** Green Lands
- CUM:** Cultural Meadow
- CUS:** Cultural Savannah
- CV:** Constructed
- CVC\_1:** Business Sector
- CVL\_1:** Transportation
- CVR:** Residential
- MAM:** Meadow Marsh
- MEM:** Mixed Meadow
- MEMM4:** Fresh - Moist Mixed Meadow Ecosite
- TH:** Thicket
- THDM2-6:** Buckthorn Deciduous Shrub Thicket Type
- THDM3-1:** Buckthorn Deciduous Hedgerow Thicket Type
- THDM4:** Dry - Fresh Deciduous Regeneration Thicket Ecosite
- THDM5:** Fresh - Moist Deciduous Thicket Ecosite



**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2023.
3. Imagery © First Base Solutions. Imagery flown in 2021.



Project Location: Oakville, ON  
 Prepared by: toghlan on 2023-08-10  
 Technical Review by: DH on 2023-07-20

Client/Project:  
 General Electric  
 420 South Service Road East, Oakville  
 Natural Heritage Development Constraints Analysis

Figure No.

**2**

Title

**Vegetation Communities**

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November 7, 2023  
Amir Hazar, Vice President, Construction

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 2    Conservation Halton Correspondence**

**From:** [Dana Anderson](#)  
**To:** [David Bannerman](#)  
**Cc:** [David McKay](#)  
**Subject:** FW: GE Lands  
**Date:** Thursday, June 22, 2023 12:06:48 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[GE Lands Current Regulatory Mapping from Conservation Halton.jpg](#)

---

David

I wanted to get back to the group on this matter quickly.

See email confirmation below.

I have attached the current CH mapping.

Also note that there is NO NHS on the site based on Regional or Town mapping.

I will leave it to you to circulate to the group as I am not sure I have everyone's emails.

Thanks

Dana

**DANA ANDERSON, MA, FCIP, RPP | Partner**

## **MHBC** Planning, Urban Design & Landscape Architecture

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**From:** Geoff Abma <[geoff.abma@oakville.ca](mailto:geoff.abma@oakville.ca)>

**Sent:** June 22, 2023 11:26 AM

**To:** Dana Anderson <[danderson@mhbcplan.com](mailto:danderson@mhbcplan.com)>

**Cc:** Gabe Charles <[gabe.charles@oakville.ca](mailto:gabe.charles@oakville.ca)>; Kirk Biggar <[kirk.biggar@oakville.ca](mailto:kirk.biggar@oakville.ca)>

**Subject:** RE: GE Lands

Hi Dana,

Leah Smith from Conservation Halton has previously confirmed that the feature on the SW quadrant of the 'GE Lands' is not a wetland. See excerpts from various emails below to that effect with relevant portions highlighted:

---

**From:** Leah Smith [<mailto:leahsmith@hrca.on.ca>]  
**Sent:** Monday, September 21, 2020 9:37 AM  
**To:** Lesley Gill Woods <[lesley.gill-woods@oakville.ca](mailto:lesley.gill-woods@oakville.ca)>  
**Subject:** RE: Midtown Oakville

Good Morning Lesley,

I hope you had a nice weekend.

Thanks for reaching out on the midtown mapping. With respect to your first question about the wetland feature – I actually recalled going out to stake this wetland before I left CH about 8 years ago, and that we discovered it wasn't a wetland when we got out to the site. We managed to find that record so our mapping will be updated to remove the wetland, and you don't need to recognize this area in the OP.

For question 2, I will get back to you shortly to confirm if the CH mapping you've shown below is accurate for the creeks, or if there are any new flood plain analyses, etc. that have been done recently and should be reflected.

In the meantime, can you confirm your criteria for the Natural Area designation? Do you include hazards in this designation, or is Schedule B meant to capture hazards separately from the designation?

Also, let me know if there are any draft policies you'd like me to take a look at, or if you're just leaning on the town wide policy guidance for hazards/natural areas.

Thanks,  
Leah

---

**From:** Lesley Gill Woods <[lesley.gill-woods@oakville.ca](mailto:lesley.gill-woods@oakville.ca)>  
**Sent:** September 15, 2020 10:09 AM  
**To:** Leah Smith <[lsmith@hrca.on.ca](mailto:lsmith@hrca.on.ca)>  
**Subject:** RE: Midtown Oakville

Hi Leah – Thanks for getting back to me. As part of the town's OP Review, Geoff Abma and I are working on proposed updates to the Midtown Oakville policies and mapping (Midtown Oakville Growth Area Review). We are looking to "ground truth" the existing policies to the extent possible, and are evaluating the redistribution of Mixed Use permissions to meet Growth Plan requirements.

This includes potential mixed use / high density residential use permissions east of Trafalgar Road.

In CH's mapping there is a "Wetlands Hazard" identified on the GE lands (east of Trafalgar Rd., south of QEW) that has never been recognized in our OP mapping. It does not appear on Livable Oakville's Schedule B (Natural Features and Hazard Lands) or on Schedules L1 and L2 (Midtown).

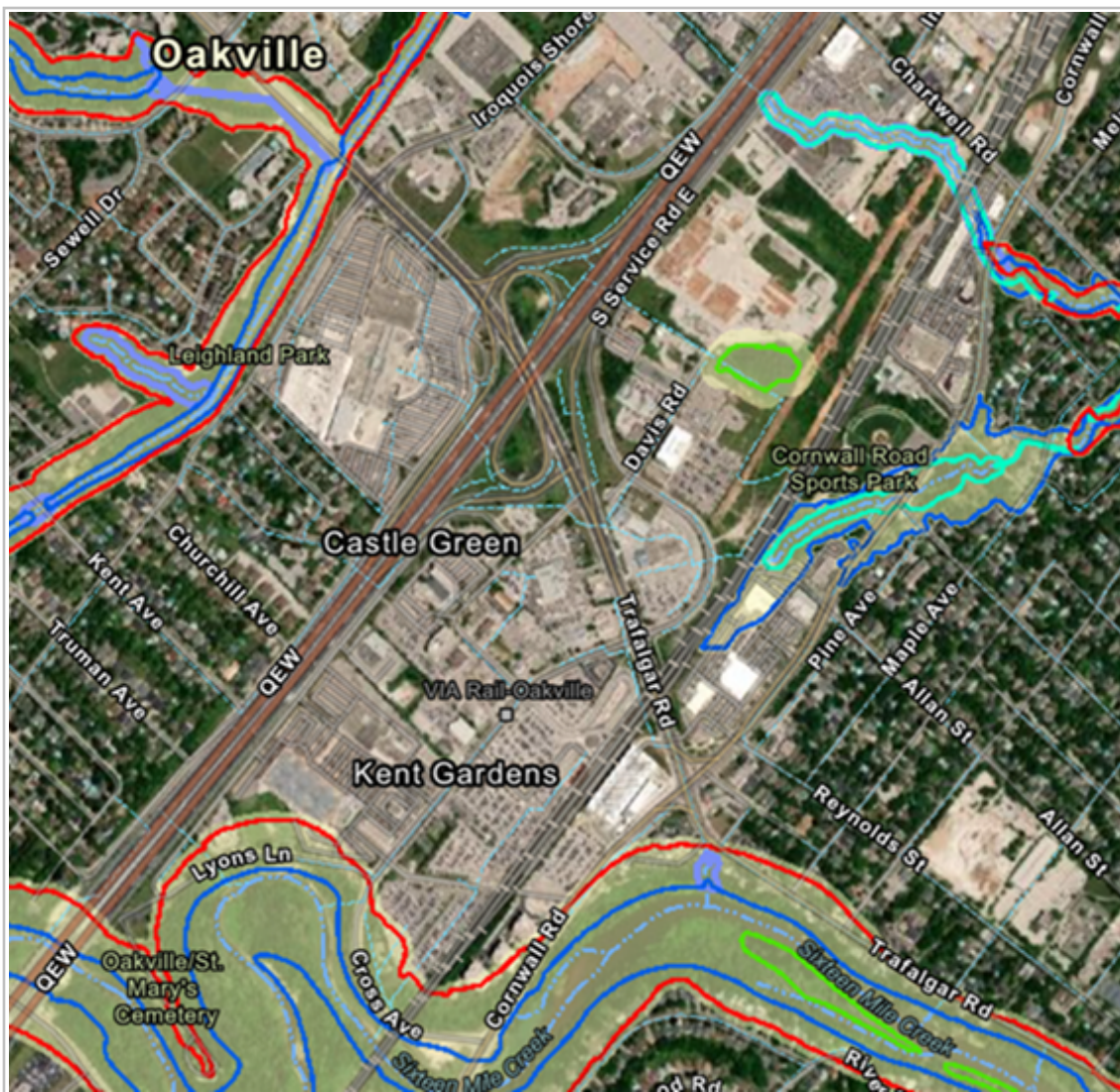
So, we're wondering:

1. Does CH have any more information about this feature or thoughts about (and basis for) how it should be recognized in our OP? e.g., Natural Area, Natural Area Requiring Further Study.
2. Does CH have any other comments or information affecting lands in Midtown Oakville?

I have attached the most current DRAFT consolidated Livable Oakville schedules for you, which include the changes made by OPA 14 (Midtown Oakville and Transportation Network Updates). These schedules *do not* include any draft proposed changes.

We are supposed to take draft policy changes to Council by December or January, so the sooner we know about any issues, the better.

Many thanks,  
Lesley



---

**From:** Leah Smith <[leahsmith@hrca.on.ca](mailto:leahsmith@hrca.on.ca)>  
**Sent:** June 6, 2022 8:50 AM  
**To:** Lesley Gill Woods <[lesley.gill-woods@oakville.ca](mailto:lesley.gill-woods@oakville.ca)>  
**Subject:** RE: CH Feedback: Midtown OPA

Hi Lesley,

Thanks for the update. We caught the addition to the NHS on the GE site too, and also let the Region know that it has been confirmed not a wetland and can be removed. Let us know if/when you need anything further from us on Midtown.

Hope all is well!



Leah

**From:** Lesley Gill Woods <[lesley.gill-woods@oakville.ca](mailto:lesley.gill-woods@oakville.ca)>

**Sent:** June 3, 2022 12:55 PM

**To:** Leah Smith <[leahsmith@hrca.on.ca](mailto:leahsmith@hrca.on.ca)>

**Cc:** Geoff Abma <[geoff.abma@oakville.ca](mailto:geoff.abma@oakville.ca)>

**Subject:** RE: CH Feedback: Midtown OPA

*Hi Leah* – I just realized that I drafted an email to you a while back and never sent it! At the time, we were in the midst of compiling agency comments to attach to the staff report about the 2022 Draft Proposed Midtown OPA. (Refer to Item 6.2 on the town's June 7, 2022 Planning and Development Council agenda: <https://pub-oakville.escribemeetings.com/Meeting.aspx?id=4a45189b-d22d-4cda-b4a3-30ccd431d64a&Agenda=Agenda&lang=English> )

I'm writing to advise that we haven't forgotten about your 03/17/2021 comments on the 2021 Draft Proposed Midtown OPA. We will address them in the next version of the 2022 Draft Proposed OPA.

I also wanted to flag that the Midtown Natural Area/Wetland Hazard in the southwest quadrant of the GE site (at the east end of Davis Rd.) reappeared in the Region's recent draft updated NHS mapping. We advised them that it had been determined not to be a significant feature based on our previous communications with you.

Lesley

**Lesley Gill Woods, MCIP, RPP**  
**Senior Planner - Policy Planning, Policy Planning and Heritage**  
**Planning Services**

Town of Oakville | 905-845-6601, ext.3261 | f: 905-338-4414 | [www.oakville.ca](http://www.oakville.ca)

I hope this helps.  
Cheers! Geoff.

**Geoff Abma, (He/Him/His), MCIP, RPP**  
**Senior Planner**  
**Planning Services**

Town of Oakville | 905-845-6601, ext.3034 | f: 905-338-4414 | [www.oakville.ca](http://www.oakville.ca)

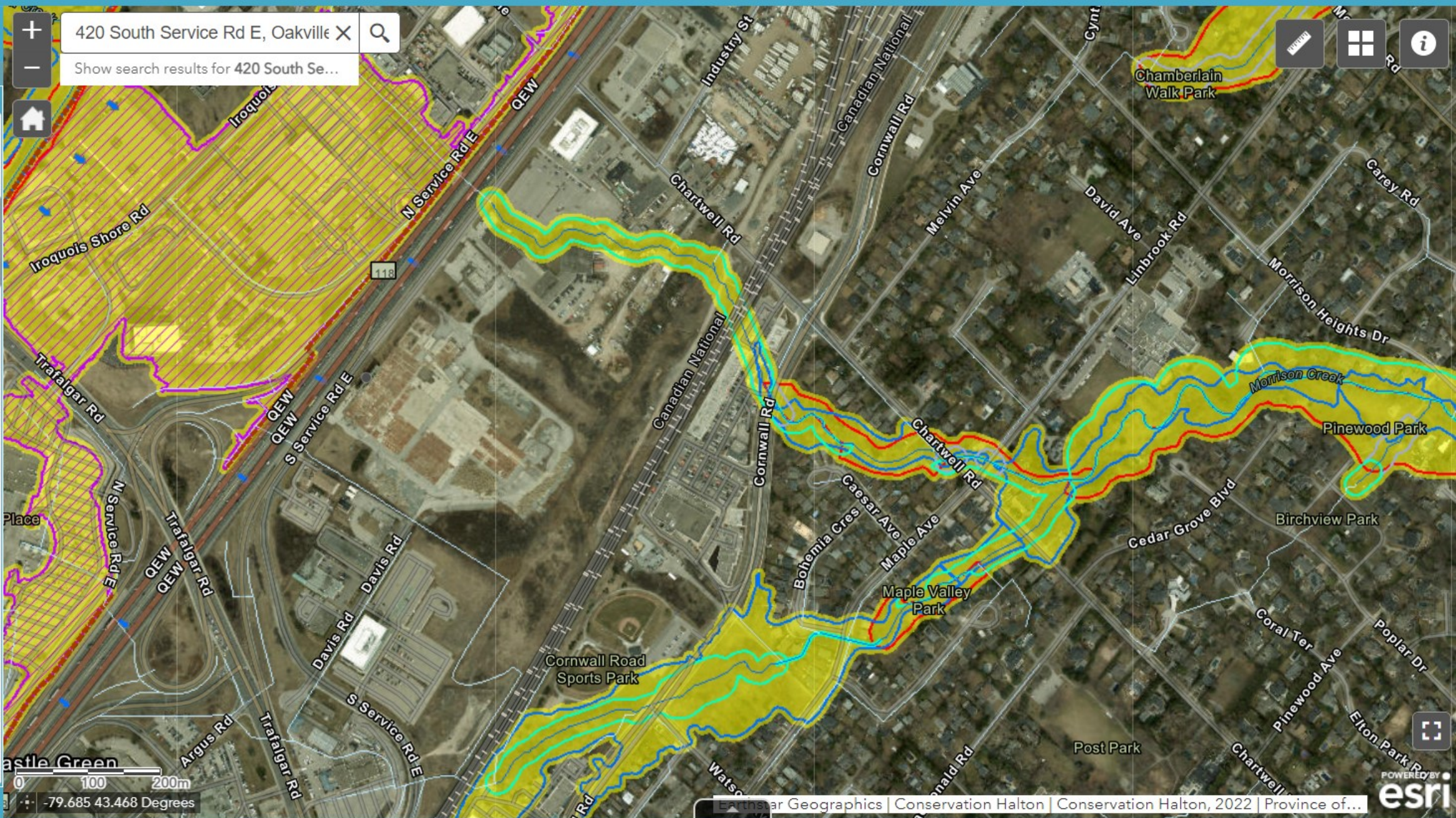
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How to...

Regulation Limit (Approximate)

**ARL Hazards**

- Meander Belt Hazard
- Headwater Floodplain Hazard
- Floodplain Hazard
- Spill Zone Hazard
- Wetland Hazard
- Stable Top of Bank (STOB) Hazard
- Shoreline Hazard
- Shoreline Dynamic Beach Hazard
- Shoreline 100 Year Flood Elevation Hazard

**ARL Components**

- Consult with Conservation Halton  
\*Potential flood hazard mapping changes
- Spill Arrows
- Spill Lines

Step 3. Print a map of your area by selecting the





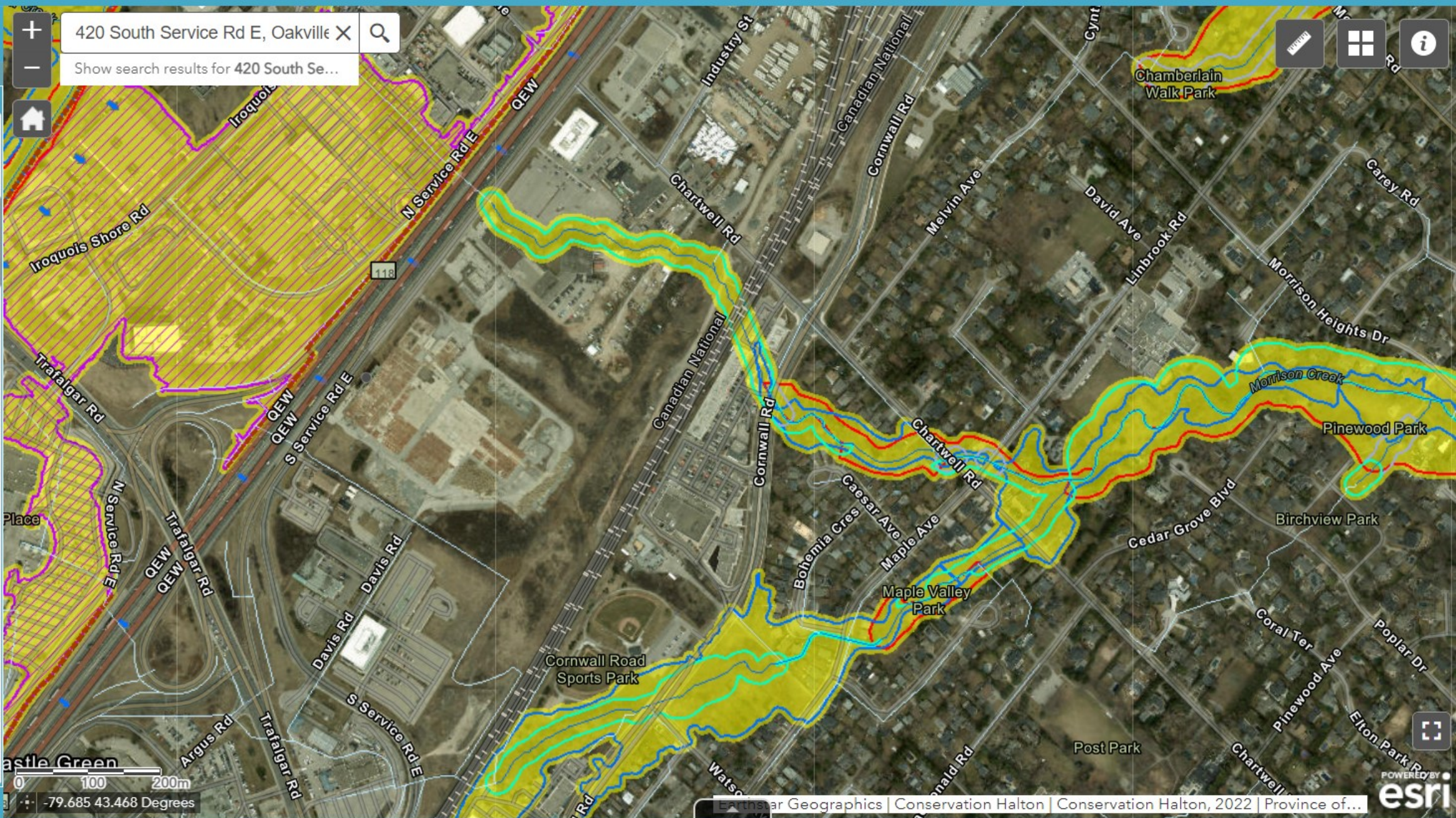
November 7, 2023  
Amir Hazar, Vice President, Construction

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 3    Conservation Halton Regulation Mapping**



Navigation icons: Home, Layers, Print, Search, Zoom In, Zoom Out, Full Screen, Info.



How to...

Regulation Limit (Approximate)

ARL Hazards

- Meander Belt Hazard
- Headwater Floodplain Hazard
- Floodplain Hazard
- Spill Zone Hazard
- Wetland Hazard
- Stable Top of Bank (STOB) Hazard
- Shoreline Hazard
- Shoreline Dynamic Beach Hazard
- Shoreline 100 Year Flood Elevation Hazard

ARL Components

- Consult with Conservation Halton  
\*Potential flood hazard mapping changes
- Spill Arrows
- Spill Lines

Step 3. Print a map of your area by selecting the

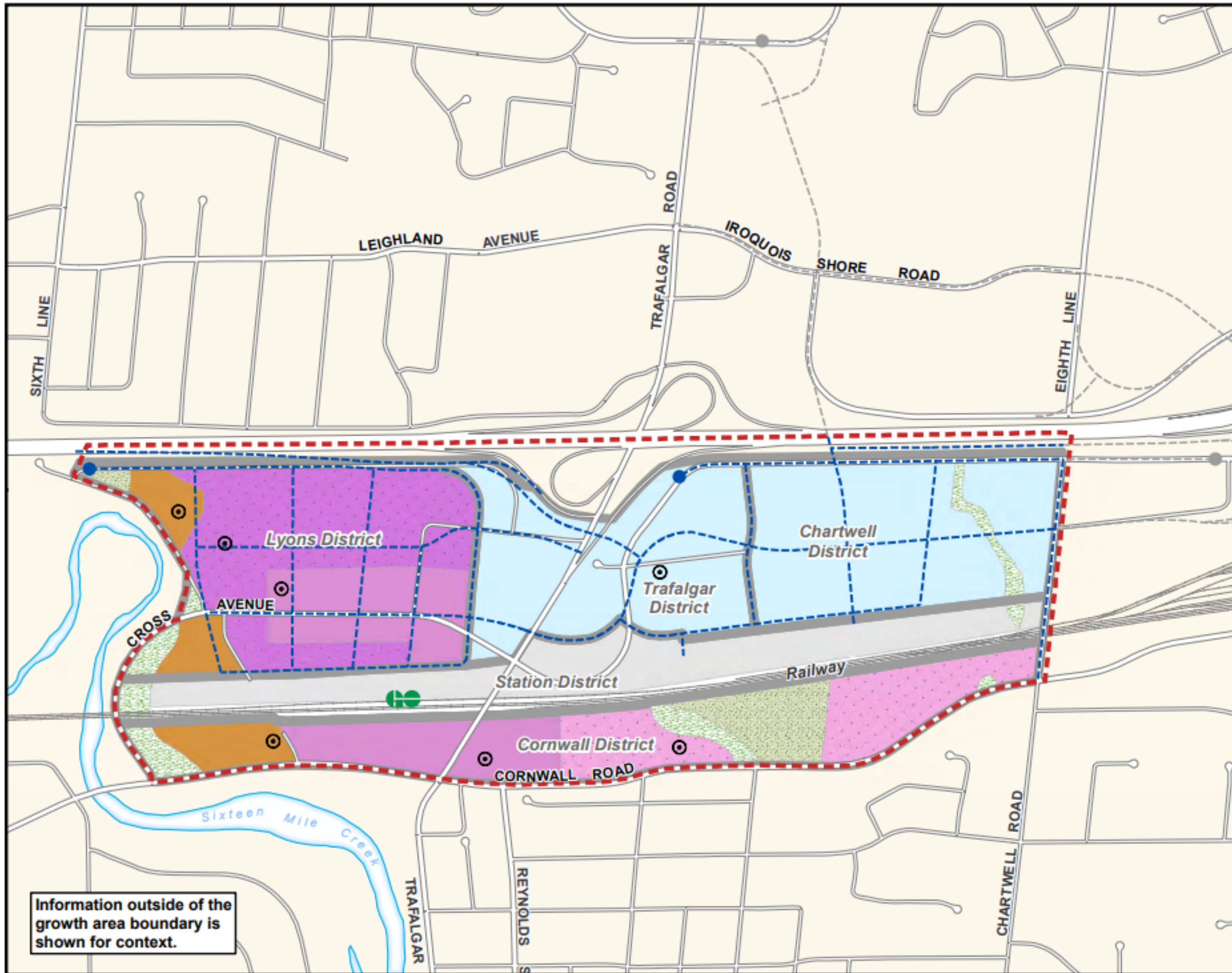




November 7, 2023  
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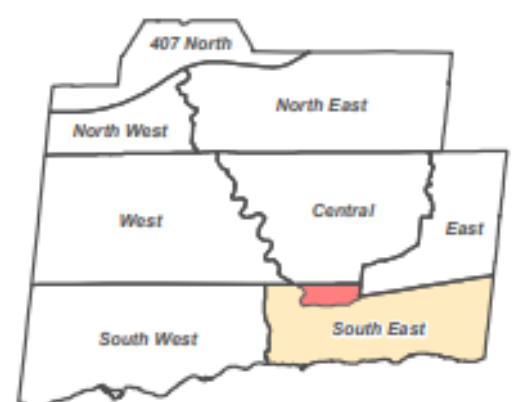
**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 4      Oakville Official Plan Schedule L1**



Information outside of the growth area boundary is shown for context.

# SCHEDULE L1 MIDTOWN OAKVILLE LAND USE



- GROWTH AREA BOUNDARY
- HIGH DENSITY RESIDENTIAL
- COMMUNITY COMMERCIAL
- URBAN CENTRE
- URBAN CORE
- OFFICE EMPLOYMENT
- NATURAL AREA
- PARKS AND OPEN SPACE
- UTILITY
- DISTRICT BOUNDARIES
- FUTURE ROADS  
(Refer to Schedule L3 for more detail)
- FUTURE CUL-DE-SAC
- RAILWAY
- MAJOR TRANSIT STATION

Refer to Part E, Midtown Oakville, for Growth Area Policies  
 Refer to Part E, Midtown Oakville Exceptions



1:7,500

August 31, 2021

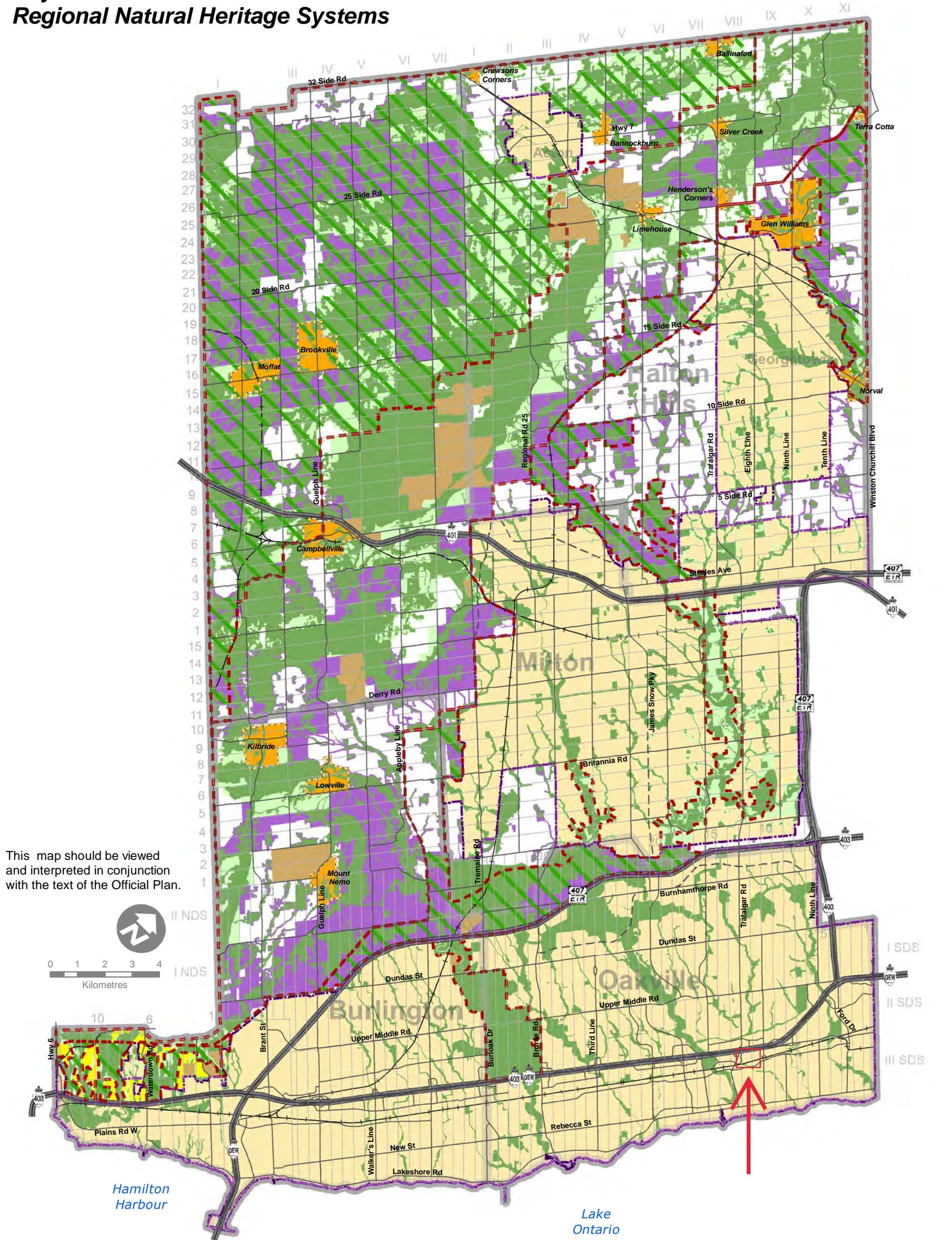
November 7, 2023  
Amir Hazar, Vice President, Construction

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 5 Halton Region Official Plan Map 1G**



# Map 1G Key Features within the Greenbelt and Regional Natural Heritage Systems



This map should be viewed and interpreted in conjunction with the text of the Official Plan.

- +— Rail Line
- - - Proposed Major Arterial
- Major Road
- Provincial Freeway
- Lot and Concession Line
- Municipal Boundary
- - - Greenbelt Plan Boundary
- Urban Area
- Hamlet
- Key Features
- Enhancement Areas, Linkages and Buffers
- Prime Agricultural Areas in NHS Enhancements/Linkages/Buffers
- Greenbelt NHS
- Regional Urban Boundary
- Mineral Resource Extraction Area
- North Aldershot Policy Area



November 7, 2023  
Amir Hazar, Vice President, Construction

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 6    Species at Risk Assessment**

Natural Heritage Due Diligence Support, 420 South Service Road East, Oakville

Attachment 6 - Species at Risk

Group	Common Name	Scientific Name	S-Rank	SARO Status	COSWIC	Source	Habitat Description	Assessment Criteria	Potential to Occur in the Study Area
Birds	Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	S4B	THR	THR	Cadman et al. 2007	Whip-poor-will favour open woodlands with frequent clearings. Its preferred nesting sites contain shaded leaf litter or pine needles and generally occur along wooded edges or in clearings without any herbaceous growth (Cadman et al. 1987). The species is considered to be area-sensitive, preferring 100 hectares of suitable habitat for breeding. Recent survey data suggest a substantial decline in Whip-poor-will numbers and a constriction of range, prompting its recent federal and provincial designation. Reasons for the decline are currently unknown and speculative with habitat loss and degradation, automobile collisions and changes in food supply listed as the leading threats (COSEWIC, 2009). The decline is concurrent with, and likely linked to, noted declines (and associated provincial and federal designations) of a number of aerial-foraging birds.	Suitable habitat is not present in the Study Area.	Low
Birds	Bobolink	<i>Dolichonyx oryzivorus</i>	S4B	THR	THR-NS	MNRF 2023; Cadman et al. 2007	The Bobolink is generally referred to as a "grassland species". It nests primarily in forage crops with a mixture of grasses and broad-leaved forbs, predominantly hayfields and pastures. Preferred ground cover species include grasses such as Timothy and Kentucky bluegrass and forbs such as clover and dandelion (COSEWIC 2010a). Bobolink is an area-sensitive species, with reported lower reproductive success in small habitat fragments (COSEWIC 2010a).	Suitable habitat is absent.	Negligible
Birds	Chimney Swift	<i>Chaetura pelagica</i>	S4B, S4N	THR	THR-THR	MNRF 2023; Cadman et al. 2007	Chimney Swift uses chimneys for roosting and breeding, and less commonly, nest in large hollow trees (Cadman et al. 2007a). Nesting sites typically have a constant ambient temperature (COSEWIC 2007a). It is an aerial insectivore, and often forages near water (COSEWIC 2007a).	Suitable chimneys and trees not observed on the Subject Property and unlikely to occur in the Study Area.	Low
Birds	Eastern Meadowlark	<i>Sturnella magna</i>	S4B	THR	THR	MNRF 2023; Cadman et al. 2007	The Eastern Meadowlark is typically found in fields, meadows, golf courses, pastures, alfalfa fields, roadsides and other open areas (MNRF 2016). Older sites with moderately tall grass, a substantial litter layer, low forb and shrub cover and dense grass are preferred (COSEWIC 2011a). Larger patch sizes (>5 ha) are also generally preferred (COSEWIC 2011a).	Marginally suitable habitat may be present in CUM/THDM4 communities however species was not recorded during the breeding bird survey.	Low
Mammals	Endangered Bats	<i>Myotis ssp. and Perimyotis subflavus</i>	Various	END	Various	Dobby 1994	Day roosts and maternity colonies in older forest and occasionally in barns or other structures.	The building on the Subject Property and large diameter trees throughout the Study Area are potentially suitable maternity and summer roosting sites for endangered bats	Moderate to High
Birds	Bank Swallow	<i>Riparia riparia</i>	THR	THR-NS	S4B	Cadman et al. 2007	The Bank Swallow breeds on a variety of sites with vertical banks, including riverbanks, bluffs, aggregate pits and stock piles of sand and soil (COSEWIC 2013). Sand-silt substrates are preferred (COSEWIC 2013). Nesting sites are often near open habitats used for aerial foraging (COSEWIC 2013). Large wetlands are used as communal roosts during post-breeding, migration, and wintering periods (COSEWIC 2013).	No suitable nesting sites for Bank Swallow were identified in the Study Area.	Negligible
Fish	American Eel	<i>Anguilla rostrata</i>	S1S2	END	THR	MNRF 2023a	Habitat requirements during the overwintering period are poorly known, in both fresh and saltwater habitats. In fresh water, preferred habitat can be found in lakes and rivers including all waters extending from the high-water mark down to at least 10 m depth. American Eels commonly overwinter in mud bottoms in both bay and estuary habitats. Eelgrass and interstitial spaces are important to American Eel as cover, particularly during daylight hours.	Morrison Creek is not mapped aquatic species at risk habitat (Government of Canada 2019)	Low
Fish	Redside Dace	<i>Clinostomus elongatus</i>	S1	END	END	MNRF 2023a	Redside Dace are a cool water species found in clear slow moving sections of streams with pool and riffle sequences and overhanging banks or vegetation for cover. Substrates vary and include boulders, rocks, gravel or sand often with a shallow covering of detritus or silt. (Redside Dace Recovery Team, 2010)	Morrison Creek is not mapped aquatic species at risk habitat (Government of Canada 2019)	Low

Group	Common Name	Scientific Name	S-Rank	SARO Status	COSWIC	Source	Habitat Description	Assessment Criteria	Potential to Occur in the Study Area
Amphibian	Jefferson Salamander	Ambystoma jeffersonianum	S4B	THR	THR	Ontario Nature 2021	The Jefferson Salamander is terrestrial during the adult stage and inhabits upland deciduous forests with suitable breeding areas including limestone sinkhole ponds, kettle ponds, vernal pools and other natural basins. Breeding areas are often ephemeral and are fed by spring runoff, groundwater, or springs. In Canada, the species is associated with mature, Carolinian forests. Suitable habitat is often only available in fragmented deciduous woodlots of marginal agricultural land (COSEWIC, 2010b).	Suitable habitat is not present within the Study Area.	Negligible

## References

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November 7, 2023  
Amir Hazar, Vice President, Construction

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 7    Significant Wildlife Habitat Assessment**

**Natural Heritage Due Diligence Support, 420 South Service Road East, Oakville**

Attachment 7 – Significant Wildlife Habitat Assessment

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
<b>Seasonal Concentration Areas</b>			
Waterfowl Stopover and Staging Area (Terrestrial)	<p>Fields with sheet water or utilized by tundra swans during spring (mid-March to May), or annual spring melt water flooding found in any of the following Community Types: Meadow (CUM1), Thicket (CUT1).</p> <p>Agricultural fields with waste grains are commonly used by waterfowl, and these are not considered SWH unless they have spring sheet water.</p>	ELC surveys and air photo interpretation were used to assess features within the Study Area that may support waterfowl stopover and staging areas (terrestrial).	<p>Qualifying communities are absent from the Subject Property and Adjacent Lands.</p> <p><b>Candidate habitat is considered absent.</b></p>
Waterfowl Stopover and Staging Area (Aquatic)	<p>The following Community Types: Shallow Marsh (MAS), Shallow Aquatic (SA), Deciduous Swamp (SWD).</p> <p>Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration.</p> <p>Aggregations of 100 or more qualifying waterfowl species are required for 7 days to confirm the habitat as significant (&gt;700 waterfowl use days).</p>	ELC surveys and air photo interpretation were used to assess features within the Study Area that may support waterfowl stopover and staging areas (aquatic).	<p>Lower Morrison Creek is located within the Study Area; however, it is likely too small to support &gt;700 waterfowl use days.</p> <p><b>Candidate habitat is considered absent.</b></p>
Shorebird Migratory Stopover Area	<p>Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats.</p> <p>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.</p> <p>The following community types: Meadow Marsh (MAM), Beach/Bar (BB), or Sand Dune (SD)</p> <p>&gt;1000 shorebird use days are required during migration to confirm the habitat as significant.</p>	ELC surveys and air photo interpretation were used to assess features within the Study Area that may support migratory shorebirds.	<p>Lower Morrison Creek and a Meadow Marsh community are present in the Study Area; however, they are likely too small to support 1000 shorebird use days.</p> <p><b>Candidate habitat is considered absent.</b></p>

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Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Raptor Wintering Area	<p>At least one of the following Forest Community Types: Deciduous Forest (FOD), Mixed Forest (FOM) or Coniferous Forest (FOC), in combination with one of the following Upland Community Types: Meadow (CUM), Thicket (CUT), Savannah (CUS), Woodland (CUW) (&lt;60% cover) that are &gt;20 ha and provide roosting, foraging and resting habitats for wintering raptors.</p> <p>Upland habitat (CUM, CUT, CUS, CUW), must represent at least 15 ha of the 20 ha minimum size.</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that may support wintering raptors.</p>	<p>Forest communities are absent from the Subject Property and Adjacent Lands.</p> <p>Suitable amount of qualifying upland habitat is absent from the Subject Property and Adjacent Lands.</p> <p><b>Candidate habitat is considered absent.</b></p>
Bat Hibernacula	<p>Hibernacula may be found in caves, mine shafts, underground foundations and karsts.</p> <p>May be found in these Community Types: Crevice (CCR), Cave (CCA).</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that may support bat hibernacula.</p>	<p>Crevices, caves or abandoned mines are absent from the Subject Property and Adjacent Lands.</p> <p><b>Candidate habitat is considered absent.</b></p>
Bat Maternity Colonies	<p>Maternity colonies considered significant wildlife habitat are found in forested ecosites.</p> <p>Community Types: Deciduous Forest (FOD), Mixed Forest (FOM), Deciduous Swamp (SWD) that have &gt;10/ha wildlife trees &gt;25cm diameter at breast height (dbh).</p> <p>Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH).</p> <p>Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2.</p> <p>Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.</p>	<p>ELC surveys, wildlife habitat assessments, and air photo interpretation used to assess features within the Study Area that may support bat maternity colonies.</p>	<p>Qualifying forest habitat is absent in the Study Area. Suitable roost trees were not documented on the Subject Property.</p> <p>The facade of a building remains in the Subject Property which could be suitable habitat for maternal colonies; however, buildings are not considered SWH.</p> <p><b>Candidate habitat is considered absent.</b></p>

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Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Turtle Wintering Areas	<p>Snapping Turtle and Midland Painted Turtle use ELC community classes: Swamp (SW), Marsh (MA), Open Water (OA), Shallow water (SA), Open Fen (FEO) and Open Bog (BOO). Northern Map turtle- open water areas such as deeper rivers or streams and lakes can also be used as over-wintering habitat.</p> <p>Water has to be deep enough not to freeze and have soft mud substrate.</p> <p>Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate dissolved oxygen.</p>	<p>ELC surveys and air photos interpretation were used to assess features within the Study Area that may support turtle wintering areas.</p>	<p>Lower Morrison Creek is located on the Adjacent land, however, was not visited during the ELC survey. Lower Morrison Creek may be suitable for over-wintering turtles.</p> <p><b>Candidate habitat may be present in the Adjacent Lands (Lower Morrison Creek).</b></p>
Snake Hibernacula	<p>Hibernation occurs in sites located below frost lines in burrows, rock crevices, broken and fissured rock and other natural features. Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover.</p> <p>Any ecosite in southern Ontario other than very wet ones may provide habitat. The following Community Types may be directly related to snake hibernacula: Talus (TA), Rock Barren (RB), Crevice (CCR), Cave (CCA), and Alvar (RBOA1, RBSA1, RBTA1).</p> <p>Hibernacula features used by a minimum of five snakes of one species or two or more species are considered significant.</p>	<p>ELC surveys and wildlife habitat assessments were used to document features that may support snake hibernacula.</p>	<p>Qualifying communities are absent from the Subject Property and adjacent Lands. Natural, below-ground features were not observed during field investigations for the Subject Lands; however Adjacent Lands were not searched.</p> <p><b>Candidate habitat is present on the Adjacent Lands.</b></p>
Colonial-Nesting Bird Breeding Habitat (Bank and Cliff)	<p>Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, or barns found in any of the following Community Types: Meadow (CUM), Thicket (CUT), Bluff (BL), Cliff (CL).</p> <p>Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles.</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that may support colonial bird breeding habitat.</p>	<p>Eroding banks, sandy hills, borrow pits, steep slopes and sand piles are absent from the Subject Property and Adjacent Lands.</p> <p><b>Candidate habitat is considered absent.</b></p>

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Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Colonial-Nesting Bird Breeding Habitat (Tree/Shrubs)	<p>Identification of stick nests in any of the following Community Types: Mixed Swamp (SWM), Deciduous Swamp (SWD), Treed Fen (FET).</p> <p>Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used.</p>	<p>ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support colonial bird breeding habitat (Trees/Shrubs).</p>	<p>Deciduous swamp (SWD), Mixed Swamp (SWM), and Treed Fen (FET) communities are absent from the Subject Property and Adjacent Lands. No large stick nests were observed in the Study Area.</p> <p><b>Candidate habitat is considered absent.</b></p>
Colonial-Nesting Bird Breeding Habitat (Ground)	<p>Any rocky island or peninsula within a lake or large river.</p> <p>For Brewer’s Blackbird close proximity to watercourses in open fields or pastures with scattered trees or shrubs found in any of the following Community Types: Meadow Marsh (MAM1-6), Shallow Marsh (MAS1-3), Meadow (CUM), Thicket (CUT), Savannah (CUS).</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that may support colonial bird breeding habitat (Ground).</p>	<p>Rocky islands and peninsulas were absent from the Subject Property and Adjacent Lands.</p> <p>In southern Ontario, Brewer’s Blackbird known occurrences are primarily restricted to the Bruce Peninsula; none are known to occur in the Study Area region, and it is considered a “very rare irregular spring and autumn transient” (Cadman et al., 2007; Weir, 2008)</p> <p><b>Candidate habitat is considered absent.</b></p>
Migratory Butterfly Stopover Areas	<p>Located within 5 km of Lake Ontario</p> <p>A combination of ELC communities, one from each land class is required: Field (CUM, CUT, CUS) and Forest (FOC, FOM, FOD, CUP)</p> <p>Minimum of 10 ha in size with a combination of field and forest habitat present</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that may support migratory butterfly stopover areas.</p>	<p>The Subject Property is within 5 km from Lake Ontario; however, large Forest / field complexes are absent from the Subject Property and Adjacent Lands.</p> <p><b>Candidate habitat is considered absent.</b></p>
Landbird Migratory Stopover Areas	<p>The following community types: Forest (FOD, FOM, FOC) or Swamp (SWC, SWM, SWD)</p> <p>Woodlots must be &gt;10 ha in size and within 5 km of Lake Ontario – woodlands within 2 km of Lake Ontario are more significant</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that may support landbird migratory stopover areas.</p>	<p>The Subject Property is within 5 km from Lake Ontario; however, large Forest and Swamp communities are absent from the Subject Property and Adjacent Lands.</p> <p><b>Candidate habitat is considered absent.</b></p>



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Deer Winter Congregation Areas	<p>Woodlots typically &gt; 100 ha in size unless determined by the MNR as significant. (If large woodlots are rare in a planning area &gt;50ha)</p> <p>All forested ecosites within Community Series: FOC, FOM, FOD, SWC, SWM, SWD</p> <p>Conifer plantations much smaller than 50 ha may also be used.</p> <p>Deer winter congregations areas are mapped by MNRF and species use surveys are not required.</p>	The LIO database and MNRF consultation were used to identify deer winter congregation areas.	<p>Records of deer winter congregation areas were not identified for the Subject Property and Adjacent Lands.</p> <p><b>Deer Winter Congregation Areas are considered absent.</b></p>
<b>Rare Vegetation Communities</b>			
Cliffs and Talus Slopes	<p>A Cliff is vertical to near vertical bedrock &gt;3 m in height.</p> <p>A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris</p> <p>Any ELC Ecosite within Community Series: TAO, TAS, TAT, CLO, CLS, CLT</p> <p>Most cliff and talus slopes occur along the Niagara Escarpment</p>	ELC surveys and air photo interpretation were used to assess features within the Study Area that would be considered cliffs or talus slopes.	<b>Cliffs or talus slopes are absent</b> from the Subject Property and Adjacent Lands.
Sand Barrens	<p>Sand barrens typically are exposed sand, generally sparsely vegetated and cause by lack of moisture, periodic fires and erosion.</p> <p>Vegetation can vary from patchy and barren to tree covered but less than 60%.</p> <p>Any of the following Community Types: SBO1 (Open Sand Barren Ecosite), SBS1 (Shrub Sand Barren Ecosite), SBT1 (Treed Sand Barren Ecosite).</p>	ELC surveys and air photo interpretation were used to assess features within the Study Area that would be considered sand barrens.	<b>Sand barrens are absent</b> from the Subject Property and Adjacent Lands.

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Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Alvars	<p>An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil.</p> <p>Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plant.</p> <p>Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species.</p> <p>Vegetation cover varies from patchy to barren with a less than 60% tree cover.</p> <p>Any of the following Community Types: ALO1 (Open Alvar Rock Barren Ecosite), ALS1 (Alvar Shrub Rock Barren Ecosite), ALT1 (Treed Alvar Rock Barren Ecosite), FOC1 (Dry-Fresh Pine Coniferous Forest), FOC2 (Dry-Fresh Cedar Coniferous Forest), CUM2 (Bedrock Cultural Meadow), CUS2 (Bedrock Cultural Savannah), CUT2-1 (Common Juniper Cultural Alvar Thicket), or CUW2 (Bedrock Cultural Woodland)</p> <p>An Alvar site &gt; 0.5 ha in size</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that would be considered alvar communities.</p>	<p><b>Alvars are absent</b> from the Subject Property and Adjacent Lands.</p>

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Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Old-growth Forest	<p>Old-growth forests tend to be relatively undisturbed, structurally complex, and contain a wide variety of trees and shrubs in various age classes. These habitats usually support a high diversity of wildlife species.</p> <p>No minimum size criteria in any of the following Community Types: FOD (Deciduous Forest), FOM (Mixed Forest), FOC (Coniferous Forest)</p> <p>Forests greater than 120 years old and with no historical forestry management was the main criteria when surveying for old-growth forests.</p> <p>Candidate features include forests 30 ha or greater with 10 ha of interior habitat, measured 100m from the forest edge.</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that would be considered old-growth forest communities.</p>	<p>Forest communities were absent from the Subject Property and Adjacent Lands.</p> <p><b>Old-growth Forest is considered absent.</b></p>
Savannahs	<p>A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.</p> <p>In Ecoregion 6E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario).</p> <p>Any of the following Community Types: TPS1 (Dry-Fresh Tallgrass Mixed Savannah Ecosite), TPS2 (Fresh-Moist Tallgrass Deciduous Savannah Ecosite), TPW1 (Dry-Fresh Black Oak Tallgrass Deciduous Woodland Ecosite), TPW2 (Fresh-Moist Tallgrass Deciduous Woodland Ecosite), CUS2 (Bedrock Cultural Savannah Ecosite).</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that would be considered to be savannah communities.</p>	<p><b>Savannahs are absent</b> from the Subject Property and Adjacent Lands.</p>

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Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Tall-grass Prairies	<p>A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has &lt; 25% tree cover. In Ecoregion 6E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario).</p> <p>Any of the following Community Types: TPO1 (Dry Tallgrass Prairie Ecosite), TPO2 (Fresh-Moist Tallgrass Prairie Ecosite).</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that would be considered to be tallgrass communities.</p>	<p><b>Tallgrass prairies are absent</b> from the Subject Property and Adjacent Lands.</p>
Other Rare Vegetation Communities	<p>Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that would be considered other rare vegetation communities.</p>	<p><b>Rare vegetation communities are absent</b> from the Subject Property and Adjacent Lands.</p>
<b>Specialized Habitat for Wildlife</b>			
Waterfowl Nesting Area	<p>All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, SWD4</p> <p>Note: includes adjacency to Provincially Significant Wetlands (PSW)</p>	<p>ELC surveys and air photo interpretation were used to assess features within the Study Area that may support nesting waterfowl.</p> <p>A breeding bird survey were used to record nesting waterfowl.</p>	<p>Qualifying communities are absent on the Subject Property and Adjacent Lands. Additionally, nesting waterfowl were not recorded during field investigations.</p> <p><b>Waterfowl Nesting Areas are considered absent.</b></p>
Bald Eagle and Osprey nesting, Foraging, and Perching Habitat	<p>Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water.</p> <p>Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms).</p> <p>ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands</p>	<p>ELC surveys, air photo interpretation and wildlife habitat assessments were used to assess features within the Study Area that may support nesting, foraging and perching habitat for large raptors.</p>	<p>Lower Morrison Creek is located on the Adjacent Lands however, is likely too small for open water feeding. Additionally, large stick nests and/or qualifying species were not observed during field investigations.</p> <p><b>Bald Eagle and Osprey habitat is considered absent.</b></p>

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Woodland Raptor Nesting Habitat	<p>All natural or conifer plantation woodland/forest stands combined &gt;30 ha and with &gt;4 ha of interior habitat. Interior habitat determined with a 200 m buffer.</p> <p>Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands.</p> <p>May be found in all forested ELC Ecosites.</p> <p>May also be found in SWC, SWM, SWD and CUP3</p>	<p>ELC surveys, wildlife habitat assessments, and GIS analysis were used to assess features within the Study Area that may support nesting habitat for woodland raptors.</p>	<p>Forest (FO) communities are absent from the Subject Property and Adjacent Lands.</p> <p><b>Woodland Raptor Nesting habitat is considered absent.</b></p>
Turtle Nesting Areas	<p>Exposed mineral soil (sand or gravel) areas adjacent (&lt;100 m) or within the following ELC Ecosites: MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1, SAM1, SAF1, BOO1, FEO1</p> <p>Best nesting habitat for turtles is close to water, away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals.</p> <p>For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH.</p> <p>Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.</p>	<p>ELC surveys, air photo interpretation, and wildlife habitat assessments were used to assess features within the Study Area that may support turtle nesting areas.</p>	<p>Disturbed exposed soil and gravel was observed in constructed parts of the Subject Property (fill piles); however, these areas are not considered candidate SWH. Exposed mineral soil may be present in the floodplain of flood plain of Lower Morrison Creek in the Adjacent Lands, however turtle surveys are needed to confirm.</p> <p><b>Candidate habitat may be present in the Adjacent Lands (floodplain of Lower Morrison Creek).</b></p>

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Seeps and Springs	<p>Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.</p> <p>Any forested area (with &lt;25% meadow/field/pasture) within the headwaters of a stream or river system.</p> <p>The presence of two or more seeps in a forested ELC ecosite indicates significant wildlife habitat. SWH includes the entire forest polygon.</p>	<p>The presence of seeps and springs was recorded during ELC surveys.</p>	<p>Seeps and springs were not observed from the Subject Property.</p> <p><b>Seeps and springs are considered absent.</b></p>
Amphibian Breeding Habitat (Woodland)	<p>All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD</p> <p>Presence of a wetland, lake, or pond within or adjacent (within 120 m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians.</p> <p>Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.</p> <p>Habitat maybe confirmed as significant if there are one or more of the listed frog species with 20 individuals or call level 3.</p>	<p>ELC surveys and were used to assess features within the Study Area that may support woodland breeding amphibians.</p>	<p>The qualifying communities are absent from the Subject Property and Adjacent Lands.</p> <p><b>Amphibian Breeding Habitat (Woodland) is considered absent.</b></p>

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Amphibian Breeding Habitat (Wetland)	<p>ELC Community Classes SW, MA, FE, BO, OA and SA.</p> <p>Wetland areas &gt;120 m from woodland habitats.</p> <p>Wetlands and pools (including vernal pools) &gt;500 m<sup>2</sup> (about 25 m diameter) supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNR mapping and could be important amphibian breeding habitats.</p> <p>Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators.</p> <p>Bullfrogs require permanent water bodies with abundant emergent vegetation.</p>	<p>ELC surveys were used to identify wetland habitat features within the Study Area.</p>	<p>Qualifying communities are absent from the Study Area,</p> <p><b>Amphibian Breeding Habitat (Wetland) may be present in wetland surrounding Lower Morrison Creek.</b></p>
<b>Habitat for Species of Conservation Concern</b>			
Marsh Bird Breeding Habitat	<p>All wetland habitats with shallow water and emergent aquatic vegetation.</p> <p>May include any of the following Community Types: Meadow Marsh (MAM), Shallow Aquatic (SA), Open Bog (BOO), Open Fen (FEO), or for Green Heron: Swamp (SW), Marsh (MA) and Meadow (CUM) Community Types.</p>	<p>ELC surveys and air photo interpretation were used to identify marshes with shallow water and emergent vegetation that may support marsh breeding birds.</p> <p>A breeding bird survey was used to detect presence of qualifying species.</p>	<p>A meadow marsh (MAM) inclusion was present on the Subject Property; however, it is too small to support required thresholds for breeding marsh birds. Qualifying marsh species were not detected during breeding bird surveys.</p> <p><b>Marsh Bird Breeding habitat is considered absent.</b></p>
Woodland Area-sensitive Bird Breeding Habitat	<p>Habitats &gt;30ha where interior forest is present (at least 200 m from the forest edge); typically &gt;60 years old.</p> <p>These include any of the following Community Types: Forest (FO), Treed Swamp (SW)</p>	<p>ELC surveys and air photo interpretation were used to identify woodland area-sensitive bird breeding habitat.</p>	<p>Qualifying communities are absent from the Subject Property and Adjacent Lands.</p> <p><b>Woodland Area-sensitive Bird Breeding habitat is considered absent.</b></p>

**Natural Heritage Due Diligence Support, 420 South Service Road East, Oakville**

Attachment 7 – Significant Wildlife Habitat Assessment

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Open Country Bird Breeding Habitat	Grassland areas > 30 ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or hay or livestock pasturing in the last 5 years, in the following Community Type: Meadow (CUM).	ELC surveys, air photo interpretation, and GIS analysis were used to identify grassland communities within the Study Area that may support area-sensitive breeding birds.  A breeding bird survey was used to detect presence of qualifying species.	Non-agricultural grassland communities are present from the Subject Property and Adjacent Lands; however, are not large enough to constitute as Open Country Bird Breeding Habitat (<30 ha). Qualifying open country species were not detected during breeding bird surveys.  <b>Open Country Bird Breeding habitat is considered absent.</b>
Shrub/Early Successional Bird Breeding Habitat	Oldfield areas succeeding to shrub and thicket habitats >10 ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, in the following Community Types: Thickets (CUT), Savannahs (CUS), or Woodlands (CUW).	ELC surveys, air photo interpretation and GIS analysis were used to identify large communities that may support shrub/early successional breeding birds.  Breeding bird surveys were used to detect presence of qualifying species.	One common qualifying shrub/early successional indicator species were detected during breeding bird surveys (Willow flycatcher); however, two are required to confirm significance. Additionally, successional community types are present on the Subject Property and Adjacent Lands; however, are too small (<10 ha) to be considered shrub/early bird breeding habitat.  <b>Early successional communities are considered absent.</b>
Terrestrial Crayfish	Meadow marshes and edges of shallow marshes (no minimum size). Vegetation communities include MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3.  Construct burrows in marshes, mudflats, meadows  Can be found far from water	ELC surveys were used to identify shallow marsh and meadow marsh communities that occurred within the Study Area.	One marsh (MAM) community is present in Subject Area; however, crayfish chimneys were not observed during field investigations.  <b>Candidate habitat is considered absent in the Study Area.</b>
<b>Species of Conservation Concern</b>			
Barn Swallow	This species inhabits open areas; often found nesting on anthropogenic structures such as open barns, under bridges and in culverts (Cadman et al. 2007).	A breeding bird survey was conducted in potentially suitable habitat on the Subject Property.	This species or its nests were not identified during targeted searches. It may nest on the building on the Subject Property in subsequent years.  <b>Species is considered absent in the Study Area.</b>



**Natural Heritage Due Diligence Support, 420 South Service Road East, Oakville**  
 Attachment 7 – Significant Wildlife Habitat Assessment

<b>Wildlife Habitat Type</b>	<b>Criteria</b>	<b>Methods</b>	<b>Habitat Assessment (Subject Property and Adjacent Lands)</b>
Midland Painted Turtle	Species is found in ponds, marshes, lakes and slow-moving creeks; hibernates on the bottom of waterbodies (Ontario Nature 2018); nests in loose soil.	Significant wildlife habitat was considered through the assessment of Turtle Overwintering and Nesting habitats (see above).	<b>Candidate Wintering habitat may be present in the Adjacent Lands (Lower Morrison Creek).</b> <b>Candidate nesting habitat may be present in the Adjacent Lands (floodplain of Lower Morrison Creek).</b>
Northern Map Turtle	Species is found in large rivers and lakes with slow-moving water and a soft bottom (Ontario Nature 2018); Nest is loose soil.	Significant wildlife habitat was considered through the assessment of Turtle Overwintering and Nesting habitats (see above).	<b>Lower Morrison Creek is too small to support Northern Map Turtle which is considered absent.</b>
Snapping Turtle	Species is found in ponds streams, rivers with slow moving water, aquatic vegetation, soft bottoms; hibernates is in mud or silt of lakes, rivers and other open water (Ontario Nature 2018); nests in loose soil	Significant wildlife habitat was considered through the assessment of Turtle Overwintering and Nesting habitats (see above).	<b>Candidate Wintering habitat may be present in the Adjacent Lands (Lower Morrison Creek).</b> <b>Candidate nesting habitat may be present in the Adjacent Lands (floodplain of Lower Morrison Creek).</b>
Virginia Bluebells	Species is found moist deciduous woods and thickets, usually on floodplains, and in Anthropogenic habitats (GoBatany, n.d.)	ELC surveys and air photo interpretation were used to identify the habitat for Virginia Bluebells. Botanical surveys were not conducted outside study area (i.e., along Lower Morrison Creek).	This species was not detected during site investigations on the Subject Property. Botanical surveys were not conducted searched for this species in suitable habitat in the Adjacent Lands (i.e., along Lower Morrison Creek). Because targeted species-use surveys were not conducted, species is considered candidate. <b>Species may be present in the Adjacent Lands.</b>
Common Nighthawk	The Common Nighthawk is found in open areas, forests and urban areas. In urban areas, the species can be found nesting along gravel roads, trails, and railways (Cadman et al, 2007).	A breeding bird survey was conducted in potentially suitable habitat on the Subject Property.	This species was not identified during the breeding bird survey; however, targeted surveys would be required to determine presence / absence. <b>Species may be present in the Study Area.</b>

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 Attachment 7 – Significant Wildlife Habitat Assessment

<b>Wildlife Habitat Type</b>	<b>Criteria</b>	<b>Methods</b>	<b>Habitat Assessment (Subject Property and Adjacent Lands)</b>
Eastern Wood-Pewee	The Eastern Wood-Pewee is a forest bird of deciduous and mixed woods. Nest-site selection favors open space near the nest, typically provided by clearings, roadways, water, and forest edges. Nests are cryptic as they are covered with lichens, typically appearing like a knot on top of a branch (Cadman et al. 2007).	A breeding bird survey was conducted in potentially suitable habitat on the Subject Property.	This species was not identified during the breeding bird survey; however, additional surveys would be required to determine presence / absence. <b>Species may be present in the Study Area.</b>
Purple Martin	The Purple Martin nests almost exclusively in artificial structures and nest boxes (Cadman et al. 2007).	A breeding bird survey was conducted in potentially suitable habitat on the Subject Property. Recorded any artificial boxes during the site visit.	No artificial boxes were recorded. This species was not identified during targeted surveys. <b>Species is considered absent in the Study Area.</b>
Tufted Titmouse	The Tufted Titmouse inhabits woodlands containing large trees that produce abundant mast, such as Pin Oak and beech (Cadman et al. 2007).	A breeding bird survey was conducted in potentially suitable habitat on the Subject Property.	This species was not identified during the breeding bird survey. Suitable woodland habitat is absent. <b>Species is considered absent in the Study Area.</b>
Wood Thrush	The Wood Thrush inhabits deciduous woodlots of various sizes. Preferred habitat includes tall trees for singing perches and a thick understorey for nesting (Cadman et al. 2007).	A breeding bird survey was conducted in potentially suitable habitat on the Subject Property.	This species was not identified during the breeding bird survey. Suitable woodland habitat is absent. <b>Species is considered absent in the Study Area.</b>
Grasshopper Sparrow	This species is found in dry, open grasslands, such as rough or unimproved pastures; prefers sparse short grass (Cadman et al. 2007).	A breeding bird survey was conducted in potentially suitable habitat on the Subject Property.	This species was not identified during the breeding bird survey. Suitable grassland habitat is absent. <b>Species is considered absent in the Study Area.</b>
Eastern Milksnake	Species is found in farmlands, meadows, and forest; hibernates underground in rotting logs or foundations of old buildings (Ontario Nature 2018).	Significant wildlife habitat was considered through the assessment of Snake Hibernacula (see above).	<b>Candidate habitat is present in the Adjacent Lands (considered through Snake Hibernacula habitat above).</b>

**Natural Heritage Due Diligence Support, 420 South Service Road East, Oakville**

Attachment 7 – Significant Wildlife Habitat Assessment

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment (Subject Property and Adjacent Lands)
Monarch	Adults feed on the nectar of wildflowers, typically found in abandoned farmlands, roadsides and other open spaces; caterpillars feed on milkweed which require open habitats. Habitat that is important to the sustainability of local populations is considered SWH	ELC and botanical surveys recorded milkweed and nectaring plants. Observations of adults and caterpillars were recorded during all investigations.	Migratory Butterfly Stopover Areas are considered absent (see above). Milkweed was observed on the Subject Property in the Thicket and Meadow communities. No Monarchs were observed during the site visit. The Subject Property and Adjacent lands are not considered important to the sustainability of host breeding plants or local Monarch activity. <b>Significant Monarch habitat is considered absent.</b>
West Virginia White	This species is found in moist deciduous woodlots; larva exclusively feed on toothwort which is found in wooded habitats (Ontario, 2014)	ELC and botanical surveys recorded toothwort. Observations of adults and caterpillars were recorded during all investigations.	Toothwort and West Virginia White were not identified during targeted surveys. Limited habitat is present for Toothwort. <b>Candidate habitat is considered absent.</b>
<b>Animal Movement Corridors</b>			
Amphibian Movement Corridor	Corridors may be found in all ecosites associated with water. Determined based on identifying significant amphibian breeding habitat (wetland).	Movement corridors should be considered when amphibian breeding habitat is confirmed as SWH from Amphibian Breeding Habitat (Wetland).	Candidate amphibian breeding habitat was absent on the Subject Property and Adjacent Lands. <b>Amphibian movement corridors are absent.</b>

**References**

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November 7, 2023  
Amir Hazar, Vice President, Construction

**Reference:** Natural Heritage Assessment, 420 South Service Road East, Oakville

## **Attachment 8    Vascular Plant List**

Natural Heritage Due Diligence Support, 420 South Service Road East, Oakville  
Attachment 8 Vascular Plant Species Recorded for the Subject Property on June 28, 2023

TAXON_GROUP	FAMILY	SCIENTIFIC_NAME	AUTHOR	ENGLISH_COMMON_NAME	S_RANK	SARO_STATUS	COSEWIC_STATUS	SARA_STATUS	G_RANK	EXOTIC_STATUS	COEFF_CONSERVATISM	COEFF_WETNESS
dicots	Aceraceae	Acer negundo var. negundo		Manitoba Maple	SU				G5T5?		0	0
dicots	Aceraceae	Acer platanoides	L.	Norway Maple	SNA				GNR	SE5		5
dicots	Anacardiaceae	Rhus typhina	L.	Staghorn Sumac	S5				G5		1	3
dicots	Anacardiaceae	Toxicodendron radicans	(L.) Kuntze	Poison Ivy	S5				G5		2	0
dicots	Anacardiaceae	Toxicodendron radicans var. rydbergii	(Small ex Rydberg) Erskine	Western Poison Ivy	S5				G5		2	0
dicots	Apiaceae	Daucus carota	L.	Wild Carrot	SNA				GNR	SE5		5
dicots	Apocynaceae	Asclepias syriaca	L.	Common Milkweed	S5				G5		0	5
dicots	Asteraceae	Achillea millefolium	L.	Common Yarrow	SNA				G5	SE5?		3
dicots	Asteraceae	Cichorium intybus	L.	Wild Chicory	SNA				GNR	SE5		5
dicots	Asteraceae	Cirsium arvense	(L.) Scop.	Canada Thistle	SNA				G5	SE5		3
dicots	Asteraceae	Erigeron annuus	(L.) Pers.	Annual Fleabane	S5				G5		0	3
dicots	Asteraceae	Lactuca serriola	L.	Prickly Lettuce	SNA				GNR	SE5		3
dicots	Asteraceae	Leucanthemum vulgare	Lam.	Oxeye Daisy	SNA				GNR	SE5		5
dicots	Asteraceae	Solidago canadensis var. canadensis		Canada Goldenrod	S5				G5T5		1	3
dicots	Asteraceae	Sonchus arvensis	L.	Field Sow-thistle	SNA				GNR	SE5		3
dicots	Asteraceae	Tanacetum vulgare	L.	Common Tansy	SNA				GNR	SE5		5
dicots	Asteraceae	Tragopogon dubius	Scop.	Yellow Goatsbeard	SNA				GNR	SE5		5
dicots	Boraginaceae	Echium vulgare	L.	Common Viper's Bugloss	SNA				GNR	SE5		5
dicots	Brassicaceae	Alliaria petiolata	(Bieb.) Cavara & Grande	Garlic Mustard	SNA				GNR	SE5		0
dicots	Caprifoliaceae	Lonicera tatarica	L.	Tatarian Honeysuckle	SNA				GNR	SE5		3
dicots	Clusiaceae	Hypericum perforatum	L.	Common St. John's-wort	SNA				GNR	SE5		5
dicots	Convolvulaceae	Convolvulus arvensis	L.	Field Bindweed	SNA				GNR	SE5		5
dicots	Cornaceae	Cornus racemosa	Lam.	Grey Dogwood	S5				G5		2	0
dicots	Cornaceae	Cornus sericea	L.	Red-osier Dogwood	S5				G5		2	-3
dicots	Dipsacaceae	Dipsacus fullonum	L.	Common Teasel	SNA				GNR	SE5		3
dicots	Elaeagnaceae	Elaeagnus sp.		Olive spp.								
dicots	Euphorbiaceae	Euphorbia cyparissias	L.	Cypress Spurge	SNA				G5	SE5		5
dicots	Fabaceae	Lotus corniculatus	L.	Garden Bird's-foot Trefoil	SNA				GNR	SE5		3
dicots	Fabaceae	Melilotus albus	Medik.	White Sweet-clover	SNA				G5	SE5		3
dicots	Fabaceae	Securigera varia	(L.) Lassen	Purple Crown-vetch	SNA				GNR	SE5		5
dicots	Juglandaceae	Juglans nigra	L.	Black Walnut	S4?				G5		5	3
dicots	Lythraceae	Lythrum salicaria	L.	Purple Loosestrife	SNA				G5	SE5		-5
dicots	Moraceae	Morus alba	L.	White Mulberry	SNA				GNR	SE5		0
dicots	Oleaceae	Fraxinus pennsylvanica	Marsh.	Red Ash	S4				G4		3	-3
dicots	Oleaceae	Ligustrum vulgare	L.	European Privet	SNA				GNR	SE5		3
dicots	Onagraceae	Oenothera sp.		Primrose spp.								
dicots	Polygonaceae	Rumex crispus	L.	Curled Dock	SNA				GNR	SE5		0
dicots	Rhamnaceae	Rhamnus cathartica	L.	European Buckthorn	SNA				GNR	SE5		0
dicots	Rosaceae	Geum aleppicum	Jacq.	Yellow Avens	S5				G5		2	0
dicots	Rosaceae	Potentilla recta	L.	Sulphur Cinquefoil	SNA				GNR	SE5		5
dicots	Rosaceae	Rubus idaeus ssp. strigosus	(Michx.) Focke	North American Red Raspberry	S5				G5T5		2	3
dicots	Rosaceae	Rubus occidentalis	L.	Black Raspberry	S5				G5		2	5
dicots	Salicaceae	Populus deltoides ssp. deltoides		Eastern Cottonwood	S5				G5T5		4	0
dicots	Salicaceae	Salix sp.		Willow spp.								
dicots	Solanaceae	Solanum dulcamara	L.	Bittersweet Nightshade	SNA				GNR	SE5		0
dicots	Ulmaceae	Ulmus americana	L.	White Elm	S5				G4		3	-3
dicots	Vitaceae	Parthenocissus vitacea	(Knerr) A.S. Hitchc.	Thicket Creeper	S5				G5		4	3
dicots	Vitaceae	Vitis riparia	Michx.	Riverbank Grape	S5				G5		0	0
monocots	Poaceae	Elymus repens	(L.) Gould	Quackgrass	SNA				GNR	SE5		3
monocots	Poaceae	Festuca rubra ssp. rubra		Red Fescue	SNA				G5T5	SE5		
monocots	Poaceae	Phragmites australis ssp. australis		European Reed	SNA				G5T5	SE5		-3
monocots	Poaceae	Poa pratensis ssp. pratensis		Kentucky Bluegrass	SNA				G5T5	SE5		3