Environmental Impact Study for the DEV Centre
1950 Montreal Road, Cornwall, Ontario

2025-06-11

Final Report

KILGOUR & ASSOCIATES LTD.
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Project Number: DVCR 1444.4

TABLE OF CONTENTS

List of Figures

List of Tables

List of Appendices

List of Acronyms and Abbreviations

BBS: Breeding Bird Survey
COSSARO: Committee on the Status of Species at Risk in Ontario
CPUE: Catch Per Unit Effort
CRZ: Critical Root Zone
DBH: Diameter at Breast Height
DFO: Fisheries and Oceans Canada
ECCC: Environment and Climate Change Canada
EIS: Environmental Impact Study
ELC: Ecological Land Classification
ESA: Endangered Species Act
ESC: Erosion and Sediment Control
FWCA: Fish and Wildlife Conservation Act
KAL: Kilgour & Associates Ltd.
MBCA: Migratory Birds Convention Act
MECP: Ministry of Environment, Conservation and Parks
MMAH: Ministry of Municipal Affairs and Housing
MNR: Ministry of Natural Resources
MNRF: Ministry of Natural Resources and Forestry
NHIC: Natural Heritage Information Centre
OMAFRA: Ontario Ministry of Agriculture, Food and Rural Affairs
PPS: Provincial Policy Statement / Provincial Planning Statement
SAR: Species at Risk
SARA: Species at Risk Act
SARO: Species at Risk in Ontario
SWH: Significant Wildlife Habitat
RRCA: Raisin Region Conservation Authority

1.0 INTRODUCTION

This report is an Environmental Impact Study (EIS) prepared by Kilgour & Associates Ltd. (KAL; Appendix A) on behalf of Devcore Group in support of a Zoning Bylaw Amendment for the DEV Centre redevelopment at 1950 Montreal Road in Cornwall, Ontario (the "Site"; Figure 1). The Site is situated in southeast Cornwall, on the north bank of the St. Lawrence River. The Site currently supports the DEV Hotel and Conference Centre. The proposed redevelopment would comprise residential properties, a hotel, retail, and green spaces, and will employ green technologies throughout to the extent possible.

In the City of Cornwall, an EIS is required when development or site alteration is proposed in or adjacent to natural heritage features, as outlined in Section 4.11 of the Official Plan (City of Cornwall, 2018). The purposes of an EIS are to:

- Identify natural heritage features on or adjacent to the Site;
- Assess potential impacts of the proposed development to existing features; and
- Recommend mitigation measures to minimize or eliminate identified impacts.

This EIS includes the results from field studies undertaken in 2023 and provides recommendations and mitigation measures to minimize impacts of the proposed development on the natural heritage features located on and adjacent to the Site.

2.0 ENVIRONMENTAL POLICY CONTEXT

Natural heritage policies and legislation relevant to this EIS are outlined below.

2.1 The Provincial Policy / Planning Statements, 2020/2024

The Provincial Policy Statement ("PPS") was issued under Section 3 of the *Planning Act* (Government of Ontario, 1990b). The PPS in effect when this project began came into effect on May 1, 2020 (Ministry of Municipal Affairs and Housing, 2020). Under that version of the PPS, natural features are afforded protections under Section 2.1. The protections included address the maintenance, restoration, and improved function of diversity, connectivity, ecological function, and biodiversity of natural heritage systems. These protections restrict development and site alteration in significant natural areas (e.g., woodlands, wetlands, wildlife habitat) except where it can be demonstrated that there will be no negative effects on the features and ecological functions of those natural areas. Technical guidance for implementing the natural heritage policies of the PPS is found within the second edition of the *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005* (MNR, 2010). This manual recommends the approach and technical criteria for protecting natural heritage features and areas in Ontario.

Importantly, while the 2020 PPS was the version in effect at the start of this project, it must be noted that the Province approved the updated Provincial Planning Statement 2024 (herein also the "PPS") on August 20, 2024; it came into effect on October 20, 2024 (MMAH, 2024). The revised PPS is intended to

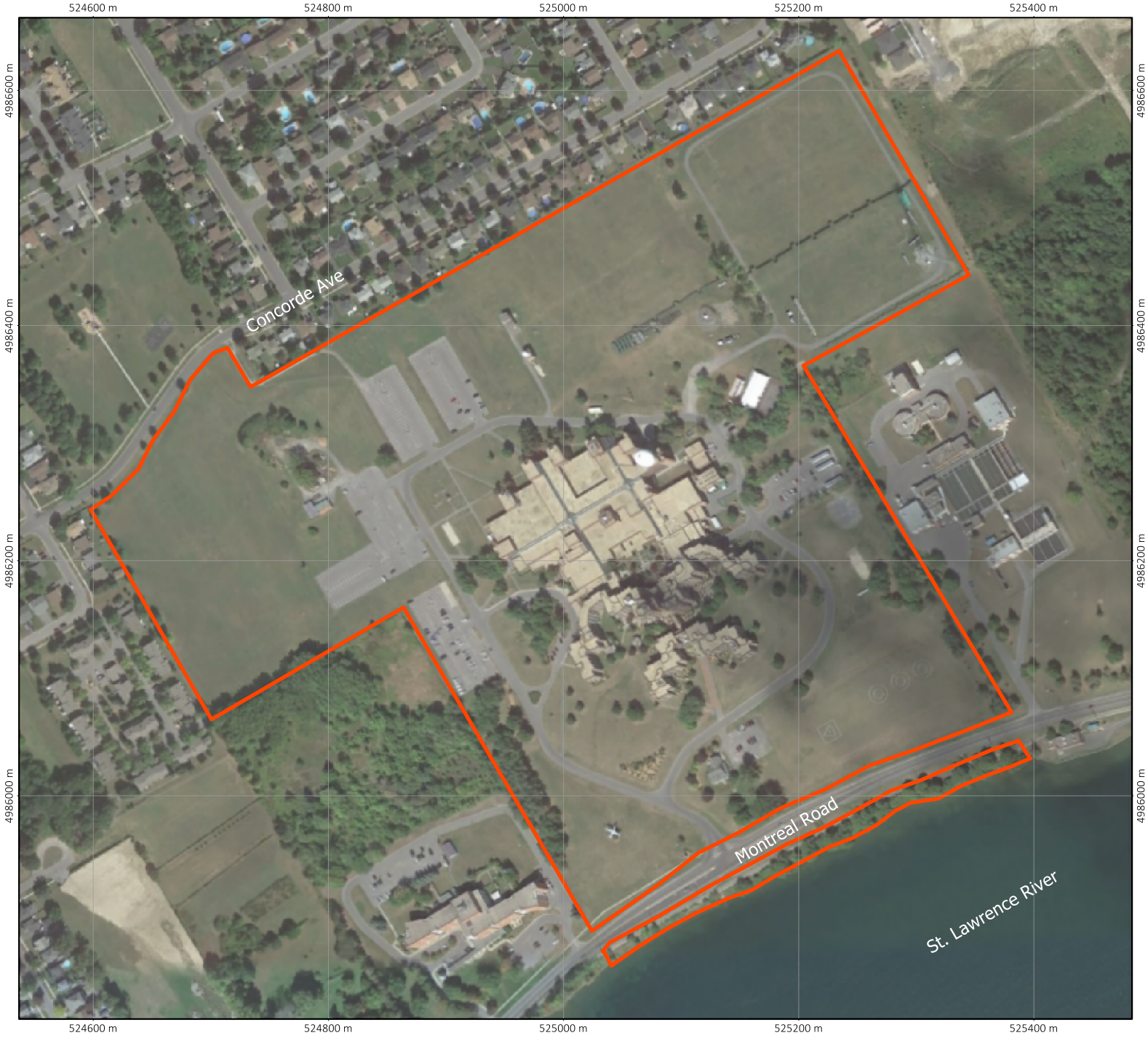

Figure 1 Location of Site and Site Context

Site Boundaries

N

0 100 m

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simplify and integrate existing policies to achieve housing objectives while providing tools for municipalities to deliver on housing objectives. While the 2024 PPS will formally be the planning document in effect going forward, other than renumbering the relevant policies, there have been no meaningful changes related to Natural Heritage considerations between the two versions. Thus, for the analysis and recommendations of this EIS, the "PPS" documents from 2020 and 2024 are effectively equivalent.

2.2 City of Cornwall Official Plan

The City of Cornwall Official Plan (City of Cornwall, 2018) provides a general comprehensive framework for the guidance of future land use and physical development within the City of Cornwall. The general purposes of the Official Plan are to define and promote the public interest in the future planning of the City, to promote an enhanced quality of life for the citizens of Cornwall, and to reduce uncertainty that could exist concerning future development and redevelopment.

2.3 *Species at Risk Act*, 2002

The federal *Species at Risk Act* (SARA; Government of Canada, 2002) is administered by Environment and Climate Change Canada (ECCC) and provides direction to protect and ensure the survival of wildlife species in Canada. The purpose of the SARA is to prevent populations of wildlife from becoming Extirpated, Endangered, or Threatened, provide recovery Endangered or Threatened species, and to manage other species to prevent them from becoming Endangered or Threatened.

All species listed on Schedule 1 of SARA are afforded protection on federal lands. Aquatic species and species of migratory birds protected by the *Migratory Birds Convention Act* (MBCA; (Government of Canada, 1994) and listed as Endangered, Threatened, or Extirpated under Schedule 1 of SARA are protected wherever they occur in Canada, regardless of land ownership. SARA protections do not typically apply for other species groups on non-federal properties. However, the Federal Minister of ECCC can impose SARA protections on private projects where habitat is deemed "…necessary for the survival or recovery of the species…" in the area of concern.

2.4 *Endangered Species Act*, 2007

The provincial *Endangered Species Act* (ESA; Government of Ontario, 2007) is administered by the Ministry of Environment, Conservation, and Parks (MECP) and provides protection for species at risk (SAR) and their habitat. The ESA states that it is illegal to harm the habitat of species listed as Extirpated, Endangered, and Threatened. It is also illegal to kill, harm, harass, possess, transport, buy, or sell Extirpated, Endangered, and Threatened species, whether it is living or dead. Species listed as Endangered, Threatened, or Extirpated and their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation, and migration) are automatically afforded legal protection under the ESA.

2.5 *Fisheries Act*, 1985

The federal *Fisheries Act* (Government of Canada, 1985) is administered by Fisheries and Oceans Canada (DFO) and provides protections to fish, fish habitat, and fisheries. Specifically, the *Fisheries Act* in its current version provides: 1) Protection for all fish and fish habitat; 2) Prohibition against the "harmful alteration, disruption or destruction of fish habitat"; and 3) Prohibition against causing "the death of fish by means other than fishing".

Projects with a scope that does not fall within DFO's defined standards and codes of practice require submission of a request for review to DFO.

2.6 *Migratory Birds Convention Act*, 1994

Nesting migratory birds are protected under the MBCA (Government of Canada, 1994). No work is permitted that would result in the destruction of active nests or the wounding or killing of bird species protected under the MBCA and/or associated regulations (e.g., SARA). The "incidental take" of migratory birds and the disturbance, destruction, or taking of the nest of a migratory bird is prohibited. "Incidental take" is the killing or harming of migratory birds due to actions that are not primarily focused on taking migratory birds (e.g., economic development) and no permits exist for the incidental take of migratory birds or their nest/eggs as a result of activities that are not focused on taking migratory birds. These prohibitions apply throughout the year. The Government of Canada has compiled nesting calendars that apply across Canada that can be used to greatly reduce the risk of harming/destroying active nests by ensuring works that may impact nests are performed outside of the nesting period.

2.7 *Fish and Wildlife Conservation Act*, 1997

The provincial *Fish and Wildlife Conservation Act* (FWCA; Government of Ontario, 1997) governs the hunting and trapping of a variety of wildlife including mammals, birds, reptiles, amphibians, and fish in Ontario, thereby facilitating the protection of wildlife and their habitat. The FWCA outlines the prohibition of hunting or trapping specially protected species and the requirement for provincially issued licenses for the hunting or trapping of "furbearing" or "game" animals. Examples of specifically protected animals include, for example, Southern Flying Squirrel (*Glaucomys volans*), Northern Harrier (*Circus cyaneus*), American Kestrel (*Falco sparverius*), Blue Jay (*Cyanocitta cristata*), Midland Painted Turtle (*Chrysemys picta marginata*), Northern Watersnake (*Nerodia sipedon*), and Gray Treefrog (*Hyla versicolor*). In particular, raptors that are not protected under the MBCA (including Peregrine Falcon) are protected under the FWCA.

2.8 *Conservation Authorities Act*, 1990

Conservation Authorities were created to address erosion, flooding, and drought concerns regionally by managing at the watershed level. Conservation Authorities were given the ability to regulate under Section 28 of the *Conservation Authorities Act* (Government of Ontario, 1990a). The Act obliges Conservation Authorities to implement Ontario Regulation (O.Reg.) 41/24, Prohibited Activities, Exemptions and Permits (formerly O.Reg. 174/06, Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) under Section 28.1 of the *Conservation Authorities Act* for relevant works. This project falls under the jurisdiction of Raisin Region Conservation Authority.

Bill 23, which was passed on November 28, 2022 and received Royal Assent the same day, introduced a series of legislative and proposed regulatory changes affecting conservation authorities. It is now in effect. Among the changes under Bill 23, the definition of "watercourse" was updated from an identifiable depression to a defined channel, having a bed, and banks or sides.

3.0 PROPERTY IDENTIFICATION

The Site is approximately 75 hectares (ha) in size and is situated at 1950 Montreal Road in Cornwall (Lat: 45.027526°N and Long: 74.680922°W; Figure 1). The Site is characterized primarily by existing buildings, paved parking areas and driveways, manicured areas, scattered planted trees, and naturalized hedgerows. The Site excludes a portion of Montreal Road and an adjacent multi-use path but includes the north bank of the St. Lawrence River.

The Site is bordered by:

- Concorde Avenue and residential properties of the City of Cornwall to the north;
- The Cornwall Wastewater Treatment Plant, undeveloped forested lands, and residential properties to the east;
- The St. Lawrence River to the south; and
- Forest and green spaces, a long-term care home, and residential properties to the west.

The Site falls within the Gray's Creek Watershed. There are no Provincially Significant or Unevaluated Wetlands on the Site.

4.0 METHODOLOGY

4.1 Desktop and Background Data Review

4.1.1 Agency Oversight and Consultation

The Site is located within the jurisdictions of the City of Cornwall and Raisin Region Conservation Authority (RRCA). The need for the EIS was triggered by the potential for proposed redevelopment of the Site to impact species at risk and/or SAR habitat, as well as potential impacts to the St. Lawrence River, based on the river's proximity to the Site.

4.1.2 Site Overview

Aerial imagery from Google Earth (*Google Earth*, n.d.) and the City of Cornwall (*Maps - City of Cornwall*, n.d.) was used to develop preliminary mapping of existing site features and landcover and to inform how the Site may be divided into vegetation communities.

Existing data on soils in the vicinity of the Site were obtained from the Ontario Ministry of Agriculture, Food and Rural Affairs' AgMaps (OMAFRA, 2023) and the Ontario Geotechnical Boreholes Data collected in 2001 (Ontario Ministry of Mines, 2012). These data were supplemented by soil cores taken in the field using a 120 cm soil auger at select locations within the Site.

Additional background information was obtained from the following sources:

- *Natural Environment Due Diligence Review of Nav Centre Property 1950 Montreal Road, Cornwall: Technical Memorandum* (WSP Golder, 2022a); and

- *NAV Centre Phase One Environmental Site Assessment: 1950 Montreal Rd. Cornwall, Ontario* (WSP Golder, 2022b).

4.1.3 Preliminary SAR Review

The initial review of species listed under the federal SARA and provincial ESA was completed by WSP-Golder (2022b, 2022a). This review identified SAR having some potential to be in the broader vicinity of the Site. The screening was completed following the *Draft Client's Guide to Preliminary Screening for Species at Risk* (MECP, 2019). KAL undertook a review of the SAR screening and available databases to determine whether the potential occurrence assessments warrant adjustment (Appendix B).

The preliminary screening considered data sources including:

- Species at Risk in Ontario (SARO; Ministry of Environment, Conservation, and Parks (MECP, 2024);

- Species at Risk Public Registry (Government of Canada, 2024);

- Natural Heritage Information Centre (NHIC; Ministry of Natural Resources, and Forestry (Ministry of Natural Resources (MNR), 2025);

- Land Information Ontario (MNRF, 2024b);

- Aquatic Species at Risk Map (DFO, 2023);

- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2019);

- Ontario Breeding Birds Atlas (Birds Canada et al., 2009);

- Ontario Butterfly Atlas (Toronto Entomologists' Association, 2024);

- eBird (The Cornell Lab of Ornithology, 2024);

- iNaturalist (California Academy of Sciences and National Geographic Society, 2025);

- Bumble Bee Watch (Wildlife Preservation Canada et al., 2024);

- Recovery Strategy for the Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Ontario (Humphrey & Fotherby, 2019);

- Recovery Strategy for the Eastern Small-footed Myotis (*Myotis leibii*) in Ontario (Humphrey, 2017); and

- Fish ON-Line (MNRF, 2024a).

4.2 Field Surveys

Field surveys conducted in 2023 included Breeding Bird Surveys (BBS), bat acoustic monitoring, a fish survey, and vegetation studies including a general tree survey and Ecological Land Classification (ELC). The 2023 field surveys are listed in Table 1 and detailed in the sections below.

Table 1 Summary of field studies

Date	Purpose	Conditions	Personnel
May 16, 2023	• Ecological Land Classification • Tree Survey	• 19°C • Wind 3-4 on Beaufort Scale • No precipitation	• Rob Hallett, Maren Nielsen
June 1, 2023	• Breeding Bird Survey #1	• 19-34°C • Wind 2 on Beaufort Scale • No precipitation	• Maren Nielsen
June 15, 2023	• Breeding Bird Survey #2 • Install acoustic bat monitors	• 15-25°C • Wind 2-3 on Beaufort Scale • No precipitation	• Maren Nielsen
June 30, 2023	• Aquatic Environment Characterization • Fish survey • Remove acoustic bat monitors	• 27°C • Wind 1-2on Beaufort Scale • No precipitation	• Jon Séguin, Rob Hallett

4.2.1 Aquatic Environment

A desktop review of available aquatic information was undertaken in 2023, followed by field surveys to characterize the fish community and habitat along the shoreline adjacent to the Site (Figure 1). To assess the fish community interacting with the Site shoreline directly, a fish community assessment using a Midwest Lake Electrofishing Systems (MLES) boat electrofishing system, mounted on a 17’ Jon boat, was conducted on June 30, 2023. One survey pass was completed along the littoral zone of the Site shoreline where the e-fishing effort was made in shaded areas adjacent to the shoreline as well as the transition between cobble base and submergent vegetation. Captured fish were enumerated and identified to species before being released. The electrofisher time (minutes and seconds) was documented to calculate catch per unit effort (CPUE). Supporting information collected during the fish survey included *in situ* water quality parameters using a handheld meter (YSI Pro Plus; temperature, dissolved oxygen, and specific conductivity). Site photographs were also taken to visualize the shoreline.

4.2.2 Vegetation

4.2.2.1 Ecological Land Classification

Vegetation communities on the Site were based on standard ELC methods for Ontario (Lee et al., 1998). The ELC methodology provides a consistent approach to identify, describe, and map vegetation communities or physiographic features on the landscape based on dominant plant species and soil composition. This method results in a standardized description of each vegetation community to capture the natural diversity and variability of communities within a site and to provide insight into available habitat and the type of species that may be present. More specifically, the classifications from ELC provide a basis for determining whether potential habitat for a given SAR or other ecological value may be present.

The desktop review of available aerial imagery and preliminary field visits informed how the Site was divided into vegetation communities based on variation in land cover, topography, and vegetation

structure. During the ELC surveys conducted on May 16, 2023, the dominant plant species were recorded within each proposed ecosite in the field to further divide ecosites into vegetation types (the finest resolution in ELC), where possible. Supplementary soil data was collected on June 1, 2023 to support vegetation community classification. Representative photos of each ELC unit on the Site were taken and are included with the community descriptions in this report.

4.2.2.2 Tree Studies

A tree survey was performed for the Site concurrently with the ELC on May 16, 2023. All trees with a diameter at breast height (DBH) > 10 cm and having potential to be removed under the proposed development were identified, enumerated, mapped, their DBH measured, and their general health and condition documented. Butternut (*Juglans cinerea*) and Black Ash (*Fraxinus nigra*) trees (both Endangered under the ESA) were also specifically surveyed.

4.2.3 Breeding Bird Surveys

Morning breeding bird surveys were performed via point count surveys following the Ontario Breeding Bird Atlas Guide for Participants (Ontario Breeding Bird Atlas, 2001). Breeding bird surveys are to be completed from survey stations that, combined, provide suitable viewing of all habitats on a site on calm weather days with light wind (≤3 on the Beaufort scale[1]) and no precipitation. Per Birds Canada et al. (2001), two rounds of surveys must take place between sunrise and five hours after sunrise between May 24 and July 10. KAL staff conducted breeding bird surveys on June 1 and June 15, 2023. Seven survey stations were established across the Site (Figure 2). Birds were identified by vocalization and/or direct visual observation at each station. All incidental observations were recorded while moving between survey points as well as during other field visits.

The presence of regionally rare bird species was based on an analysis of data from the Atlas of Breeding Birds of Ontario (Birds Canada et al., 2009) based on Hill's Site Regions, now Ecoregions. The Ontario Wetland Evaluation System: Southern Manual (MNRF, 2022) also assisted with classifying regionally significant breeding birds in the area (Region 6). The presence of provincially and federally significant species was based on species listed under the ESA and SARA, respectively, and any other non-SAR species that are tracked by the Natural Heritage Information Centre (these species are considered provincially significant (Ministry of Natural Resources (MNR), 2025).

4.2.4 Acoustic Bat Monitoring

Bat monitoring was completed following acoustic surveys under the MNRF's *Survey Protocol for Species at Risk Bats within Treed Habitats* (2017). This is currently the recommended protocol for confirming the presence/absence of Little Brown Myotis, Northern Myotis, and Tri-colored Bat, where it is determined that potentially suitable habitat for the establishment of maternity roosts is present.

[1] The Beaufort Wind Force Scale is an empirical measure that relates wind speed to observed conditions at sea or land. The scale is as follows: **0**: calm, smoke rises vertically, wind speed 1 km/hr; **1**: light air, smoke drift indicates wind direction, leaves and wind vanes are stationary, wind speed = 1.1 – 5.5 km/hr; **2**: light breeze, wind felt on exposed skin, leaves rustle, wind vanes begin to move, wind speed = 5.6 – 11 km/hr; **3**: gentle breeze, leaves and small twigs constantly moving, light flags extended, wind speed = 12 – 19 km/hr.

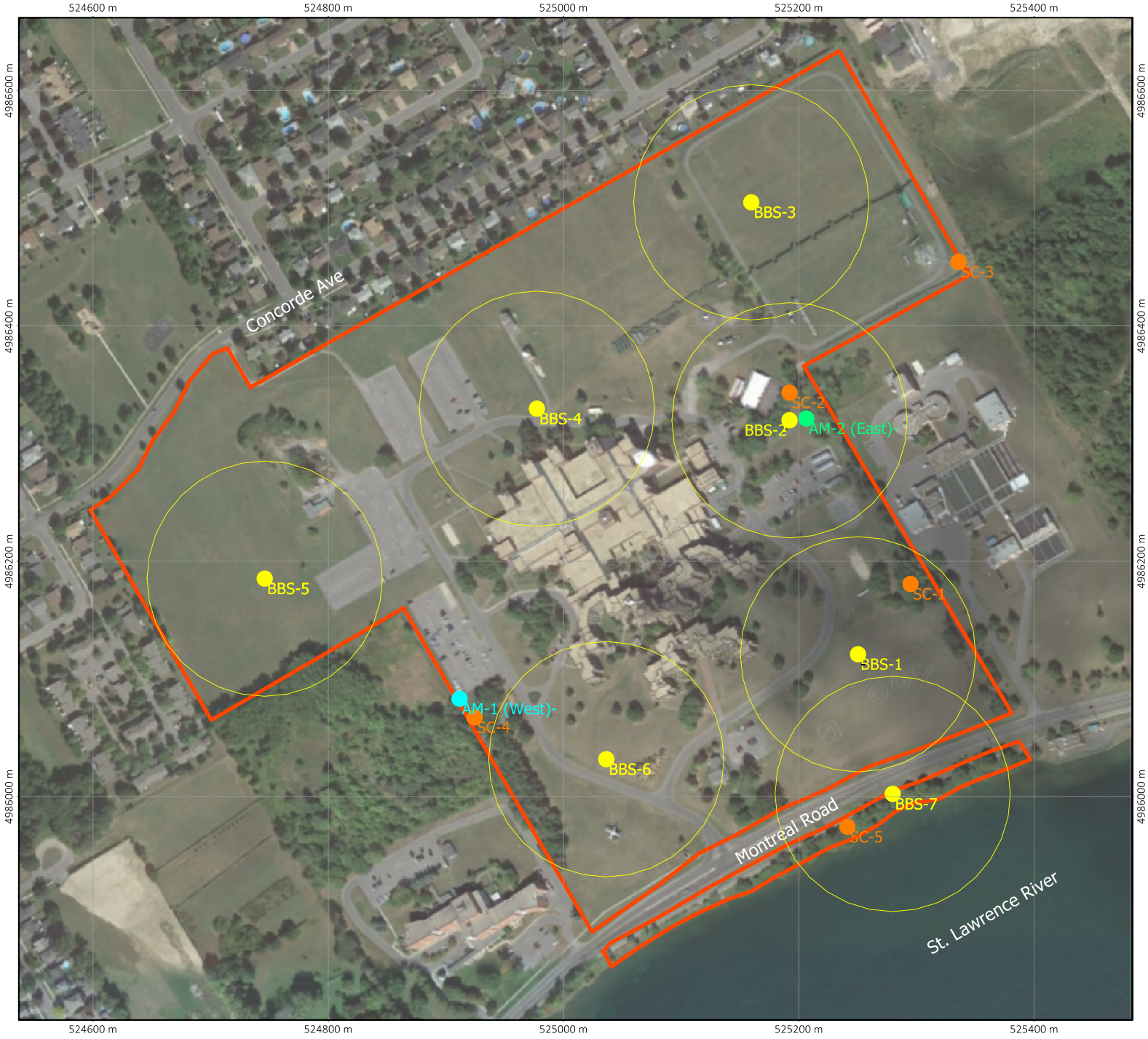

Figure 2 Map showing the locations of breeding bird survey stations, acoustic bat monitors and soil core locations (2023)

Site Boundaries

Survey Stations

- AM-1 (West)
- AM-2 (East)
- BBS
- SC-1

N

0 100 m

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The Site is characterized by scattered, mature trees situated within manicured areas, as well as hedgerows situated primarily along the Site boundaries. Relatively more extensive treed areas exist off-site, with one woodlot situated adjacent to the west project boundary. Some individual trees, as well as some trees within the hedgerows, are potentially suitable for bat roosting, having diameters at breast height greater than 25 cm, crevices, and loose bark, and being in the early stages of decay (MNRF, 2015b, 2017). The Site also contains existing buildings that could provide suitable habitat.

All species of bats that may occur on-site are detectable following MNRF (2017) protocols if ultrasonic acoustic monitors are used and the signal-to-noise ratio can be analyzed from oscillogram displays to identify bat calls to species level. Under this protocol, acoustic monitors are installed for a minimum of 10 nights between June 1 and June 30, with recordings commencing after dusk and continuing for five hours. Acoustic surveys took place by placing two Song Meter SM3 acoustic recorders on site between June 15 and June 30, 2023 (Figure 2), scheduled to record after dusk and continuing for five hours. Kaleidoscope Pro analysis software was used to automatically detect and identify bat calls from acoustic data. This software typically has an identification accuracy rate of ~70-80%; approximately 10% of the acoustic data were manually verified.

5.0 RESULTS

5.1 Landforms, Soils and Geology

The Site is located within the Lancaster Flats physiographic region (Chapman & Putnam, 1984). Soils are mapped in Report No. 20 of the Ontario Institute of Pedology, *Soil Survey of Stormont County* (Matthews & Richards, 1954) as belonging to the Eamer and North Gower soil series, characterized as loam to clay loam soils, stone-free to moderately stony, and level to undulating/rolling.

Soils on the Site were characterized as part of the ELC exercise. Soil cores were taken from representative locations across the Site (Figure 2). Soil morphology across the main Site area was generally found to be highly disturbed, all with a sandy Ap layer. Soil samples indicated sandy loam or sandy clay textures. A portion of the western edge of the Site was predominantly organic, with high amounts of sand, overlying sandy clay. Detailed descriptions of soil cores are included in Section 5.3.1 below.

5.2 Aquatic Environment

The Site shoreline (Figure 3) is roughly 370 m long where the substrate was mainly composed of cobble and sand with periphyton covering over 80% of the rocks. The shoreline features a gentle slope from the water's edge to deeper waters where sparse submerged vegetation (< 5% of the shoreline) could be seen growing at the edge of the littoral zone (Figure 3). During the time of the fish survey, the water temperature was 18.81 °C, pH was 7.89, dissolved oxygen was 11.01 mg/L, and the specific conductivity was 320 mg/L. The vegetation on the shoreline is described in Section 5.3.1.2.

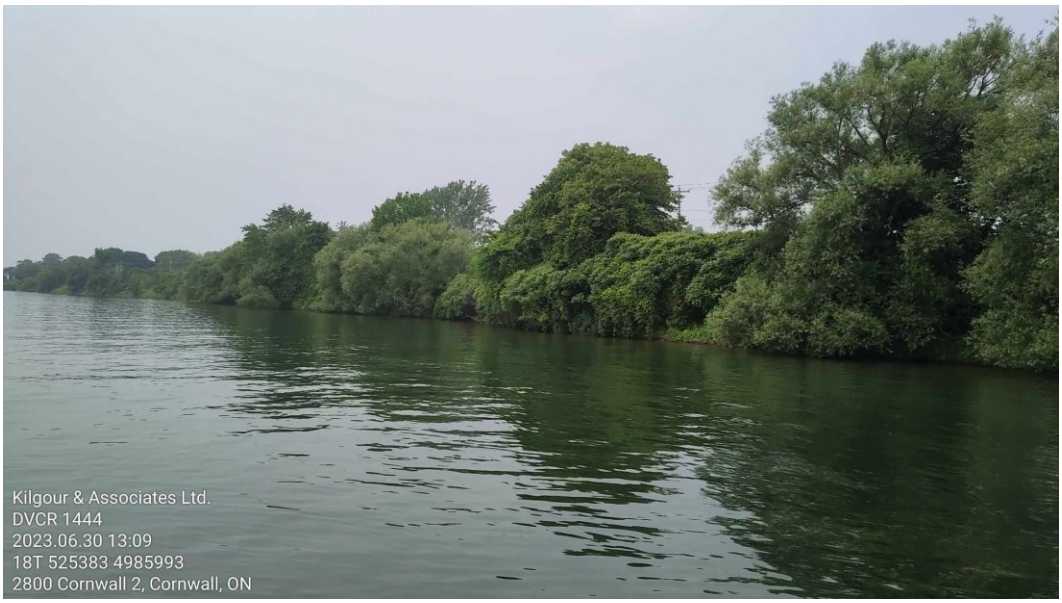

Figure 3 Photograph of the DEV Centre shoreline where a fish survey was conducted on June 30, 2023

The numbers of fish captured by boat electrofishing are summarized in Table 2. Four different species were captured along the shoreline of the Site, including Banded Killifish (*Fundulus diaphanus*), Bluntnose Minnow (*Pimephales notatus*), Golden Redhorse (*Moxostoma erythrurum*), and Round Goby (*Neogobius melanostomus*). Round Gobies, which are an invasive species, were by far the most frequently captured fish species, with 42 individuals captured. The CPUE for the fish community assessment was 4.1 fish per minute. One American Eel (*Anguilla rostrata*) was found dead on the shore of the Site, but it was unclear at the time of the survey if the individual was directly associated with the shoreline or if it had been washed ashore. No live fish species currently listed under the *Endangered Species Act* or the *Species at Risk Act*, nor any sportfish, were captured during the fish community survey.

Table 2 Summary of fish species captured by boat electrofishing and catch per unit effort along the shoreline of the DEV Centre on June 30, 2023

MNRF Code	Common Name	Scientific Name	Numbered Captured
251	American Eel	*Anguilla rostrata*	Found dead on shoreline prior to starting fish assessment
261	Banded Killifish	*Fundulus diaphanus*	1
208	Bluntnose Minnow	*Pimephales notatus*	3
170	Golden Redhorse	*Moxostoma erythrurum*	1
366	Round Goby	*Neogobius melanostomus*	42
Total Number of Species			4
Total Fish Caught			47
Total Effort (Seconds)			680
Catch Per Unit Effort (CPUE; fish/minute)			4.1

5.3 Vegetation

5.3.1 Ecological Land Classification

Six distinct ELC units (ecosites, vegetation types, or other) were delineated on and adjacent to the Site (Figure 4), all of which are terrestrial classifications. Each unit and the dominant vegetation therein (if appropriate) are described in detail below. The designations below were used in subsequent analyses to identify potential habitats that may be used by species of interest (e.g., SAR) occurring or potentially occurring on the Site.

The majority of the Site was highly manicured with little natural vegetation cover. Adjacent lands (i.e., off-site) included more extensive areas of natural landcover, including a mixed woodland patch dominated by Eastern White Cedar (*Thuja occidentalis*), Manitoba Maple (*Acer negundo*) and species of Ash (*Fraxinus* spp.); a Sugar Maple (*Acer saccharum*)-dominated forest stand; and a Poplar (*Populus* sp.) dominated forest stand. Adjacent lands also supported manicured parklands and cultural meadows.

5.3.1.1 Constructed Green Lands: Parkland (CGL_2)

The majority of the Site was characterized as Parkland (CGL_2), comprising extensive areas of mown, manicured Kentucky Bluegrass (*Poa pratensis*), surrounding the buildings, parking areas and paths on the Site (Figure 5). The landscaping of the area included individual trees as well as clusters of planted trees. Soil morphology within the Parkland area was generally found to be highly disturbed, with sandy to sandy-loam or sandy-clay textures.

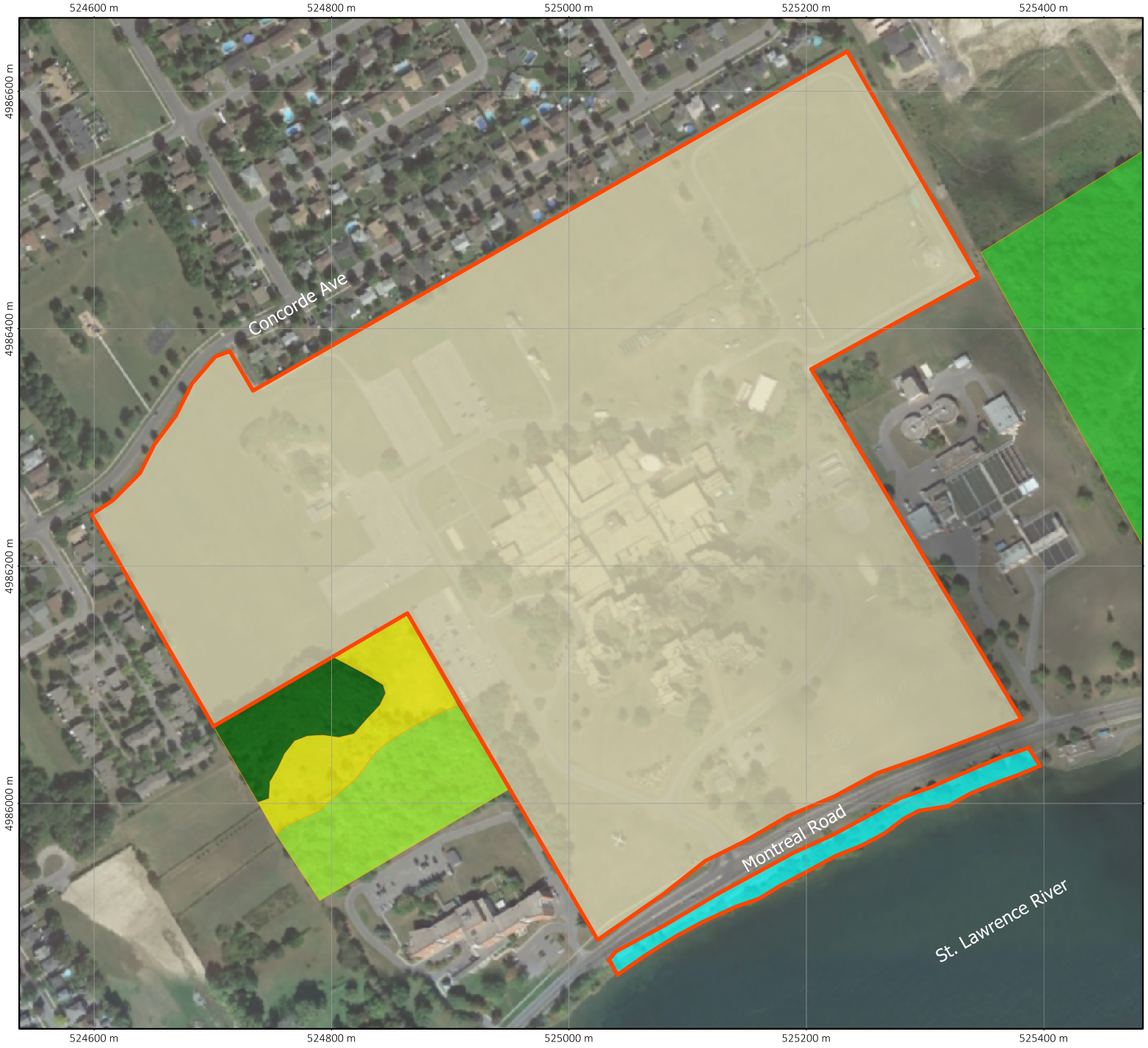

Figure 4 Map showing Ecological Land Classifications on and adjacent to the Site, 2023

Site Boundaries

ELC Communities

- CGL-2
- SHTM1
- CUM1
- FODM5
- FODM8-1
- WOMM4-1

N

0 100 m

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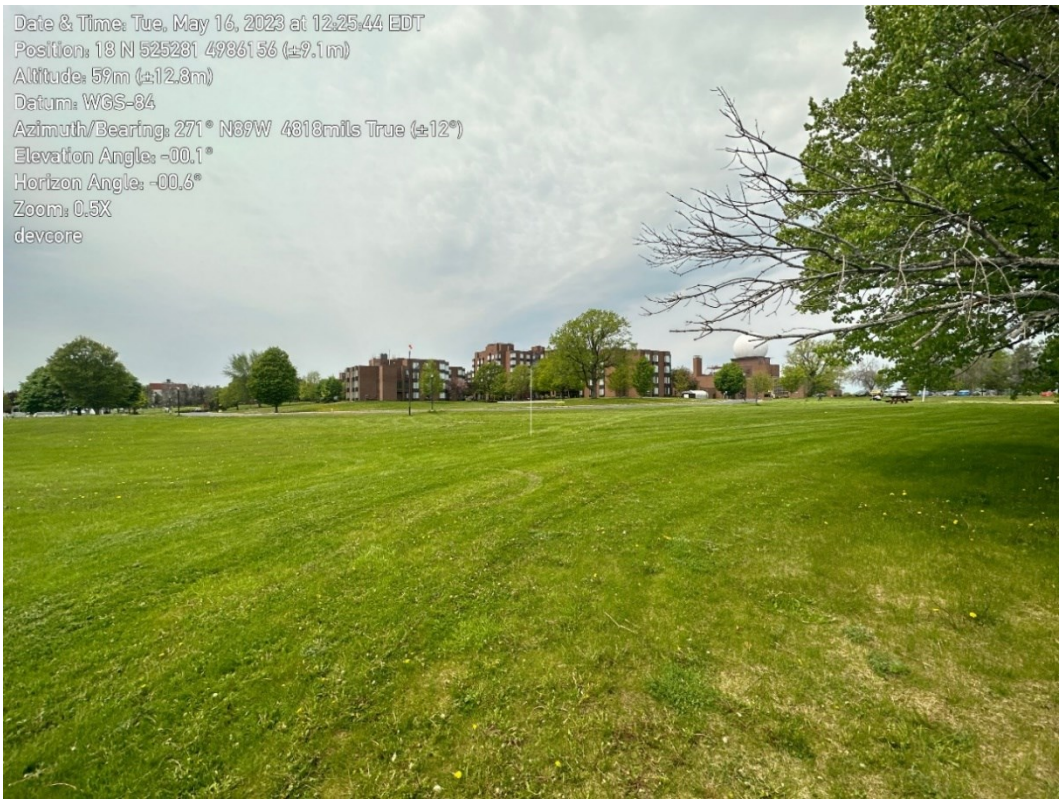

Figure 5 Parkland areas (CGL_2), comprising manicured grass and scattered tree cover throughout the majority of the Site.

5.3.1.2 Mineral Treed Shoreline Ecosite (SHTM1)

A Mineral Treed Shoreline Ecosite (SHTM1) was situated on the south edge of the Site, along the bank of the St. Lawrence River (Figure 4). This area was characterized as a semi-open treed community, dominated by White Willow (*Salix alba*). The sub-canopy was characterized by Staghorn Sumac (*Rhus typhina*), Common Lilac (*Syringa vulgaris*), Sweet Gale (*Myrica gale*), and Green Ash (*Fraxinus pennsylvanica*) saplings. The shoreline represented a relatively narrow strip of vegetation between the river and adjacent multi-use paths and Montreal Road (Figure 6). Soil morphology within this community was found to be sandy to depths of 30 cm, overlying sandy clay to depths of 80 cm. Light mottling was found starting at a depth of approximately 35 cm, indicating some presence of water saturation in the soils.

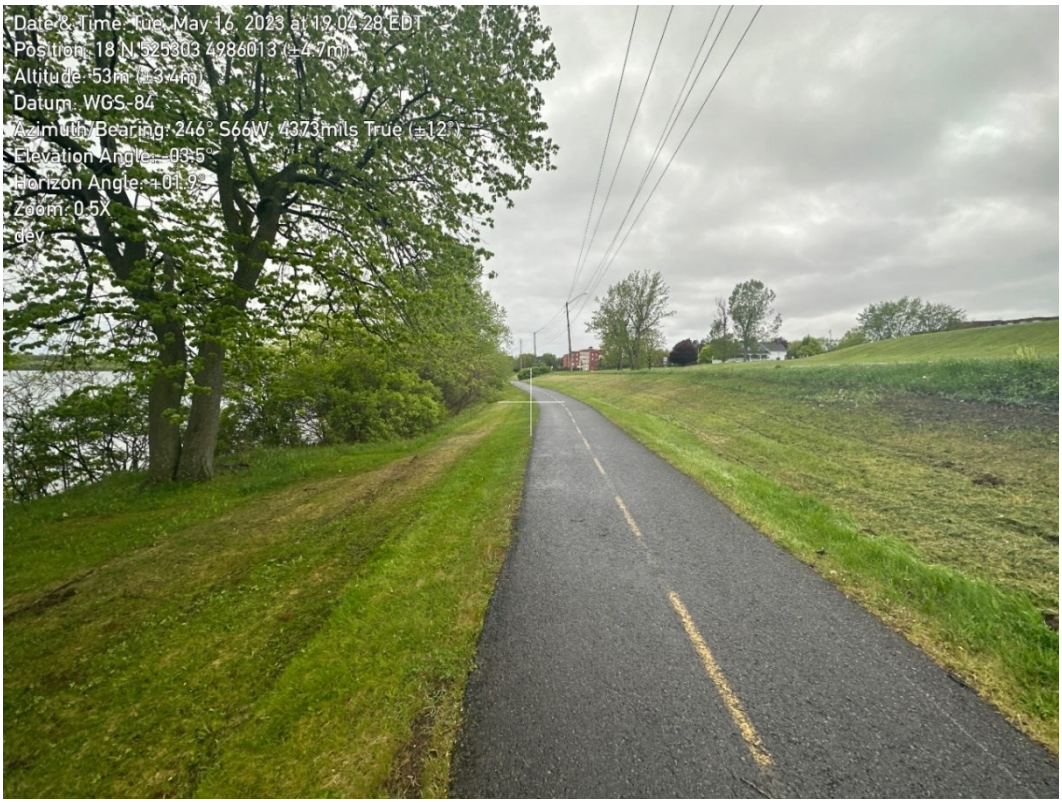

Figure 6 Mineral Treed Shoreline Ecosite (SHTM1), situated between a shared-use path and the St. Lawrence River on the south edge of the Site

5.3.1.3 Coniferous Plantation (no ELC code)

A manicured coniferous plantation was situated on the west edge of the Site, making up a relatively narrow strip of treed land along the property boundary (Figure 4). The canopy comprised Red Pine (*Pinus resinosa*) exclusively (Figure 7). The subcanopy was open, with manicured Kentucky Bluegrass groundcover (Figure 7). Soil morphology within this community was found to be predominantly organic with high amounts of sandy material from 0-18 cm, overlying a sandy clay layer to depths of 40-60 cm, and a clay loam layer from 60-130 cm. Light mottling was encountered at a depth of approximately 60 cm, indicating some periods of prolonged soil saturation.

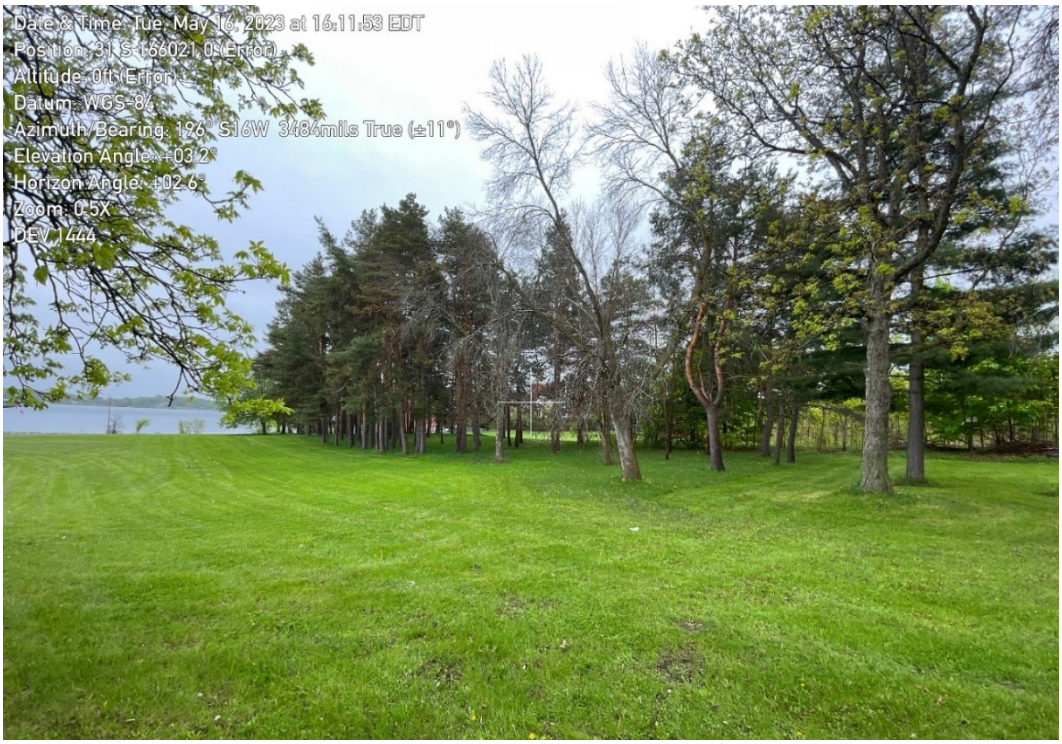

Figure 7 Red Pine-dominated coniferous plantation on the west edge of the Site

5.3.1.4 Adjacent ELC Units

Adjacent lands (i.e., off-site) included more extensive areas of natural land cover (Figure 4). Areas located directly west of the Site include three distinct ELC units: a Fresh-Moist White Cedar – Hardwood Mixed Woodland Type (WOMM4-1) community dominated by Eastern White Cedar, Manitoba Maple and species of Ash; a Dry-Fresh Sugar Maple Deciduous Forest Ecosite (FODM5) dominated by Sugar Maple; and a Mineral Cultural Meadow (CUM1) primarily comprised of Canada Goldenrod (*Solidago canadensis*) and various grass and forb species.

The area located east of the Site is mapped as Fresh-Moist Poplar Deciduous Forest Type (FODM9-1) and is characterized as a Poplar-dominated forest stand (Figure 8). Adjacent lands also supported manicured parklands and cultural meadows.

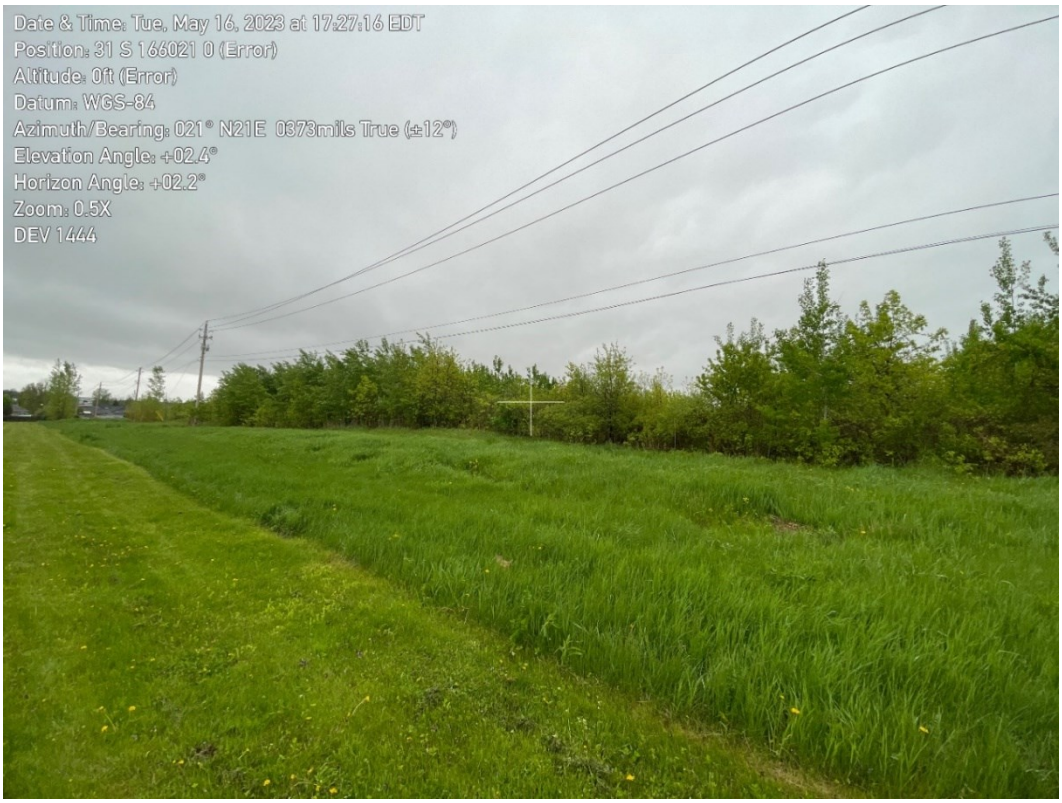

Figure 8 Edge of FODM9-1 Community east of the Site

5.3.2 Tree Studies

A detailed inventory of trees on the Site was undertaken concurrently with the ELC on May 16, 2023. Trees were scattered throughout the Site and often occurred as individual trees or small clusters of mature trees (Figure 9). Overall, data from 506 Site trees were recorded, representing 34 confirmed species (Table 3; Appendix C). The five most abundant species represented 63% of trees observed (Table 3): Scots Pine (*Pinus sylvestris*; 144), Eastern White Pine (*Pinus strobus*; 58), White Ash (*Fraxinus americana*; 42), Norway Maple (*Acer platanoides*; 45), and White Spruce (*Picea glauca*; 38). In total, 37 trees from 12 species had DBH > 50 cm, while five trees from three species had DBH over 90 cm (Table 3). The largest tree observed on the Site was a Bur Oak (*Quercus macrocarpa*), with a DBH measuring 115 cm.

No Butternut or Black Ash trees (i.e. those listed under the ESA or SARA) were observed on the Site.

Table 3 Tree species count and percent composition for the Site

Species Common Name	Species Taxonomic Name	Count	Percent Composition (%)	Average DBH (cm)
American Elm	*Ulmus americana*	4	0.8	39.0
Amur Maple	*Acer ginnala*	1	0.2	19.0
Apple	*Malus* sp.	6	1.2	22.7
Austrian Pine	*Pinus nigra*	28	5.5	28.4
Basswood	*Tilia americana*	19	3.8	36.2
Bitternut Hickory	*Carya cordiformis*	1	0.2	19.0
Black Cherry	*Prunus serotina*	1	0.2	33.0
Black Maple	*Acer nigrum*	1	0.2	40.0
Bur Oak	*Quercus macrocarpa*	9	1.8	53.7
Cherry species	*Prunus* sp.	10	2	13.7
Common Hawthorne	*Crataegus monogyna*	3	0.6	26.3
Eastern Cottonwood	*Populus deltoides*	4	0.8	89.0
Honey Locust	*Gleditsia triacanthos*	2	0.4	20.0
Horse Chestnut	*Aesculus hipocastanum*	1	0.2	11.0
Large-tooth Aspen	*Populus grandidentata*	4	0.8	18.0
Little-leaf Linden	*Tilia cordata*	7	1.4	30.6
Lombardy Popular	*Populus nigra*	2	0.4	21.0
Manitoba Maple	*Acer negundo*	2	0.4	31.5
Norway Maple	*Acer platanoides*	45	8.9	24.5
Red Oak	*Quercus rubra*	4	0.8	40.0
Red Pine	*Pinus resinosa*	1	0.2	30.0
Scots Pine	*Pinus sylvestris*	144	28.5	28.8
Shagbark Hickory	*Carya ovata*	3	0.6	44.3
Siberian Elm	*Ulmus pumila*	7	1.4	22.6
Silver Maple	*Acer saccharinum*	15	3.0	56.3
Sugar Maple	*Acer saccharum*	10	2.0	27.7
Trembling Aspen	*Populus tremuloides*	2	0.4	21.0
White Ash	*Fraxinus americana*	42	8.3	27.3
White Birch	*Betula papyrifera*	1	0.2	13.0
White Cedar	*Thuja occidentalis*	1	0.2	22.0
White Oak	*Quercus alba*	21	4.2	29.5
White Pine	*Pinus strobus*	58	11.5	34.2
White Spruce	*Picea glauca*	38	7.5	29.1
White Willow	*Salix alba*	9	1.8	52.0
Total		**506**	**100%**	

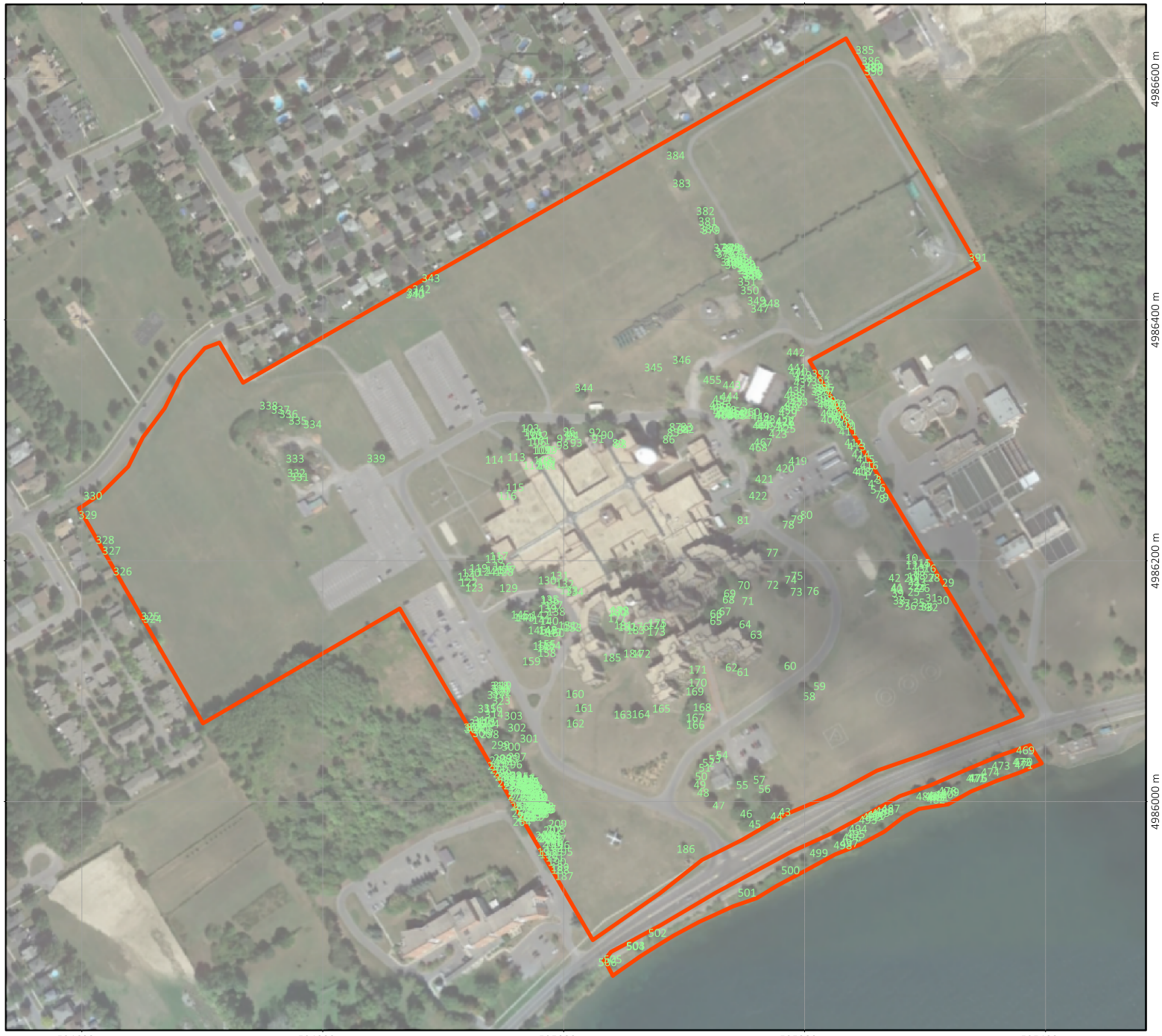

Figure 9 Proposed development

Legend

Site Boundary

\# Tree Number

N

0 100 m

Project: DVCR 1444
Map File: DVCR 1444-2308a.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 5/30/2025

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5.4 Wildlife Surveys

5.4.1 Breeding Birds

Two rounds of breeding bird surveys were conducted during ideal weather conditions on June 1 and June 15, 2023. A total of seven breeding bird survey stations were established in representative habitats on the Site. Weather conditions associated with morning breeding bird surveys are summarized in Table 4.

Table 4 Dates, weather conditions, and stations visited during breeding bird surveys in 2023

Date	Cloud Cover (%)	Air Temperature (°C)	Wind (Beaufort Scale)	Precipitation
2023-06-01	0	20	1	None
2023-06-15	10	18	3	None

A total of 28 bird species were detected through vocalization and/or direct visual observations during breeding bird surveys and incidental observation (Appendix D). The following bird species were commonly observed on the Site, detected at a majority of survey stations (i.e. four or more) and on both survey dates: American Robin (*Turdus migratorius*), Black-capped Chickadee (*Poecile atricapillus*), Common Grackle (*Quiscalus quiscula*), European Starling (*Sturnus vulgaris*), Osprey (*Pandion haliaetus*), Song Sparrow (*Melospiza melodia*), Yellow Warbler (*Setophaga petechia;* Appendix D).

Bank Swallow (*Riparia riparia*) and Eastern Meadowlark (*Sturnella magna*) were observed during the morning breeding bird survey on June 1, 2023. Both the Bank Swallow and Eastern Meadowlark are listed as Threatened under the ESA and SARA. Additional information on these SAR is provided in Section 5.5.

5.4.2 Bats

Two bat monitors were installed for 14 nights and placed along the western and eastern sides of the Site, within open areas ideal for bat foraging to capture the greatest potential for bat activity on the Site. Conditions were ideal throughout the monitoring period, with mainly clear or cloudy nights and warm overnight temperatures ($\geq$ 8°C) and little precipitation. Bat species identified within the Site were Big Brown Bat (*Eptesicus fuscus*), Hoary Bat (*Lasiurus cinereus*), Little Brown Myotis (*Myotis lucifugus*), Silver-haired Bat (*Lasionycteris noctivagans*), and Tri-colored Bat (*Perimyotis subflavus*; Table 5).

Table 5 Number of bat recordings from acoustic monitoring performed in 2023

Survey Station	Survey Dates	Habitat Description	Big Brown Bat	Eastern Red Bat	Hoary Bat	Silver-haired Bat	Little Brown Myotis	Tri-colored Bat	Mean Number of Calls per Night
AM-1 (west)	2023-06-13 to 2023-06-26	Manicured landscape adjacent to thicket and meadow community	114	1	71	60	4	1	18
AM-2 (east)	2023-06-13 to 2023-06-26	Manicured landscape	166	4	59	252	1	-	34

Of the six species recorded, Silver-haired Bat, Big Brown Bat, and Hoary Bat had the most occurrences, suggesting these species were feeding and/or roosting within the vicinity of the acoustic monitors. The lower occurrences of Eastern Red Bat, Little Brown Myotis, and Tri-colored Bat are indicative of limited transient presence, i.e., flyovers by individuals resident in the broader vicinity but not directly inhabiting or otherwise using the Site.

5.5 Species at Risk

The list of SAR reviewed through this study was based on the initial SAR review completed by WSP Golder (2022a, 2022b) with updates completed by KAL (Appendix B). The Preliminary SAR Screening identified a total of 31 SAR with some potential to occur within the broader vicinity of the Site based on a desktop review of observation records and publicly available databases (Appendix B). The 31 SAR initially screened for consideration were assessed based on general habitat availability on the Site, the potential for those species to occur within the project area, and/or their likelihood for interactions generally with future development. Of those species, 22 were considered to have some potential to occur on the Site and/or to interact with the project (Appendix B; Table 6).

Table 6 Species at risk screened for consideration in the proposed project

Common Name	Taxonomic Name	ESA Status	SARA Status	Observed On Site	Potential to Interact with Project
Birds					
Bank Swallow	*Riparia riparia*	Threatened	Threatened	Not observed during targeted BBS surveys	Low
Barn Swallow	*Hirundo rustica*	Special Concern	Threatened	Observed during targeted BBS surveys	Moderate
Chimney Swift	*Chaetura pelagica*	Threatened	Threatened	Not observed during BBS surveys	Low; chimneys on-site were determined to be capped.
Common Nighthawk	*Chordeiles minor*	Special Concern	Threatened	Not observed; nighttime surveys for nightjars not undertaken	Low

Common Name	Taxonomic Name	ESA Status	SARA Status	Observed On Site	Potential to Interact with Project
Eastern Meadowlark	*Sturnella magna*	Threatened	Threatened	Observed during targeted BBS surveys	Moderate
Fish					
American Eel	*Anguilla rostrata*	Endangered	Not Listed	Dead individual (of unknown origin) noted during aquatic survey	Low
Bridle Shiner	*Notropis bifrenatus*	Special Concern	Special Concern	Not observed during fish survey	Low
Cutlip Minnow	*Exoglossum maxillingua*	Threatened	Special Concern	Not observed during fish survey	Low
Lake Sturgeon – Great Lakes / Upper St. Lawrence population	*Acipenser fulvescens*	Endangered	Not Listed	Not observed during fish survey	Low
River Redhorse	*Moxostoma carinatum*	Special Concern	Special Concern	Not observed during fish survey	Low
Silver Lamprey _ great Lakes / Upper St. Lawrence population	*Ichthyoyzon unicuspis*	Special Concern	Special Concern	Not observed during fish survey	Low
Mammals					
Eastern Red Bat	*Lasiurus borealis*	Endangered	Not Listed	Detected during acoustic bat monitoring	High
Eastern Small-footed Myotis	*Myotis leibii*	Endangered	Not Listed	Not detected during acoustic bat monitoring	Low
Hoary Bat	*Lasiurus cinereus*	Endangered	Not Listed	Detected during acoustic bat monitoring	High
Little Brown Myotis	*Myotis lucifugus*	Endangered	Endangered	Detected during acoustic bat monitoring	High
Northern Myotis	*Myotis septentrionalis*	Endangered	Endangered	Not detected during acoustic bat monitoring	Low
Silver-haired Bat	*Lasionycteris noctivagans*	Endangered	Not Listed	Detected during acoustic bat monitoring	High
Tri-colored Bat	*Perimyotis subflavus*	Endangered	Endangered	Detected during acoustic bat monitoring	High
Reptiles					
Snapping Turtle	*Cheyldra serpentina*	Special Concern	Special Concern	Not observed; targeted turtle surveys not undertaken	Low
Arthropods					
Monarch	*Danaus plexippus*	Special Concern	Special Concern	Not observed; targeted arthropod surveys not undertaken	Low
Vascular Plants					
Black Ash	*Fraxinus nigra*	Endangered	No Status	No observations onsite with targeted tree survey	Negligible
Butternut	*Juglans cinerea*	Endangered	Endangered	No observations onsite with targeted tree survey	Negligible

SAR presented in Table 6 that are not listed or are listed as Special Concern under the ESA are not considered further as SAR in this report because they do not receive individual or habitat protection under the ESA (whereas Threatened and Endangered species do). However, individuals of these species are protected under other regulations addressing wildlife conservation generally, such as the FWCA, MBCA, and the PPS. In addition, species listed as Special Concern under the ESA may receive habitat protection if they are observed in habitats that meet the criteria for designation as Significant Wildlife Habitat (SWH) for Special Concern Species (MNRF, 2015a). Species of Special Concern will be discussed with SWH in Section 5.6.

Of the protected SAR reviewed, six were observed on the Site: Eastern Meadowlark, Eastern Red Bat, Hoary Bat, Little Brown Myotis, Silver-haired Bat, and Tri-colored Bat. These species are discussed further below.

5.5.1 Eastern Meadowlark

Eastern Meadowlark is an obligate grassland species that nests on the ground. They breed and forage in tall grass and open areas, including hayfields, pastures, agricultural fields, abandoned fields, and cultural meadows that are greater than 5 ha in size. Ideal nesting habitat contains tall grass with abundant litter and grass cover, low shrub and woody vegetation cover, and very little bare ground (McCracken et al., 2013; MECP, 2021b). Eastern Meadowlark was detected during the breeding bird survey; however, the majority of the Site is manicured and kept regularly mowed, and therefore, does not provide suitable nesting habitat for Eastern Meadowlark.

5.5.2 SAR Bats

The Committee on the Status of Species at Risk in Ontario (COSSARO) has updated the provincial status for the Hoary Bat, Silver-haired Bat, and Eastern Red Bat to Endangered. These species received general habitat protection as of January 31, 2025. Although these species were not officially listed at the time of field studies in support of this EIS, it is anticipated that protections will apply throughout a future development timeline. As such, these species are considered and assessed as Endangered species in this EIS.

Eastern Red Bat, Hoary Bat, Little Brown Myotis, Silver-haired Bat, and Tri-colored Bat were detected through acoustic monitoring on the Site. Tri-colored Bat was detected as a single record at one of the stations, while Eastern Red Bat and Little Brown Myotis were detected at both stations with fewer than five records at each. Hoary Bat and Silver-haired Bat were detected at both stations, with over 50 records at each station. As such, Hoary Bat and Silver-haired Bat likely forage and/or roost in proximity to the Site. The low numbers of detections for Eastern Red Bat, Little Brown Myotis, and Tri-colored Bat suggest only a limited transient presence over most of the Site, with little evidence of maternal roosting activity or habitat. As Endangered species, all of these species receive “general habitat protection” under the ESA.

Roosting habitat for SAR bats includes buildings, rock crevices, exfoliating tree bark, within foliage, and cavities and crevices in trees (Humphrey & Fotherby, 2019). These species generally forage over clearings adjacent to forests and over water. Trees on-site may provide day roosting habitat for SAR bats; however, forest and woodland areas on adjacent lands, with more consistent tree cover, provide more suitable roosting habitat. Clearings and forest edges on-site may provide suitable foraging habitat.

Maternity roosting habitat for SAR bats includes tree cavities, particularly in large diameter (>25 cm DBH) wildlife trees in early stages of decay; maternity roosts are typically found in deciduous or mixed forest stands, with a density of suitable wildlife trees of >10/ha (MNRF, 2015a). Maternity colonies are protected as SWH; however, the Site does not meet the density criteria of wildlife trees to be considered SWH (MNRF, 2015a).

Bat hibernacula generally include subterranean openings, including caves, abandoned mines, wells, and tunnels (Environment Canada, 2015; MNRF, 2017). Potential underground structures for bat hibernation were not observed on the Site.

5.6 Significant Wildlife Habitat

The SWH Criteria Schedule for Ecoregion 6E (MNRF, 2015a) identifies four main types of SWH: seasonal concentration areas, rare vegetation communities, specialized habitat for wildlife, and habitats of Species of Conservation Concern.

5.6.1 Seasonal Concentration Areas

Seasonal concentration areas include stopover and staging areas for waterfowl, shorebirds, landbirds and butterflies, wintering areas for raptors, bat hibernacula, bat maternity colonies, wintering areas for turtles, reptile hibernacula, breeding habitats for colonially-nesting birds, and deer yarding and congregation areas.

The Site does not meet the criteria for candidate or confirmed SWH.

5.6.2 Rare Vegetation Communities or Specialized Habitat for Wildlife

Rare Vegetation Communities

Rare vegetation communities typically include those that have developed on cliff and talus slopes, sand barrens, shallow soils over limestone bedrock (alvar), old growth forests, savannahs, and tallgrass prairies.

The Site does not meet the criteria for candidate or confirmed SWH.

Specialized Wildlife Habitat

Specialized wildlife habitat includes waterfowl nesting areas, Bald Eagle and Osprey nesting, foraging, and perching habitat, woodland raptor nesting habitat, turtle nesting areas, seeps and springs, woodland amphibian breeding habitat, wetland breeding habitat, and woodland area-sensitive bird breeding habitat.

An active Osprey nest on a hydro structure was observed on the Site. However, per the SWH Criteria (MNRF, 2015a), nests located on man-made objects are not to be included as SWH.

The Site does not meet the criteria for candidate or confirmed SWH.

Habitats of Species of Conservation Concern

Habitats of species of conservation concern include marsh breeding bird habitat, open country bird habitat, shrub/early successional bird breeding habitat, terrestrial crayfish, and special concern and rare wildlife species. Habitats of Species of Conservation Concern do not include habitats of Endangered or Threatened species as identified by the ESA. Our background review did not identify the presence of marsh bird breeding habitat, open country bird habitat, shrub/early successional bird breeding habitat or terrestrial crayfish.

MNRF (2015) defines candidate SWH for special concern and rare wildlife species as when an element occurrence is identified within a 1 or 10 km grid and suitable candidate habitat is found on-site based on ELC. As such, the Site meets the definition of Confirmed SWH for special concern and rare wildlife species for one species: Barn Swallow, as this species was detected during the breeding bird surveys in 2023.

5.7 Other Natural Heritage Features

The Site does not contain significant wetlands, significant coastal wetlands, significant woodlands, significant valleylands, or greenspace linkages, or Areas of Natural Scientific Interest (ANSI). No other significant natural heritage features are located within 120 m of the Site.

6.0 DESCRIPTION OF THE PROPOSED PROJECT

The majority of the 75 ha Site will be subject to redevelopment as part of the proposed project, although the existing DEV Centre building will be retained. Residential properties will be situated primarily in the north portion of the Site, while commercial properties will be located primarily in the southern portion. Parking areas and greenspaces will be located throughout the Site. Roadway access will be provided via two entrances along Montreal Road to the south as well as one point of connection to Concorde Avenue to the north.

The majority of the Site is designated as Parkland, with the only natural vegetation community occurring along the shoreline of the St. Lawrence River. As part of the current phase of development of the DEV Centre and surrounding lands, no shoreline development is proposed. All works will be set back at least 30 m from the shoreline; as such, no naturally vegetated communities will be removed to accommodate the proposed redevelopment and existing shoreline vegetation will be retained in its current extent. This setback will satisfy the requirements for Hazard Lands, RRCA floodplain setbacks, and the City of Cornwall setback requirements from the high-water mark, or top of bank.

It is anticipated that the portion of the Site north of Montreal Road will be fully cleared to accommodate redevelopment and all existing Site trees will be removed. A total of 506 trees were identified during the tree inventory. Approximately 660 trees are proposed as part of the redevelopment, indicating that at maturity, canopy cover for the Site will be similar or slightly increased relative to current canopy cover.

It is intended that, to the extent possible, grading and project works will avoid any critical root zones (CRZs) of trees on adjacent properties extending onto the Site. For the northern portion of the Site subject to residential development, rear yard setbacks will facilitate protection of trees on adjacent properties. Within the Mixed-Use Block, however, some encroachment into the CRZ of adjacent trees is anticipated,

as the proposed roadways and below-grade services are situated immediately adjacent to the property line near existing off-site trees.

Future phases of the redevelopment of the DEV Centre lands are proposed to include components along the shoreline and within the St. Lawrence River. Shoreline plans would include a beach area (approximately 1 ha), a wooden boardwalk, change rooms, a washroom, a shoreline restaurant, fueling station, and a marina office. Components within the river would include a marina with between 150 and 200 boats slips and accommodation for two seaplanes and a breakwater. Anticipated impacts, mitigation measures and appropriate permits for the marina and shoreline components, however, will be addressed as part of a separate assessment.

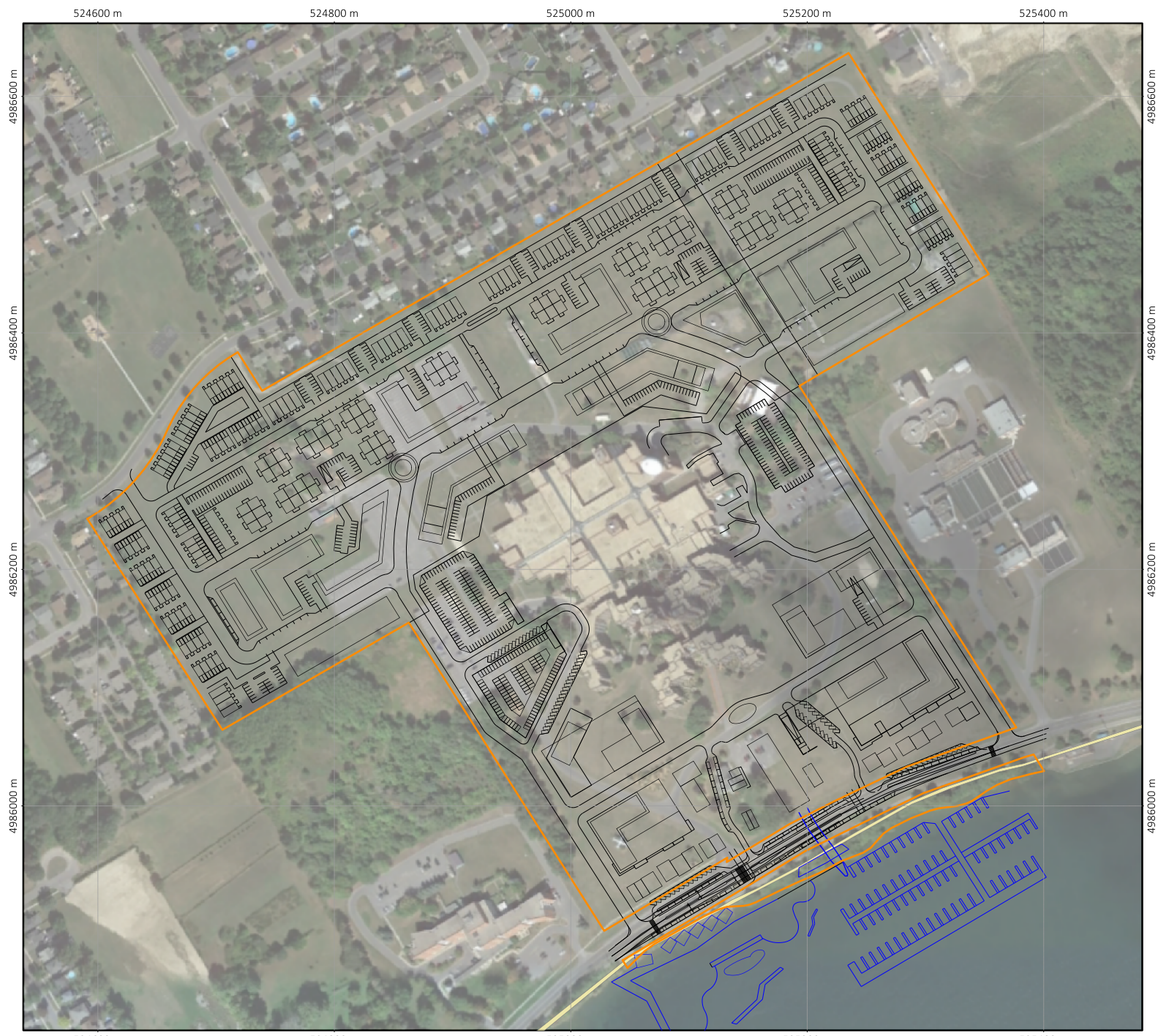

Figure 10 Proposed development

Legend

- Exising Multi-Use Path
- Site boundary
- Future Marina Development

N

0 100 m

Project: DVCR 1444
Map File: DVCR 1444-2308a.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 5/29/2025

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7.0 IMPACT ASSESSMENT AND MITIGATION

7.1 Surface Water

The Site does not contain surface water features (e.g., wetlands, watercourses). It is, however, situated along the bank of the St. Lawrence River. No shoreline works are anticipated and existing shoreline vegetation will be left in-place. A marina with components extending into the St. Lawrence River is under consideration as part of a future development; however, all proposed components of the current project are situated north of Montreal Road, approximately 40 m from the St. Lawrence River.

To protect waters within the broader catchment area during future development of the Site, an erosion and sediment control (ESC) plan will be required and must be developed to the satisfaction of RRCA. The ESC Plan should include:

- A multi-faceted approach to provide ESC;
- Silt fencing paired with sturdy construction fence along the project perimeter to protect adjacent habitats. This fencing can also act as a wildlife exclusion measure for smaller and less mobile animals that may occupy or traverse through the Site, such as turtles, snakes, and amphibians;
- Regularly inspecting and maintaining the ESC measures during all phases of the project, including inspections after each rain event to ensure its integrity and continued function;
- Retention of existing vegetation and stabilization of exposed soils with native vegetation where possible;
- Keeping the ESC measures in place until all disturbed ground has been permanently stabilized;
- Using biodegradable ESC materials where possible and removing all exposed non-biodegradable ESC materials once the Site is stabilized;
- Limiting the duration of soil exposure and phasing project works;
- Limiting the size of disturbed areas by minimizing nonessential clearing and grading;
- Minimizing the total slope length and the gradient of disturbed areas;
- Refueling of machinery should occur >30 m from surface water features and all machinery will remain on the project-side of silt and construction fence;
- Maintaining overland sheet flow and avoiding concentrated flows;
- Storing/stockpiling materials >30 m away from the wetland and other surface water features;
- Fencing or tarping all stockpiled material (<150 millimeter gravel) during the turtle nesting period (late May to early July) (MECP, 2021a) to prevent turtles from nesting in stockpiles. If the stockpile is within a properly fenced area (i.e., the project footprint) additional fencing is not necessary for turtle management, but is recommended for ESC if piles will be left unused for extended periods;

- Regularly inspecting the Site for signs of sedimentation during all phases of work and taking corrective action if required;
- Developing a response plan to be implemented immediately in the event of a spill of a deleterious substance;
- Keeping an emergency spill kit on the Site;
- Stopping work and containing deleterious substances to prevent dispersal;
- Reporting any spills of sewage, oil, fuel, or other deleterious material whether near or directly into a surface water feature;

7.2 Vegetation

Vegetation clearing will be required on the Site to accommodate the proposed development. The following general protection measures are recommended during Site preparation and construction to limit impacts to vegetation:

- Limit tree removal on-site to the highest extent possible and only remove trees necessary to accommodate construction and development;
- Ensure that, where possible, grading and project works avoid encroaching into the critical root zones (CRZs) of trees on adjacent properties extending onto the Site. Where project components are situated near the property lines (e.g. the north-south roadways in the central Mixed-Use Block), some impacts to the CRZs of off-site trees may be unavoidable. Any required compensation for impacts to adjacent (i.e., off-site) trees will be determined in consultation with the City; and
- Ensure equipment is clean prior to vegetation removal to avoid introducing invasive species to the Site, and clean equipment prior to leaving the Site to avoid spreading the aforementioned invasive species elsewhere.

The following mitigation measures are recommended to minimize impacts on trees being retained on the Site:

- Erect a fence beyond the critical root zone (CRZ; i.e., 10 x the trunk diameter) of trees being retained. The fence is recommended to be highly visible (e.g., orange construction fence) and paired with erosion control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment;
- Signage attached to the CRZ fence every 6.0 m indicating:
    - the fencing is to protect the tree's CRZ; and
    - that the fence must not be moved.
- Do not place any material or equipment within the CRZ of the tree;

- Do not attach any signs, notices, or posters to any tree;
- Do not raise or lower the existing grade within the CRZ without approval;
- Do not tunnel or bore when digging within the CRZ of a tree;
- Do not damage the root system, trunk, or branches of any tree; and
- Ensure that exhaust fumes from all equipment are NOT directed toward any tree's canopy.

Tree planting plans will be created as part of the landscape plan for the proposed development. The tree planting plan is to include directives that will lead to 40% canopy cover at maturity.

7.3 Species at Risk

Six SAR ranked as Threatened or Endangered under the ESA were observed on the Site.The observed SAR are Eastern Meadowlark, Eastern Red Bat, Hoary Bat, Little Brown Myotis, Silver-haired Bat, and Tri-colored Bat. Hoary Bat and Silver-haired Bat were relatively more widespread on the Site and likely roost and/or forage on the Site or adjacent lands. There is no identified protected habitat for bats observed on the Site (e.g., Significant Wildlife Habitat); therefore, there are no anticipated impacts to bat habitat as part of the proposed project. However, individuals may use the Site for day roosting and foraging.

The general wildlife mitigation measures provided in Section 7.5, while not species-specific, are anticipated to protect the SAR that may potentially occur on the Site. As such, the project is considered compliant with the ESA and no SAR-specific permitting should be required. If SAR are subsequently observed within work areas, all site work must cease and the MECP must be consulted on appropriate next steps.

7.4 Significant Natural Heritage Features

The Site does not contain significant wetlands, significant coastal wetlands, or ANSIs (life/earth science). The Site itself does not contain significant woodlands, significant valleylands, or greenspace linkages. The Site does not meet the criteria for any type of candidate or confirmed SWH.

7.5 General Wildlife Mitigation

The following mitigation measures shall be implemented during future construction to generally protect wildlife and potential SWH areas:

- Areas shall not be altered or cleared during sensitive times of year for wildlife unless mitigation measures are implemented and/or the habitat has been inspected by a qualified Biologist;
    - Clearing of trees and/or vegetation should not take place April 1 to September 30 inclusive unless a qualified Biologist has determined that no birds are nesting or suitable bat roosting trees are present. The bird nest sweep would be valid for five days:

  - The MBCA protects the nests and young of migratory breeding birds in Canada. The timing of nesting for birds in the area spans April 1 to August 31 (Government of Canada, 1994);

  - Six SAR bat species were detected during acoustic bat surveys. The Site contains suitable foraging and roosting habitat. To mitigate any possibility of impacts to at-risk bats directly, tree clearing is recommended to take place outside of the roosting season (April 1 to September 30 inclusive; MNRF, 2017).

- Temporary exclusion fence should be installed prior to the turtle active season (April through October) (MECP, 2021a) and should follow recommendations in Reptile and Amphibian Exclusion Fencing: Best Practices (MECP, 2021c). Temporary exclusion fence (e.g., silt fence) may be paired with ESC measures and should be installed along the perimeter of the project area. Temporary exclusion measures should be inspected and repaired weekly by a qualified biologist during the turtle active season;

- Develop an ESC plan. Install sediment control fence and inspect/maintain it periodically and after each rain event to ensure its integrity and continued function;

- Ensure that a qualified biologist develops a wildlife management plan for the construction process and delivers environmental compliance and biodiversity training to all site workers to implement the plan. The plan should include (but not be limited to) requirements to:

  - Utilize silt fence paired with sturdy construction fence along the project perimeter and around soil stockpiles to serve as a wildlife exclusion measure to prevent smaller animals from accessing/utilizing temporary habitats on the Site (e.g., prevent turtles from nesting in stockpiles on the Site);

  - Check the entire work site for wildlife prior to beginning work each day;

  - Do not harm, feed, or unnecessarily harass wildlife;

  - Manage waste to prevent attracting wildlife to the work site. Effective mitigation measures include litter prevention and keeping all trash secured in wildlife-proof containers and promptly removing it from the work site, especially during warm weather;

  - Enforce a speed limit of 20 km/h during the active season (April 1 to September 30) to reduce wildlife mortality; and

  - Manage stockpiles and equipment at the work site to prevent wildlife from being attracted to artificial habitat. Cover and contain any piles of soil, fill, brush, rocks, and other loose materials and cap ends of pipes where necessary to keep wildlife out. Ensure that trailers, bins, boxes, and vacant buildings are secured at the end of each workday to prevent access by wildlife.

8.0 CONCLUSION

This report provides a set of mitigation measures for employment in the design and construction of the proposed development. The assessment of the potential for impacts to the natural heritage system is based on the implementation of these mitigation measures. It is our professional opinion that the proposed development is not anticipated to have negative impacts to existing natural features or ecological functions if the recommended mitigation measures provided in this report are implemented.

9.0 CLOSURE

This is a draft report and has been prepared only for internal review by Kilgour & Associates Ltd. and the Client. Kilgour & Associates Ltd. assumes no liability for use of the contents of this report by the Client or by third parties.

Respectfully submitted,

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Appendix A Qualifications of Report Authors

Kesia Miyashita, MSc

Ms. Miyashita has over six years of experience in environmental consulting and more than ten seasons of field experience in ecosystems in Alberta and British Columbia. During her career in environmental consulting, Ms. Miyashita has completed environmental assessments for a variety of major infrastructure projects and urban developments. Her expertise is in vascular and non-vascular plant ecology, with experience in both terrestrial and wetland ecosystems; she has performed vegetation community inventories, rare plant surveys, and weed surveys in a variety of natural environments, including native forest, urban nature preserves, grasslands, and wetlands. Ms. Miyashita joined Kilgour & Associates Ltd. in May of 2021 and has since contributed to numerous Environmental Impact Statements and tree conservation reports, delineation of natural heritage features and SAR surveys. Ms. Miyashita is a Professional Biologist with the Alberta Society of Professional Biologists and a Qualified Wetland Science Practitioner in the province of Alberta.

Maren Nielsen, BES, EMA

Maren is a Biologist and Project Manager with over eight years of comprehensive field, laboratory, and consulting experience. She has worked extensively in the environmental sector, assisting clients through complex land development, ecological restoration, species at risk, and fisheries permitting and approvals processes, ensuring compliance with key environmental regulations while achieving project goals. She carries out field programs for the collection, analysis, and monitoring of water, fish, benthos, sediment, and soils as well as a variety of vegetation, wetland, wildlife surveys, and construction monitoring. Maren plays a key role in delivering high-quality assessments, including the delivery of Environmental Impact Studies (EIS), Environmental Assessments (EA), Species at Risk (SAR) assessments, Headwater Drainage Feature Assessments (HDFA), Existing Conditions Reports, and Environmental Constraints Analyses. Since joining Kilgour & Associates Ltd. in 2023, Maren has contributed her expertise to a diverse portfolio of land development and environmental monitoring projects for government agencies and private industry. Maren is a certified wetland evaluator under the Ontario Wetland Evaluation System (OWES).

Jonathan Séguin, MSc

Jonathan is a Senior Biologist with a background in aquatic biology as well as environmental fate and effects monitoring with focus on large-scale field experiments, environmental chemistry, and toxicokinetics. Jonathan completed both his BSc and MSc at the University of Ottawa where he studied the bioaccumulation potential of oil-derived contaminants in freshwater organisms. Early in his career, he worked for Eastern Canada Response Corporation (ECRC) as the Training Specialist for the Great Lakes Region as well as the Department of Fisheries and Oceans (DFO) as a Student Fisheries Technician. Through his work and school experience, Jonathan has obtained comprehensive field and laboratory experience using a wide variety of field equipment to collect environmental samples and analytical techniques to monitor hydrocarbons and metals derived from oil in water, sediment, and biota. With over six years of experience, he has conducted fish community assessments in the Tributaries of Lake Erie, he was a part of a large-scale ecosystem experiment to study the bioaccumulation potential of oil-derived contaminants in freshwater organisms, and has routinely interacted with federal and provincial governments, stakeholder, clients, and contractors to determine oil spill response measures and the legislative requirements to maintain compliance and certification. Since joining joined Kilgour & Associates Ltd. in April of 2022, Jonathan has worked on projects involving environmental effects monitoring for mines in

Ontario and Manitoba, baseline studies associated with the opening of a Flake Graphite mine, analysis of environmental data, and the development of water quality guidelines (WQGs) for the province of British Columbia.

Anthony Francis, PhD

Dr. Francis is a Senior Ecologist with 20 years' consulting experience to both government agencies and private industry. He has worked on a diversity of projects relating to species at risk, invasive species, terrestrial and aquatic habitat, environmental effects monitoring and mitigation, and fate/effects of contaminants. Within each of these subject areas, Dr. Francis has completed projects addressing specific site concerns and broader policy initiatives. In the Ottawa area Dr. Francis helps clients work their way through the land development process by producing key supporting studies such as Environmental Impact Statements, Integrated Environmental Reviews, and by obtaining various permits and approvals from local regulatory agencies including the conservation authorities and Ministries of Environment and Natural Resources. Dr. Francis is our local in-house geomatics specialist, capable of carrying out detailed and complex analyses of geospatial data of plant and animal distribution. He often utilizes his skills to carry out constraint studies prior to a client purchasing or planning a development for a property.

Appendix B Species at Risk Screening and Assessment

Initial SAR Screening adapted from WSP Golder (2022a, b) with updates completed by KAL

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Amphibian					
Western Chorus Frog - Great Lakes St. Lawrence / Canadian Shield population	*Pseudacris triseriata*	—	THR	In Ontario, habitat of this amphibian species typically consists of marshes or wooded wetlands, particularly those with dense shrub layers and grasses, as this species is a poor climber. They will breed in almost any fishless pond including roadside ditches, gravel pits and flooded swales in meadows. This species hibernates in terrestrial habitats under rocks, dead trees or leaves, in loose soil or in animal burrows. During hibernation, this species is tolerant of flooding (Environment Canada 2015).	Low - no suitable wetlands occur.
Arthropod					
Monarch	*Danaus plexippus*	SC	SC (END)	In Ontario, monarch is found throughout the northern and southern regions of the province. This butterfly is found wherever there is milkweed (*Asclepias* spp.) plants for its caterpillars and wildflowers that supply a nectar source for adults. It is often found on abandoned farmland, meadows, open wetlands, prairies and roadsides, but also in city gardens and parks. Important staging areas during migration occur along the north shores of the Great Lakes (COSEWIC 2010).	Moderate - habitat edges and other areas may be suitable habitat.
Bird					

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Bank Swallow	*Riparia riparia*	THR	THR	In Ontario, bank swallow breeds in a variety of natural and anthropogenic habitats, including lake bluffs, stream and riverbanks, sand and gravel pits, and roadcuts. Nests are generally built in a vertical or near-vertical bank. Breeding sites are typically located near open foraging sites such as rivers, lakes, grasslands, agricultural fields, wetlands and riparian woods. Forested areas are generally avoided (Garrison 1999).	Low- no suitable bluffs or banks occur.
Barn Swallow	*Hirundo rustica*	SC	THR (SC)	In Ontario, barn swallow breeds in areas that contain a suitable nesting structure, open areas for foraging, and a body of water. This species nests in human made structures including barns, buildings, sheds, bridges, and culverts. Preferred foraging habitat includes grassy fields, pastures, agricultural cropland, lake and river shorelines, cleared rights-of-way, and wetlands (COSEWIC 2011). Mud nests are fastened to vertical walls or built on a ledge underneath an overhang. Suitable nests from previous years are reused (Brown and Brown 2019).	Moderate - buildings occur that may be suitable nesting habitat. But no evidence of nesting was observed during the WSP site visit.

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Bobolink	*Dolichonyx oryzivorus*	THR	THR	In Ontario, bobolink breeds in grasslands or graminoid dominated hayfields with tall vegetation (Gabhauer 2007). Bobolink prefers grassland habitat with a forb component and a moderate litter layer. They have low tolerance for presence of woody vegetation and are sensitive to frequent mowing within the breeding season. They are most abundant in established, but regularly maintained, hayfields, but also breed in lightly grazed pastures, old or fallow fields, cultural meadows and newly planted hayfields. Their nest is woven from grasses and forbs. It is built on the ground, in dense vegetation, usually under the cover of one or more forbs (Renfrew et al. 2015).	Low - no grassland habitat occurs.
Chimney Swift	*Chaetura pelagica*	THR	THR	In Ontario, chimney swift breeding habitat is varied and includes urban, suburban, rural and wooded sites. They are most commonly associated with towns and cities with large concentrations of chimneys. Preferred nesting sites are dark, sheltered spots with a vertical surface to which the bird can grip. Unused chimneys are the primary nesting and roosting structure, but other anthropogenic structures and large diameter cavity trees are also used (COSEWIC 2007).	Moderate - buildings may provide suitable nesting habitat.
Common Nighthawk	*Chordeiles minor*	SC	THR (SC)	In Ontario, these aerial foragers require areas with large open habitat. This includes farmland, open woodlands, clearcuts, burns, rock outcrops, alvars, bogs, fens, prairies, gravel pits and gravel rooftops in cities (Sandilands 2007)	Moderate - flat roofs on some buildings may provide suitable nesting habitat.

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Eastern Meadowlark	*Sturnella magna*	THR	THR	In Ontario, eastern meadowlark breeds in pastures, hayfields, meadows and old fields. Eastern meadowlark prefers moderately tall grasslands with abundant litter cover, high grass proportion, and a forb component (Hull 2019). They prefer well drained sites or slopes, and sites with different cover layers (Roseberry and Klimstra 1970).	Low - no grassland habitat occurs.
Eastern Wood-pewee	*Contopus virens*	SC	SC	In Ontario, eastern wood-pewee inhabits a wide variety of wooded upland and lowland habitats, including deciduous, coniferous, or mixed forests. It occurs most frequently in forests with some degree of openness. Intermediate-aged forests with a relatively sparse midstory are preferred. In younger forests with a relatively dense midstory, it tends to inhabit the edges. Also occurs in anthropogenic habitats providing an open forested aspect such as parks and suburban neighborhoods. Nest is constructed atop a horizontal branch, 1-2 m above the ground, in a wide variety of deciduous and coniferous trees (COSEWIC 2012).	Low - no suitable woodland habitat occurs.
Wood Thrush	*Hylocichla mustelina*	SC	THR	In Ontario, wood thrush breeds in moist, deciduous hardwood or mixed stands that are often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches. This species selects nesting sites with the following characteristics: lower elevations with trees less than 16 m in height, a closed canopy cover (>70 %), a high variety of deciduous tree species, moderate subcanopy and shrub density, shade, fairly open forest floor, moist soil, and decaying leaf litter (COSEWIC 2012).	Low - no suitable woodland habitat occurs.
Fish					

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
American Eel	*Anguilla rostrata*	END	Not listed (THR)	In Ontario, American eel is native to the Lake Ontario, St. Lawrence River and Ottawa River watersheds. Their current distribution includes lakes Huron, Erie, and Superior and their tributaries. The Ottawa River population is considered extirpated. The preferred habitat of the American eel is cool water of lakes and streams with muddy or silty substrates in water temperatures between 16 and 19°C. The American eel is a catadromous fish that lives in fresh water until sexual maturity then migrates to the Sargasso Sea to spawn (Burridge et al. 2010; Eakins 2016).	Moderate - the river may provide suitable habitat.
Bridle Shiner	*Notropis bifrenatus*	SC	SC	In Ontario, bridle shiner is a species found only in the St. Lawrence River and its tributaries. Preferred habitat conditions include substrates of sand, silt or organic debris and relatively warm, clear water. Bridle shiner are freshwater fish species that inhabit slow-moving areas of unpolluted streams with abundant aquatic vegetation. Bridle shiner is not acid tolerant and so distribution in Precambrian shield may be limited. Typical spawning habitat is in water depths of 45-120 cm over medium to high density of submerged aquatic vegetation, and fine substrates of clay, silt or sand (Boucher et al. 2011).	Moderate - the river may provide suitable habitat.
Cutlip Minnow	*Exoglossum maxillingua*	THR	SC	In Ontario, cutlip minnow is found in the St. Lawrence River and its tributaries. Cutlip minnow is a freshwater fish found in small to moderate sized streams and rivers with slower moving water. They prefer clear warm water with substrates representing a combination of gravel, cobble and sand over firm rocky bottom. This fish species is tolerable of cool water but is not a cold-water species (MacVeigh 2013).	Moderate - the river may provide suitable habitat.

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Eastern Sand Darter	*Ammocrypta pellucida*	END	Not listed	The preferred habitat of the Eastern Sand Darter is sand–bottomed areas in streams and rivers, and sandy shoals in lakes (Scott and Crossman 1973). They are most abundant in sandy portions of medium to large size streams with moderate current that maintain a silt–free condition without washing away sand (Trautman 1981). Eastern Sand Darter are typically found on sand substrates in the depositional areas downstream of bends in the river	Low - - the river may provide suitable habitat, but conditions are suboptimal. COSEIWC rabgre review does not locate the species in the area
Lake Sturgeon - Great Lakes / Upper St.Lawrence population	*Acipenser fulvescens*	END	Not listed (THR)	In Ontario, lake sturgeon, a large prehistoric freshwater fish, is found in all the Great Lakes and in all drainages of the Great Lakes and of Hudson Bay. This species typically inhabits highly productive shoal areas of large lakes and rivers. They are bottom dwellers and prefer depths between 5-10 m and mud or gravel substrates. Small sturgeons are often found on gravelly shoals near the mouths of rivers. They spawn in depths of 0.5 to 4.5 m in areas of swift water or rapids. Where suitable spawning rivers are not available, such as in the lower Great Lakes, they are known to spawn in wave action over rocky ledges or around rocky islands (Golder 2011).	Moderate - the river may provide suitable habitat.
River Redhorse	*Moxostoma carinatum*	SC	SC	In Ontario, river redhorse is known to occur in the Mississippi River, Ottawa River, Madawaska River, Grand River, Trent River, and Thames River systems. They inhabit moderate to large rivers. The majority of their time is spent in pool habitats with slow-moving water and abundant vegetation. Spawning occurs in areas of shallow, moderate to fast-flowing waters in riffle-run habitats with coarse substrates of gravel and cobble (DFO 2019).	Moderate - the river may provide suitable habitat.

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Silver Lamprey - Great Lakes / Upper St.Lawrence population	*Ichthyomyzon unicuspis*	SC	SC (END)	In Ontario, silver lamprey is known to occur in the Great Lakes and its tributaries, St. Lawrence River, Lake Nipissing, Lake-of- the-Woods and its tributaries, and the Ottawa River. Silver lamprey is a parasitic freshwater species that undertake spawning migrations in rivers and streams. They are often confused with sea lamprey. Adults prefer the clear waters of large streams, rivers, and lakes. Adults migrate in flowing water with stoney or gravelly bottom material for nesting. Larvae seek out slow flowing areas initially with thick organic layers where they will grow until moving out into predominantly sandy environments where they reside until they reach adulthood (COSEWIC 2012).	Moderate - the river may provide suitable habitat.
Mammal					
Eastern Red Bat	*Lasiurus borealis*	END	---	Typically roost among foliage, selecting areas that have overhead foliage for cover and open flight space below. Use both deciduous and coniferous forests of any age class. Maternity roosts tend tow be in large-diameter, tall trees.	Moderate - large trees and buildings may provide suitable roosting habitat.

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Eastern Small-footed Bat	*Myotis leibii*	END	—	In Ontario, eastern small-footed myotis is not known to roost in trees, but there is very little known about its roosting habits. The species generally roosts on the ground under rocks, in rock crevices, talus slopes and rock piles, but it occasionally inhabits buildings. Entrances of caves or abandoned mines where humidity is low, and temperatures are cool and sometimes subfreezing may be used as hibernacula (Humphrey 2017).	Low - no suitable roosting habitat occurs.
Hoary Bat	*Lasiurus cinereus*	END	--	Typically roost among foliage, selecting areas that have overhead foliage for cover and open flight space below. Use both deciduous and coniferous forests of any age class. Maternity roosts tend to be	Moderate - large trees and buildings may provide suitable roosting habitat.
Little Brown Myotis	*Myotis lucifugus*	END	END	In Ontario, this species' range is extensive and covers much of the province. It will roost in both natural and man-made structures. Roosting colonies require a number of large dead trees, in specific stages of decay and that project above the canopy in relatively open areas. May form nursery colonies in the attics of buildings within 1 km of water. Caves or abandoned mines may be used as hibernacula, but high humidity and stable above freezing temperatures are required (ECCC 2018).	Moderate - large trees and buildings may provide suitable roosting habitat.

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Northern Myotis	*Myotis septentrionalis*	END	END	In Ontario, this species' range is extensive and covers much of the province. It will usually roost in hollows, crevices, and under loose bark of mature trees. Roosts may be established in the main trunk or a large branch of either living or dead trees. Caves or abandoned mines may be used as hibernacula, but high humidity and stable above freezing temperatures are required (ECCC 2018).	Moderate - large trees and buildings may provide suitable roosting habitat.
Silver-haired Bat	*Lasionycteris noctivagans*	END	--	Typically roost under bark and in tree cavities, typically in large, decaying coniferous and deciduous trees. May roost in or on buildings.	Moderate - large trees and buildings may provide suitable roosting habitat.
Tri-colored bat	*Perimyotis subflavus*	END	END	In Ontario, tri-colored bat may roost in foliage, in clumps of old leaves, hanging moss or squirrel nests. They are occasionally found in buildings although there are no records of this in Canada. They typically feed over aquatic areas with an affinity to large-bodied water and will likely roost in close proximity to these. Hibernation sites are found deep within caves or mines in areas of relatively warm temperatures. These bats have strong roost fidelity to their winter hibernation sites and may choose the exact same spot in a cave or mine from year to year (ECCC 2018).	Moderate - large trees and buildings may provide suitable roosting habitat.
Reptile					

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Midland Painted Turtle	*Chrysemys picta marginata*	—	SC	In Ontario, painted turtles use waterbodies, such as ponds, marshes, lakes and slow-moving creeks, with a soft bottom and abundant basking sites and aquatic vegetation. This species hibernates on the bottom of waterbodies (Ontario Nature 2018).	Low - no suitable shallow and slow aquatic habitat occurs.
Snapping Turtle	*Chelydra serpentina*	SC	SC	In Ontario, snapping turtle uses a wide range of waterbodies, but shows preference for areas with shallow, slow-moving water, soft substrates and dense aquatic vegetation. Hibernation takes place in soft substrates under water. Nesting sites consist of sand or gravel banks along waterways or roadways (COSEWIC 2008).	Moderate - the river may provide suitable habitat.
Stinkpot / Eastern Musk Turtle	*Sternotherus odoratus*	SC	THR (SC)	In Ontario, eastern musk turtle is very rarely out of water and prefers permanent bodies of water that are shallow and clear, with little or no current and soft substrates with abundant organic materials. Abundant floating and submerged vegetation is preferred. Hibernation occurs in soft substrates under water. Eggs are sometimes laid on open ground, or in shallow nests in decaying vegetation, shallow gravel or rock crevices (COSEWIC 2012).	Low - no suitable aquatic habitat occurs.
Vascular Plant					
American Ginseng	*Panax quinquefolius*	END	END	In Ontario, American ginseng is found in moist, undisturbed and relatively mature deciduous woods often dominated by sugar maple. It is commonly found on well-drained, south-facing slopes. American ginseng grows under closed canopies in well- drained soils of glacier origin that have a neutral pH (ECCC 2018).	Low - the forests present are small, disturbed, and not suitable for this species.

Common Name	Scientific Name	ESA	SARA (COSEWIC if different)	Ontario Habitat Descriptions	Likelihood of Occurrence in the Project Areas
Black Ash	*Fraxinus nigra*	END	—	Found throughout Ontario in moist ecosystems; commonly found in northern swampy woodlands (MNRF 2018). This species typically grows on mucky or peaty soils and is considered a facultative wetland species (Reznicek et al. 2011).	Low - no suitable wetlands occur.
Butternut	*Juglans cinerea*	END	END	In Ontario, butternut is found along stream banks, on wooded valley slopes, and in deciduous and mixed forests. It is commonly associated with beech, maple, oak and hickory (Voss and Reznicek 2012). Butternut prefers moist, fertile, well- drained soils, but can also be found in rocky limestone soils. This species is shade intolerant (Farrar 1995).	Low-Moderate - but none were observed during WSP surveys
Eastern Prairie Fringed- orchid	*Platanthera leucophaea*	END	END	In Ontario, eastern prairie fringed-orchid grows in wet prairies, fens, bogs, wet meadows, and wet successional fields. It grows in full sun in neutral to mildly calcareous substrates, and occasionally grows along roadsides or lake margins (Eastern Prairie Fringed-orchid Recovery Team 2010). This species is found only in southern Ontario, and only two locations are currently known on sand spits along the shore of Lake Erie.	Low - no suitable open moist habitat occurs.

Appendix C Inventory Table for the Site

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
1	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02943333° -74.67945283°	72.94
2	White Spruce	*Picea glauca*	1	36	G	G	1	45.02941483° -74.67934767°	71.24
3	White Spruce	*Picea glauca*	1	32	G	G	1	45.02940217° -74.67932200°	71.14
4	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02937350° -74.67940217°	70.24
5	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02932983° -74.67937717°	69.74
6	White Spruce	*Picea glauca*	1	42	G	G	1	45.02934200° -74.67928300°	68.74
7	Scots Pine	*Pinus sylvestris*	1	39	G	G	1	45.02929233° -74.67933250°	69.04
8	Scots Pine	*Pinus sylvestris*	1	23	G	G	1	45.02926033° -74.67928567°	71.14
9	White Spruce	*Picea glauca*	2	47	G	G	1	45.02927100° -74.67924733°	70.94
10	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02881717° -74.67897583°	66.14
11	Scots Pine	*Pinus sylvestris*	1	19	F	F	2	45.02880000° -74.67897767°	67.44
12	Scots Pine	*Pinus sylvestris*	1	19	G	F	2	45.02876150° -74.67897683°	71.94
13	Norway Maple	*Acer platanoides*	1	37	G	F	2	45.02874100° -74.67890450°	73.84
14	Scots Pine	*Pinus sylvestris*	1	22	F	F	2	45.02877750° -74.67885400°	70.94
15	White Spruce	*Picea glauca*	1	44	G	G	1	45.02877850° -74.67884017°	70.84
16	White Spruce	*Picea glauca*	1	40	F	F	2	45.02873917° -74.67878483°	68.34
17	Scots Pine	*Pinus sylvestris*	1	35	G	G	1	45.02871800° -74.67887600°	69.74
18	Norway Maple	*Acer plantanoides*	1	27	F	P	2	45.02868600° -74.67889833°	68.74
19	White Spruce	*Picea glauca*	1	22	G	F	2	45.02867883° -74.67895917°	67.34
20	White Spruce	*Picea glauca*	1	21	G	G	1	45.02866717° -74.67899367°	68.54
21	White Spruce	*Picea glauca*	1	31	F	F	2	45.02864550° -74.67895450°	67.34
22	White Spruce	*Picea glauca*	1	18	G	F	1	45.02860983° -74.67895067°	68.54

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
23	White Spruce	*Picea glauca*	1	39	F	F	2	45.02863533° -74.67888950°	66.64
24	American Elm	*Ulmus americana*	1	39	G	F	1	45.02859550° -74.67889917°	68.64
25	White Spruce	*Picea glauca*	1	17	F	F	1	45.02856417° -74.67895733°	68.64
26	White Spruce	*Picea glauca*	1	29	G	G	1	45.02859217° -74.67885067°	70.34
27	Scots Pine	*Pinus sylvestris*	1	41	G	G	1	45.02866950° -74.67879933°	71.64
28	White Spruce	*Picea glauca*	1	31	G	G	1	45.02866983° -74.67874367°	71.84
29	Norway Maple	*Acer plantanoides*	1	44	P	G	2	45.02863233° -74.67859300°	69.04
30	Scots Pine	*Pinus sylvestris*	1	18	G	G	1	45.02850183° -74.67865017°	65.64
31	Silver Maple	*Acer saccharinum*	1	54	G	F	2	45.02851883° -74.67877067°	66.84
32	Sugar Maple	*Acer saccharum*	1	38	G	G	1	45.02844833° -74.67876383°	66.84
33	Scots Pine	*Pinus sylvestris*	1	19	G	G	1	45.02845300° -74.67881550°	66.74
34	White Spruce	*Picea glauca*	1	29	G	G	1	45.02845550° -74.67884867°	66.64
35	White Spruce	*Picea glauca*	1	23	G	G	1	45.02848450° -74.67890317°	64.64
36	Little-leaf Linden	*Tilia cordata*	1	48	G	G	1	45.02845900° -74.67899217°	63.64
37	White Ash	*Fraxinus americana*	1	26	P	P	3	45.02847867° -74.67906050°	67.44
38	Little-leaf Linden	*Tilia cordata*	1	38	G	G	1	45.02850017° -74.67911083°	67.24
39	Little-leaf Linden	*Tilia cordata*	1	31	G	G	1	45.02855567° -74.67912583°	64.34
40	Silver Maple	*Acer saccharinum*	1	55	G	F	2	45.02858417° -74.67913767°	63.94
41	Norway Maple	*Acer plantanoides*	1	22	G	G	1	45.02859833° -74.67913350°	66.74
42	Silver Maple	*Acer saccharinum*	1	39	G	F	2	45.02866867° -74.67915717°	64.44
43	Eastern Cottonwood	*Populus deltoides*	1	97	F	F	2	45.02692333° -74.68032317°	60.94
44	Eastern Cottonwood	*Populus deltoides*	1	96	F	F	2	45.02689100° -74.68041217°	61.44
45	Red Oak	*Quercus rubra*	1	51	G	G	1	45.02683233° -74.68064067°	60.54

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
46	Red Oak	*Quercus rubra*	1	52	G	G	1	45.02691083° -74.68073200°	61.74
47	Norway Maple	*Acer platanoides*	1	37	G	G	4	45.02697500° -74.68102067°	60.94
48	Norway Maple	*Acer platanoides*	1	22	G	G	1	45.02706967° -74.68118400°	60.44
49	Norway Maple	*Acer platanoides*	1	36	G	G	1	45.02712867° -74.68121833°	59.94
50	Honey Locust	*Gleditsia triacanthos*	1	25	G	G	1	45.02719117° -74.68120417°	63.44
51	Norway Maple	*Acer platanoides*	1	24	G	G	1	45.02725583° -74.68116600°	65.34
52	Norway Maple	*Acer platanoides*	1	29	G	G	1	45.02729250° -74.68112667°	65.64
53	Honey Locust	*Gleditsia triacanthos*	1	15	G	G	1	45.02732217° -74.68106067°	64.94
54	Norway Maple	*Acer platanoides*	1	21	G	G	1	45.02735067° -74.68098250°	64.54
55	Sugar Maple	*Acer saccharum*	1	21	G	G	1	45.02712567° -74.68077167°	60.64
56	Eastern Cottonwood	*Populus deltoides*	1	75	F	P	2	45.02709583° -74.68053750°	59.34
57	Eastern Cottonwood	*Populus deltoides*	1	88	F	F	2	45.02716483° -74.68059150°	62.14
58	Norway Maple	*Acer platanoides*	1	37	G	G	1	45.02778700° -74.68006150°	65.54
59	Sugar Maple	*Acer saccharum*	1	41	G	G	1	45.02786200° -74.67995233°	66.74
60	Sugar Maple	*Acer saccharum*	1	38	G	G	1	45.02801467° -74.68026200°	69.04
61	Norway Maple	*Acer platanoides*	1	16	G	G	1	45.02797017° -74.68075867°	69.94
62	Norway Maple	*Acer platanoides*	1	18	G	G	1	45.02800483° -74.68088017°	65.94
63	Sugar Maple	*Acer saccharum*	1	19	G	G	1	45.02824867° -74.68061750°	66.14
64	Bitternut Hickory	*Carya cordiformis*	1	19	G	F	2	45.02832667° -74.68073400°	59.94
65	Apple sp.	*Malus sp.*	1	12	G	G	1	45.02835333° -74.68104250°	56.34
66	Norway Maple	*Acer platanoides*	1	29	G	G	1	45.02840683° -74.68104133°	68.04
67	Norway Maple	*Acer platanoides*	1	20	G	G	1	45.02842333° -74.68094617°	69.24
68	Sugar Maple	*Acer saccharum*	1	21	G	F	2	45.02851267° -74.68090850°	66.54

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
69	Norway Maple	*Acer platanoides*	1	24	G	G	1	45.02855667° -74.68089533°	66.14
70	Black Maple	*Acer nigrum*	1	40	G	G	1	45.02861867° -74.68074683°	77.84
71	Norway Maple	*Acer platanoides*	1	29	G	G	1	45.02850083° -74.68070500°	103.84
72	Norway Maple	*Acer platanoides*	1	16	G	G	1	45.02862050° -74.68044217°	100.14
73	Red Oak	*Quercus rubra*	1	29	G	G	1	45.02856767° -74.68019300°	86.14
74	Norway Maple	*Acer platanoides*	1	18	G	G	1	45.02865783° -74.68025233°	76.44
75	Norway Maple	*Acer platanoides*	1	19	G	G	1	45.02868750° -74.68018667°	76.14
76	Bur Oak	*Quercus macrocarpa*	1	85	G	G	1	45.02857317° -74.68001900°	73.14
77	Apple sp.	*Malus sp.*	3	26	G	G	1	45.02886050° -74.68044533°	67.64
78	Norway Maple	*Acer platanoides*	1	17	G	G	1	45.02907000° -74.68027567°	66.84
79	Norway Maple	*Acer platanoides*	1	13	G	G	1	45.02911000° -74.68018400°	67.94
80	Norway Maple	*Acer platanoides*	1	15	G	G	1	45.02914267° -74.68008417°	68.94
81	Sugar Maple	*Acer saccharum*	1	29	G	G	1	45.02910450° -74.68074983°	65.44
82	Austrian Pine	*Pinus nigra*	1	39	G	G	1	45.02978683° -74.68132667°	61.34
83	Austrian Pine	*Pinus nigra*	1	28	G	G	1	45.02980350° -74.68134267°	58.54
84	Austrian Pine	*Pinus nigra*	1	35	G	G	1	45.02978183° -74.68137917°	60.24
85	Austrian Pine	*Pinus nigra*	1	29	G	G	1	45.02976200° -74.68148517°	60.84
86	Austrian Pine	*Pinus nigra*	1	23	G	G	1	45.02971083° -74.68153167°	64.34
87	White Ash	*Fraxinus americana*	1	29	G	G	1	45.02980250° -74.68146250°	61.74
88	White Oak	*Quercus alba*	1	21	G	G	1	45.02967650° -74.68204133°	56.64
89	White Oak	*Quercus alba*	1	29	G	G	1	45.02968583° -74.68206250°	60.84
90	White Oak	*Quercus alba*	1	21	G	G	1	45.02974567° -74.68218100°	56.74
91	White Oak	*Quercus alba*	1	31	G	G	1	45.02971667° -74.68227717°	64.94

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
92	White Oak	*Quercus alba*	1	21	G	G	1	45.02976500° -74.68230783°	64.04
93	Austrian Pine	*Pinus nigra*	1	32	G	G	1	45.02968883° -74.68250617°	65.74
94	Austrian Pine	*Pinus nigra*	1	26	G	G	1	45.02974283° -74.68254367°	65.14
95	Austrian Pine	*Pinus nigra*	1	29	G	G	1	45.02973667° -74.68256683°	57.84
96	Austrian Pine	*Pinus nigra*	1	29	G	G	1	45.02977400° -74.68258217°	60.04
97	Austrian Pine	*Pinus nigra*	1	26	G	G	1	45.02971883° -74.68264683°	60.14
98	Austrian Pine	*Pinus nigra*	1	28	G	G	1	45.02967000° -74.68265133°	62.44
99	Austrian Pine	*Pinus nigra*	1	26	G	G	1	45.02963483° -74.68277367°	59.74
100	Austrian Pine	*Pinus nigra*	1	27	G	G	1	45.02963483° -74.68284950°	61.54
101	Austrian Pine	*Pinus nigra*	1	24	G	G	1	45.02970583° -74.68288017°	62.54
102	Austrian Pine	*Pinus nigra*	1	27	G	G	1	45.02974650° -74.68290017°	60.64
103	Austrian Pine	*Pinus nigra*	1	26	G	G	1	45.02979883° -74.68299267°	61.24
104	Austrian Pine	*Pinus nigra*	1	29	G	G	1	45.02976717° -74.68296583°	61.74
105	Austrian Pine	*Pinus nigra*	1	29	G	G	1	45.02973900° -74.68294833°	61.74
106	Austrian Pine	*Pinus nigra*	1	27	G	G	1	45.02969383° -74.68292233°	60.44
107	Austrian Pine	*Pinus nigra*	1	30	G	G	1	45.02963300° -74.68287317°	61.24
108	Austrian Pine	*Pinus nigra*	1	24	G	G	1	45.02955833° -74.68285883°	62.74
109	Austrian Pine	*Pinus nigra*	1	24	G	G	1	45.02954767° -74.68282350°	64.34
110	Austrian Pine	*Pinus nigra*	1	22	G	G	1	45.02953183° -74.68283750°	63.34
111	Austrian Pine	*Pinus nigra*	1	22	G	G	1	45.02952000° -74.68281300°	64.64
112	Austrian Pine	*Pinus nigra*	1	25	G	G	1	45.02952100° -74.68297400°	62.44
113	Norway Maple	*Acer platanoides*	1	25	G	G	1	45.02958317° -74.68313933°	58.94
114	Norway Maple	*Acer platanoides*	1	19	G	G	1	45.02956400° -74.68337100°	61.74

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
115	Austrian Pine	*Pinus nigra*	1	44	G	G	1	45.02935683° -74.68315483°	62.94
116	Austrian Pine	*Pinus nigra*	1	31	G	G	1	45.02929450° -74.68323417°	59.34
117	White Oak	*Quercus alba*	1	27	G	G	1	45.02884433° -74.68332600°	64.54
118	White Oak	*Quercus alba*	1	31	G	G	1	45.02882267° -74.68337567°	65.44
119	White Oak	*Quercus alba*	1	27	G	G	1	45.02875483° -74.68354217°	61.94
120	White Oak	*Quercus alba*	1	15	G	F	1	45.02871983° -74.68361933°	64.04
121	White Oak	*Quercus alba*	1	29	G	G	1	45.02869100° -74.68366750°	64.74
122	White Oak	*Quercus alba*	1	28	G	G	1	45.02864800° -74.68364733°	61.04
123	White Oak	*Quercus alba*	1	26	G	G	1	45.02860883° -74.68358733°	57.94
124	White Oak	*Quercus alba*	1	28	G	G	1	45.02872700° -74.68345800°	59.84
125	White Oak	*Quercus alba*	1	23	G	G	1	45.02873933° -74.68336683°	62.74
126	White Oak	*Quercus alba*	1	23	G	G	1	45.02876450° -74.68328883°	60.84
127	White Oak	*Quercus alba*	1	23	G	G	1	45.02874267° -74.68324783°	59.64
128	White Oak	*Quercus alba*	1	32	G	G	1	45.02872600° -74.68327167°	57.74
129	Norway Maple	*Acer platanoides*	1	29	G	G	1	45.02860417° -74.68322650°	58.04
130	Norway Maple	*Acer platanoides*	1	22	G	G	1	45.02866067° -74.68281950°	62.14
131	Red Oak	*Quercus rubra*	1	28	G	G	1	45.02869550° -74.68268950°	51.14
132	Cherry sp.	*Prunus sp.*	1	11	G	G	1	45.02863433° -74.68263183°	58.44
133	Cherry sp.	*Prunus sp.*	1	11	G	G	1	45.02858567° -74.68258867°	65.94
134	Cherry sp.	*Prunus sp.*	1	11	G	G	1	45.02857433° -74.68253067°	68.04
135	White Pine	*Pinus strobus*	1	39	G	G	1	45.02851917° -74.68279650°	68.54
136	White Pine	*Pinus strobus*	1	29	G	G	1	45.02850967° -74.68278850°	67.64
137	White Pine	*Pinus strobus*	1	23	G	G	1	45.02847583° -74.68275200°	66.94

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
138	Norway Maple	*Acer platanoides*	1	15	G	G	1	45.02842700° -74.68272583°	62.84
139	Norway Maple	*Acer platanoides*	1	26	G	G	1	45.02844883° -74.68281600°	63.64
140	Norway Maple	*Acer platanoides*	1	41	G	G	1	45.02835717° -74.68279900°	64.14
141	White Pine	*Pinus strobus*	1	27	G	G	1	45.02836467° -74.68288083°	63.14
142	White Pine	*Pinus strobus*	1	29	G	G	1	45.02840117° -74.68289533°	65.64
143	White Pine	*Pinus strobus*	1	33	G	G	1	45.02838433° -74.68305250°	64.44
144	White Pine	*Pinus strobus*	1	29	G	G	1	45.02838583° -74.68307583°	63.44
145	White Pine	*Pinus strobus*	1	29	G	G	1	45.02840567° -74.68310633°	61.84
146	White Oak	*Quercus alba*	1	29	G	G	1	45.02828800° -74.68292850°	60.64
147	White Pine	*Pinus strobus*	1	27	G	G	1	45.02828417° -74.68281467°	65.64
148	White Pine	*Pinus strobus*	1	25	G	G	1	45.02829083° -74.68281417°	68.94
149	White Pine	*Pinus strobus*	1	19	G	G	1	45.02827333° -74.68276883°	66.54
150	Sugar Maple	*Acer saccharum*	1	37	G	G	1	45.02826800° -74.68273333°	65.14
151	White Pine	*Pinus strobus*	1	32	G	G	1	45.02832367° -74.68260833°	63.84
152	White Pine	*Pinus strobus*	1	24	G	G	1	45.02831567° -74.68258017°	64.44
153	White Pine	*Pinus strobus*	1	30	G	G	1	45.02830700° -74.68255150°	65.44
154	White Pine	*Pinus strobus*	1	34	G	G	1	45.02817417° -74.68277333°	63.64
155	White Pine	*Pinus strobus*	1	33	G	G	1	45.02818450° -74.68282817°	67.34
156	White Pine	*Pinus strobus*	1	29	G	G	1	45.02817017° -74.68287717°	64.24
157	White Pine	*Pinus strobus*	1	30	G	G	1	45.02815567° -74.68283333°	62.44
158	Red Pine	*Pinus resinosa*	1	30	G	G	1	45.02811917° -74.68282650°	62.44
159	Norway Maple	*Acer platanoides*	1	21	G	G	1	45.02805700° -74.68298850°	61.64
160	Norway Maple	*Acer platanoides*	1	21	G	G	1	45.02781100° -74.68253183°	59.74

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
161	Norway Maple	*Acer platanoides*	1	24	G	G	1	45.02770600° -74.68243600°	58.64
162	Norway Maple	*Acer platanoides*	1	28	G	G	1	45.02759050° -74.68252817°	58.74
163	Norway Maple	*Acer platanoides*	1	26	G	G	1	45.02765500° -74.68202700°	60.24
164	Shagbark Hickory	*Carya ovata*	1	46	G	G	1	45.02765833° -74.68183517°	56.74
165	Norway Maple	*Acer platanoides*	1	13	G	G	1	45.02769917° -74.68162117°	58.14
166	Norway Maple	*Acer platanoides*	1	37	G	G	1	45.02757667° -74.68126233°	56.94
167	Silver Maple	*Acer saccharinum*	1	91	G	G	1	45.02763100° -74.68126683°	58.34
168	Silver Maple	*Acer saccharinum*	1	61	G	G	1	45.02770750° -74.68119267°	56.34
169	Norway Maple	*Acer platanoides*	1	16	G	G	1	45.02782650° -74.68126933°	58.74
170	Norway Maple	*Acer platanoides*	1	21	G	G	1	45.02789233° -74.68123750°	59.14
171	Apple sp.	*Malus sp.*	4	21	G	G	1	45.02798950° -74.68123600°	66.14
172	Norway Maple	*Acer platanoides*	1	22	G	G	1	45.02810967° -74.68182767°	68.44
173	Apple sp.	*Malus sp.*	1	23	F	P	2	45.02827400° -74.68166950°	64.14
174	Apple sp.	*Malus sp.*	1	13	G	P	2	45.02832433° -74.68166967°	66.04
175	Amur Maple	*Acer ginnanla*	3	19	F	F	2	45.02833933° -74.68165867°	69.14
176	White Birch	*Betula papyrifera*	3	13	G	G	1	45.02831250° -74.68184583°	68.94
177	Cherry sp.	*Prunus sp.*	1	15	G	G	1	45.02837617° -74.68208450°	69.04
178	Cherry sp.	*Prunus sp.*	1	15	G	G	1	45.02842750° -74.68205200°	70.24
179	Cherry sp.	*Prunus sp.*	1	16	G	G	1	45.02843567° -74.68205833°	73.84
180	Cherry sp.	*Prunus sp.*	1	18	G	G	1	45.02842000° -74.68208100°	79.44
181	Cherry sp.	*Prunus sp.*	1	11	G	G	1	45.02832250° -74.68201983°	71.24
182	Cherry sp.	*Prunus sp.*	1	16	G	G	1	45.02831083° -74.68198017°	69.64
183	Cherry sp.	*Prunus sp.*	1	13	G	G	1	45.02828600° -74.68188767°	76.04

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
184	Norway Maple	*Acer platanoides*	1	27	G	G	1	45.02811167° -74.68192300°	75.24
185	Norway Maple	*Acer platanoides*	1	27	G	G	1	45.02808217° -74.68213883°	70.64
186	Austrian Pine	*Pinus nigra*	1	35	G	F	2	45.02664933° -74.68136950°	59.04
187	Scots Pine	*Pinus sylvestris*	1	39	G	G	1	45.02645083° -74.68265233°	58.44
188	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02649700° -74.68269417°	59.74
189	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02651767° -74.68269700°	58.44
190	Scots Pine	*Pinus sylvestris*	2	17	F	P	2	45.02655683° -74.68272800°	57.94
191	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.02658967° -74.68274967°	58.64
192	Scots Pine	*Pinus sylvestris*	2	23	F	F	2	45.02661317° -74.68281483°	59.14
193	Scots Pine	*Pinus sylvestris*	1	36	F	F	2	45.02663217° -74.68283900°	59.74
194	Scots Pine	*Pinus sylvestris*	1	27	G	G	1	45.02664650° -74.68275700°	59.84
195	White Ash	*Fraxinus americana*	1	54	P	P	2	45.02663283° -74.68265550°	58.84
196	White Ash	*Fraxinus americana*	1	22	P	P	2	45.02668250° -74.68268817°	57.84
197	White Ash	*Fraxinus americana*	1	48	P	P	2	45.02672950° -74.68272917°	60.74
198	Scots Pine	*Pinus sylvestris*	1	37	G	G	1	45.02672033° -74.68275817°	61.44
199	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.02667983° -74.68276267°	61.74
200	Scots Pine	*Pinus sylvestris*	1	23	G	G	1	45.02669700° -74.68278767°	63.04
201	Scots Pine	*Pinus sylvestris*	1	23	G	G	1	45.02673817° -74.68284150°	62.64
202	Scots Pine	*Pinus sylvestris*	1	31	F	F	2	45.02673117° -74.68282150°	64.24
203	Scots Pine	*Pinus sylvestris*	1	16	G	G	1	45.02674533° -74.68277750°	61.04
204	Scots Pine	*Pinus sylvestris*	1	27	F	F	2	45.02676100° -74.68278583°	62.04
205	Scots Pine	*Pinus sylvestris*	1	24	G	G	1	45.02673867° -74.68281950°	62.74
206	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02675350° -74.68285700°	63.74

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
207	Scots Pine	*Pinus sylvestris*	1	14	F	F	2	45.02679317° -74.68277167°	63.54
208	White Ash	*Fraxinus americana*	1	35	P	P	2	45.02680200° -74.68273717°	62.54
209	Little-leaf Linden	*Tilia cordata*	1	36	G	G	1	45.02684200° -74.68271917°	63.14
210	Scots Pine	*Pinus sylvestris*	1	34	G	G	1	45.02704067° -74.68291733°	60.94
211	Scots Pine	*Pinus sylvestris*	1	20	G	G	1	45.02704267° -74.68291550°	61.04
212	Scots Pine	*Pinus sylvestris*	1	20	G	G	1	45.02705717° -74.68293183°	60.84
213	Scots Pine	*Pinus sylvestris*	1	26	G	G	1	45.02709617° -74.68297333°	57.64
214	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02712400° -74.68299050°	55.14
215	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02715950° -74.68300400°	54.34
216	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02718633° -74.68305217°	56.24
217	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02717767° -74.68305567°	58.14
218	Scots Pine	*Pinus sylvestris*	1	26	G	G	1	45.02715033° -74.68301267°	55.84
219	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02713900° -74.68301433°	54.64
220	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.02709967° -74.68299033°	53.74
221	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02709233° -74.68298250°	55.34
222	Scots Pine	*Pinus sylvestris*	1	34	G	G	1	45.02702433° -74.68293967°	52.94
223	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02696533° -74.68289617°	52.24
224	Scots Pine	*Pinus sylvestris*	1	23	G	G	1	45.02695967° -74.68288933°	54.04
225	Scots Pine	*Pinus sylvestris*	1	19	G	G	1	45.02694967° -74.68285567°	59.34
226	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02695200° -74.68283650°	61.04
227	Scots Pine	*Pinus sylvestris*	1	35	G	G	1	45.02695367° -74.68283250°	61.54
228	Scots Pine	*Pinus sylvestris*	1	35	G	G	1	45.02697083° -74.68285383°	63.24
229	Scots Pine	*Pinus sylvestris*	1	40	G	G	1	45.02698950° -74.68288717°	62.04

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
230	Scots Pine	*Pinus sylvestris*	1	30	G	G	1	45.02703850° -74.68292383°	63.14
231	Scots Pine	*Pinus sylvestris*	1	21	G	G	1	45.02706550° -74.68295833°	61.54
232	Scots Pine	*Pinus sylvestris*	1	49	G	G	1	45.02710633° -74.68296550°	57.34
233	Scots Pine	*Pinus sylvestris*	1	31	G	G	1	45.02715450° -74.68301100°	59.74
234	Scots Pine	*Pinus sylvestris*	1	40	G	G	1	45.02717383° -74.68305800°	62.44
235	Scots Pine	*Pinus sylvestris*	1	36	G	G	1	45.02719617° -74.68311617°	61.64
236	Scots Pine	*Pinus sylvestris*	1	34	G	G	1	45.02718083° -74.68311583°	61.14
237	Scots Pine	*Pinus sylvestris*	1	30	G	G	1	45.02715317° -74.68304317°	64.74
238	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02713200° -74.68302900°	70.14
239	Scots Pine	*Pinus sylvestris*	1	27	G	G	1	45.02711017° -74.68301533°	69.64
240	Scots Pine	*Pinus sylvestris*	1	40	G	G	1	45.02707017° -74.68297567°	66.04
241	Scots Pine	*Pinus sylvestris*	1	33	G	G	1	45.02704817° -74.68294617°	63.94
242	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.02703967° -74.68292883°	63.44
243	Scots Pine	*Pinus sylvestris*	1	21	G	G	1	45.02701383° -74.68295967°	63.94
244	Scots Pine	*Pinus sylvestris*	1	21	G	G	1	45.02699467° -74.68293100°	64.64
245	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02694850° -74.68288233°	63.44
246	Scots Pine	*Pinus sylvestris*	1	37	G	G	1	45.02694783° -74.68285350°	64.24
247	Scots Pine	*Pinus sylvestris*	1	24	G	G	1	45.02695983° -74.68290483°	65.24
248	Scots Pine	*Pinus sylvestris*	1	38	G	G	1	45.02698217° -74.68293833°	66.54
249	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.02699817° -74.68294917°	65.74
250	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02706667° -74.68300683°	62.14
251	Scots Pine	*Pinus sylvestris*	1	34	G	G	1	45.02716617° -74.68312917°	64.34
252	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02709650° -74.68307817°	62.44

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
253	Scots Pine	*Pinus sylvestris*	1	36	G	G	1	45.02704117° -74.68301583°	60.34
254	Scots Pine	*Pinus sylvestris*	1	33	G	G	1	45.02697650° -74.68293750°	56.64
255	Scots Pine	*Pinus sylvestris*	1	31	G	G	1	45.02693783° -74.68291383°	58.34
256	Scots Pine	*Pinus sylvestris*	1	26	G	G	1	45.02691583° -74.68290617°	59.04
257	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02691300° -74.68291783°	60.74
258	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02691967° -74.68292417°	59.24
259	Scots Pine	*Pinus sylvestris*	1	24	G	G	1	45.02689400° -74.68295533°	60.64
260	Scots Pine	*Pinus sylvestris*	1	34	G	G	1	45.02689383° -74.68299483°	62.34
261	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02689967° -74.68304733°	64.44
262	Scots Pine	*Pinus sylvestris*	1	49	G	G	1	45.02688783° -74.68304633°	66.44
263	Scots Pine	*Pinus sylvestris*	1	21	G	G	1	45.02690217° -74.68304150°	64.94
264	Scots Pine	*Pinus sylvestris*	1	33	G	G	1	45.02685717° -74.68309467°	67.64
265	Scots Pine	*Pinus sylvestris*	1	31	G	G	1	45.02688983° -74.68305250°	66.74
266	Scots Pine	*Pinus sylvestris*	1	34	G	G	1	45.02692300° -74.68310533°	64.84
267	Scots Pine	*Pinus sylvestris*	1	40	G	G	1	45.02697150° -74.68312000°	60.94
268	Scots Pine	*Pinus sylvestris*	1	30	G	G	1	45.02698183° -74.68309300°	60.14
269	Scots Pine	*Pinus sylvestris*	1	24	G	G	1	45.02700367° -74.68305067°	59.64
270	Scots Pine	*Pinus sylvestris*	1	31	G	G	1	45.02697717° -74.68306700°	58.64
271	Scots Pine	*Pinus sylvestris*	1	33	G	G	1	45.02694267° -74.68301883°	59.34
272	Scots Pine	*Pinus sylvestris*	1	20	G	G	1	45.02697283° -74.68295150°	55.54
273	Scots Pine	*Pinus sylvestris*	1	20	P	P	2	45.02695000° -74.68296633°	53.44
274	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02694717° -74.68296233°	56.04
275	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02704167° -74.68311750°	57.74

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
276	Scots Pine	*Pinus sylvestris*	1	27	G	G	1	45.02704900° -74.68314617°	60.24
277	Scots Pine	*Pinus sylvestris*	1	33	G	G	1	45.02706133° -74.68314117°	59.64
278	Norway Maple	*Acer platanoides*	1	28	G	G	1	45.02708800° -74.68314317°	57.04
279	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02712367° -74.68314100°	55.54
280	Scots Pine	*Pinus sylvestris*	1	26	G	G	1	45.02709867° -74.68310000°	58.94
281	Scots Pine	*Pinus sylvestris*	1	26	G	G	1	45.02713383° -74.68311967°	56.14
282	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02715183° -74.68316817°	57.44
283	Scots Pine	*Pinus sylvestris*	1	33	G	G	1	45.02716233° -74.68319317°	58.54
284	Scots Pine	*Pinus sylvestris*	1	38	G	G	1	45.02712917° -74.68319083°	57.34
285	Scots Pine	*Pinus sylvestris*	1	42	G	G	1	45.02714850° -74.68325567°	59.04
286	Scots Pine	*Pinus sylvestris*	1	41	G	G	1	45.02719350° -74.68328150°	62.04
287	Scots Pine	*Pinus sylvestris*	1	27	G	G	1	45.02720317° -74.68325767°	61.94
288	Scots Pine	*Pinus sylvestris*	1	31	G	G	1	45.02720333° -74.68319250°	61.74
289	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.02721967° -74.68330200°	60.04
290	Scots Pine	*Pinus sylvestris*	1	28	G	G	1	45.02724800° -74.68333433°	58.84
291	Scots Pine	*Pinus sylvestris*	1	43	G	G	1	45.02727567° -74.68335833°	61.04
292	Scots Pine	*Pinus sylvestris*	1	30	G	G	1	45.02731700° -74.68333683°	64.84
293	Scots Pine	*Pinus sylvestris*	1	20	G	G	1	45.02733217° -74.68329417°	63.54
294	White Ash	*Fraxinus americana*	1	32	G	G	1	45.02729767° -74.68328300°	64.64
295	Scots Pine	*Pinus sylvestris*	1	35	G	G	1	45.02732800° -74.68322800°	65.74
296	White Ash	*Fraxinus americana*	1	31	G	G	1	45.02728683° -74.68318533°	66.74
297	White Ash	*Fraxinus americana*	1	48	P	P	3	45.02734417° -74.68314183°	65.44
298	Scots Pine	*Pinus sylvestris*	1	34	G	G	1	45.02751250° -74.68343033°	66.14

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
299	White Pine	*Pinus strobus*	1	34	G	G	1	45.02743250° -74.68331767°	64.04
300	Shagbark Hickory	*Carya ovata*	1	44	G	G	1	45.02741883° -74.68320700°	65.34
301	American Elm	*Ulmus americana*	1	66	G	G	1	45.02944067° -74.68542417°	64.94
302	American Elm	*Ulmus americana*	1	32	G	G	1	45.02957783° -74.68547017°	68.74
303	American Elm	*Ulmus americana*	2	19	G	G	1	45.02702633° -74.67869433°	50.24
304	Apple sp.	*Malus sp.*	1	41	G	G	1	45.02994400° -74.68562233°	59.64
305	Basswood	*Tilia americana*	2	45	F	F	2	45.02729100° -74.67781000°	52.74
306	Basswood	*Tilia americana*	1	48	G	G	1	45.02728883° -74.67782533°	53.44
307	Basswood	*Tilia americana*	8	39	G	G	1	45.02726200° -74.67804500°	53.14
308	Basswood	*Tilia americana*	2	22	P	P	2	45.02716983° -74.67829433°	51.94
309	Basswood	*Tilia americana*	3	38	F	F	2	45.02716750° -74.67831517°	56.44
310	Basswood	*Tilia americana*	1	44	G	G	1	45.02707583° -74.67860850°	54.94
311	Basswood	*Tilia americana*	1	40	G	G	1	45.02706567° -74.67858283°	55.64
312	Basswood	*Tilia americana*	2	28	G	G	1	45.02704983° -74.67864633°	52.84
313	Basswood	*Tilia americana*	1	18	G	G	1	45.02701150° -74.67873017°	49.64
314	Basswood	*Tilia americana*	3	35	G	G	1	45.02702467° -74.67873133°	51.54
315	Basswood	*Tilia americana*	1	41	G	G	1	45.02704200° -74.67872167°	53.54
316	Basswood	*Tilia americana*	1	50	P	P	2	45.02703583° -74.67875367°	55.74
317	Basswood	*Tilia americana*	2	39	G	G	1	45.02703500° -74.67884367°	53.14
318	Basswood	*Tilia americana*	1	30	P	P	2	45.02692700° -74.67927383°	52.04
319	Basswood	*Tilia americana*	2	30	G	G	1	45.02691317° -74.67931233°	51.04
320	Basswood	*Tilia americana*	1	32	G	G	1	45.02689933° -74.67935783°	52.64
321	Basswood	*Tilia americana*	1	29	G	G	1	45.02689017° -74.67937450°	54.44

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
322	Basswood	*Tilia americana*	1	28	G	G	1	45.02688217° -74.67940783°	54.74
323	Basswood	*Tilia americana*	2	51	F	F	2	45.02673033° -74.67961950°	56.24
324	Black Cherry	*Prunus serotina*	1	33	G	G	1	45.02675600° -74.67957567°	55.74
325	Bur Oak	*Quercus macrocarpa*	1	35	G	G	1	45.03068583° -74.68056633°	62.24
326	Bur Oak	*Quercus macrocarpa*	1	44	G	G	1	45.03082250° -74.68067300°	62.64
327	Bur Oak	*Quercus macrocarpa*	1	19	F	F	2	45.03097050° -74.68066450°	61.94
328	Bur Oak	*Quercus macrocarpa*	1	19	F	F	2	45.03097333° -74.68069450°	61.44
329	Bur Oak	*Quercus macrocarpa*	1	52	G	G	1	45.03162400° -74.68138500°	58.94
330	Bur Oak	*Quercus macrocarpa*	3	15	G	G	1	45.03183217° -74.68144783°	56.14
331	Bur Oak	*Quercus macrocarpa*	1	115	G	G	1	45.02928683° -74.68059283°	67.84
332	Bur Oak	*Quercus macrocarpa*	1	99	G	G	1	45.02964883° -74.68058933°	63.54
333	Common Hawthorne	*Crataegus monogyna*	1	29	G	G	1	45.03127217° -74.68108000°	61.14
334	Common Hawthorne	*Crataegus monogyna*	3	30	G	G	1	45.03035750° -74.68018933°	64.84
335	Common Hawthorne	*Crataegus monogyna*	1	20	G	G	1	45.02679483° -74.67955333°	54.14
336	Horse Chestnut	*Aesculus hippocastanum*	4	11	G	G	1	45.02737650° -74.67778667°	56.34
337	Large-tooth Aspen	*Populus grandidentata*	1	21	G	G	1	45.03248833° -74.67936317°	59.84
338	Large-tooth Aspen	*Populus grandidentata*	1	18	G	G	1	45.03248400° -74.67935550°	59.94
339	Large-tooth Aspen	*Populus grandidentata*	1	19	G	G	1	45.03248433° -74.67935083°	59.84
340	Large-tooth Aspen	*Populus grandidentata*	1	14	G	G	1	45.03245483° -74.67935633°	60.24
341	Little-leaf Linden	*Tilia cordata*	1	13	G	G	1	45.03128383° -74.68110317°	61.54
342	Little-leaf Linden	*Tilia cordata*	3	30	G	G	1	45.03133917° -74.68111333°	63.44
343	Little-leaf Linden	*Tilia cordata*	1	18	G	G	1	45.03141583° -74.68113633°	61.34
344	Lombardy Poplar	*Populus nigra*	2	14	G	G	1	45.02997650° -74.67981700°	68.14

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
345	Lombardy Poplar	*Populus nigra*	1	28	G	G	1	45.02996467° -74.67986433°	67.24
346	Manitoba Maple	*Acer negundo*	1	40	G	G	1	45.02947033° -74.68545800°	68.74
347	Manitoba Maple	*Acer negundo*	1	23	P	P	2	45.02997467° -74.68574633°	59.74
348	Norway Maple	*Acer platanoides*	1	24	G	G	1	45.02764967° -74.68317967°	65.34
349	Norway Maple	*Acer platanoides*	1	19	G	G	1	45.03030450° -74.68139350°	62.84
350	Scots Pine	*Pinus sylvestris*	1	49	G	G	1	45.03019767° -74.67992600°	63.74
351	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.03008317° -74.67992050°	64.54
352	Scots Pine	*Pinus sylvestris*	1	56	G	G	1	45.03006633° -74.67993350°	60.84
353	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.03001050° -74.67990267°	64.14
354	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02997000° -74.67976700°	67.24
355	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02991050° -74.67978133°	69.54
356	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02989850° -74.67983367°	69.74
357	Scots Pine	*Pinus sylvestris*	1	35	G	G	1	45.02985383° -74.67983083°	69.34
358	Scots Pine	*Pinus sylvestris*	1	36	G	G	1	45.02988483° -74.67974417°	67.54
359	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02986550° -74.67971317°	67.74
360	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02946183° -74.67947033°	70.94
361	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02946650° -74.67950000°	71.84
362	Scots Pine	*Pinus sylvestris*	1	32	G	G	1	45.02982433° -74.68052733°	69.94
363	Scots Pine	*Pinus sylvestris*	1	30	G	G	1	45.02990367° -74.68069450°	68.14
364	Scots Pine	*Pinus sylvestris*	1	23	G	G	1	45.02989250° -74.68076550°	69.14
365	Scots Pine	*Pinus sylvestris*	1	16	G	G	1	45.02992033° -74.68080817°	70.44
366	Scots Pine	*Pinus sylvestris*	1	18	G	G	1	45.03000883° -74.68096967°	66.74
367	Scots Pine	*Pinus sylvestris*	1	16	G	G	1	45.02996733° -74.68100600°	64.44

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
368	Scots Pine	*Pinus sylvestris*	1	22	G	G	1	45.02994717° -74.68099833°	65.84
369	Scots Pine	*Pinus sylvestris*	1	25	G	G	1	45.02995167° -74.68096517°	65.54
370	Scots Pine	*Pinus sylvestris*	2	23	G	G	1	45.02991617° -74.68096717°	64.84
371	Scots Pine	*Pinus sylvestris*	1	31	G	G	1	45.02988733° -74.68095333°	63.94
372	Scots Pine	*Pinus sylvestris*	1	19	G	G	1	45.02989650° -74.68094717°	64.94
373	Scots Pine	*Pinus sylvestris*	1	23	G	G	1	45.02989683° -74.68093850°	63.94
374	Scots Pine	*Pinus sylvestris*	1	29	G	G	1	45.02992950° -74.68091400°	63.24
375	Scots Pine	*Pinus sylvestris*	1	23	G	G	1	45.02990500° -74.68084017°	63.34
376	Scots Pine	*Pinus sylvestris*	1	27	G	G	1	45.02989583° -74.68082133°	62.54
377	Scots Pine	*Pinus sylvestris*	1	27	G	G	1	45.02988733° -74.68081333°	61.74
378	Shagbark Hickory	*Carya ovata*	1	43	G	G	1	45.02747950° -74.68301517°	64.94
379	Siberian Elm	*Ulmus pumila*	1	53	G	G	1	45.02759067° -74.68342617°	67.34
380	Siberian Elm	*Ulmus pumila*	1	36	G	G	1	45.03009867° -74.68242300°	61.14
381	Siberian Elm	*Ulmus pumila*	1	20	G	G	1	45.02602317° -74.68167150°	55.14
382	Siberian Elm	*Ulmus pumila*	1	12	G	G	1	45.02592750° -74.68190033°	58.74
383	Siberian Elm	*Ulmus pumila*	2	14	G	G	1	45.02592333° -74.68190600°	58.94
384	Siberian Elm	*Ulmus pumila*	2	12	G	G	1	45.02582683° -74.68214267°	57.34
385	Siberian Elm	*Ulmus pumila*	1	11	G	G	1	45.02580533° -74.68219917°	58.94
386	Silver Maple	*Acer saccharinum*	1	68	G	F	2	45.02766117° -74.68338317°	63.34
387	Silver Maple	*Acer saccharinum*	1	80	F	F	2	45.02770350° -74.68345733°	67.64
388	Silver Maple	*Acer saccharinum*	1	29	F	F	2	45.02770817° -74.68339450°	70.44
389	Silver Maple	*Acer saccharinum*	1	62	G	F	2	45.02780617° -74.68335883°	72.04
390	Silver Maple	*Acer saccharinum*	1	61	G	G	1	45.02957683° -74.68461700°	65.24

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
391	Silver Maple	*Acer saccharinum*	1	36	G	G	1	45.03011433° -74.68086433°	64.14
392	Silver Maple	*Acer saccharinum*	1	41	G	G	1	45.03003133° -74.68088933°	63.54
393	Silver Maple	*Acer saccharinum*	1	42	G	G	1	45.03015400° -74.68107017°	65.54
394	Silver Maple	*Acer saccharinum*	1	57	G	F	2	45.02968600° -74.68053833°	62.34
395	Silver Maple	*Acer saccharinum*	4	69	G	G	1	45.02667250° -74.67971467°	56.14
396	Sugar Maple	*Acer saccharum*	1	14	G	G	1	45.03024900° -74.68169017°	64.34
397	Sugar Maple	*Acer saccharum*	1	19	P	P	2	45.03094883° -74.68065167°	63.84
398	Trembling Aspen	*Populus tremuloides*	1	26	G	G	1	45.02983383° -74.68528417°	66.84
399	Trembling Aspen	*Populus tremuloides*	2	16	G	G	1	45.03253283° -74.67938550°	59.34
400	White Ash	*Fraxinus americana*	1	21	G	G	1	45.02986167° -74.68544017°	64.54
401	White Ash	*Fraxinus americana*	1	24	P	P	2	45.02991217° -74.68553667°	62.94
402	White Ash	*Fraxinus americana*	1	35	P	P	2	45.03072483° -74.68045333°	62.14
403	White Ash	*Fraxinus americana*	1	34	P	P	2	45.03074467° -74.68060183°	64.34
404	White Ash	*Fraxinus americana*	1	33	P	P	2	45.03088700° -74.68070000°	63.14
405	White Ash	*Fraxinus americana*	1	34	P	P	2	45.03092917° -74.68062467°	64.34
406	White Ash	*Fraxinus americana*	1	30	P	P	2	45.03094067° -74.68064950°	63.54
407	White Ash	*Fraxinus americana*	1	12	P	P	2	45.03095067° -74.68065483°	65.24
408	White Ash	*Fraxinus americana*	1	14	P	P	2	45.03094183° -74.68064333°	65.84
409	White Ash	*Fraxinus americana*	1	18	P	P	2	45.03098800° -74.68070917°	62.74
410	White Ash	*Fraxinus americana*	1	19	F	P	2	45.03099233° -74.68070117°	63.04
411	White Ash	*Fraxinus americana*	1	18	P	P	2	45.03099917° -74.68068733°	64.54
412	White Ash	*Fraxinus americana*	2	18	P	P	2	45.03101767° -74.68071067°	65.14
413	White Ash	*Fraxinus americana*	1	23	P	P	2	45.03102567° -74.68074250°	63.74

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
414	White Ash	*Fraxinus americana*	1	20	P	P	2	45.03104783° -74.68073517°	62.74
415	White Ash	*Fraxinus americana*	1	28	P	P	2	45.03106383° -74.68077933°	62.24
416	White Ash	*Fraxinus americana*	2	28	P	P	2	45.03101350° -74.68083400°	60.74
417	White Ash	*Fraxinus americana*	1	42	P	P	2	45.03103433° -74.68083800°	59.94
418	White Ash	*Fraxinus americana*	1	20	P	P	2	45.03103550° -74.68088050°	60.64
419	White Ash	*Fraxinus americana*	1	19	P	P	2	45.03105217° -74.68084117°	60.64
420	White Ash	*Fraxinus americana*	1	23	P	P	2	45.03106883° -74.68080983°	61.44
421	White Ash	*Fraxinus americana*	1	27	P	P	2	45.03111183° -74.68080133°	59.84
422	White Ash	*Fraxinus americana*	1	17	P	P	2	45.03112350° -74.68084317°	60.54
423	White Ash	*Fraxinus americana*	1	29	P	P	2	45.03113267° -74.68083250°	61.94
424	White Ash	*Fraxinus americana*	1	20	P	P	2	45.03113850° -74.68086100°	63.04
425	White Ash	*Fraxinus americana*	1	13	P	P	2	45.03114450° -74.68087033°	62.34
426	White Ash	*Fraxinus americana*	1	25	P	P	2	45.03109650° -74.68092450°	62.44
427	White Ash	*Fraxinus americana*	3	22	P	P	2	45.03111067° -74.68093717°	63.64
428	White Ash	*Fraxinus americana*	1	23	P	P	2	45.03114167° -74.68095483°	62.84
429	White Ash	*Fraxinus americana*	1	22	P	P	2	45.03106050° -74.67826533°	66.74
430	White Ash	*Fraxinus americana*	1	30	P	P	2	45.02954567° -74.68017350°	71.34
431	White Ash	*Fraxinus americana*	1	33	P	P	2	45.02949050° -74.68030667°	70.84
432	White Ash	*Fraxinus americana*	1	46	P	P	2	45.02941183° -74.68052617°	67.44
433	White Cedar	*Thuja occidentalis*	1	22	G	G	1	45.03261483° -74.67944883°	58.34
434	White Oak	*Quercus alba*	1	64	G	G	1	45.02756133° -74.68314317°	62.54
435	White Oak	*Quercus alba*	1	30	G	G	1	45.02752100° -74.68351350°	64.24
436	White Oak	*Quercus alba*	1	61	G	G	1	45.02930650° -74.68760333°	55.64

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
437	White Pine	*Pinus strobus*	1	39	G	G	1	45.02754967° -74.68348633°	65.44
438	White Pine	*Pinus strobus*	1	35	G	G	1	45.02755150° -74.68359833°	63.94
439	White Pine	*Pinus strobus*	1	31	G	G	1	45.02756350° -74.68360800°	61.94
440	White Pine	*Pinus strobus*	1	32	G	G	1	45.02756567° -74.68357667°	63.24
441	White Pine	*Pinus strobus*	1	22	G	G	1	45.02759583° -74.68347333°	63.84
442	White Pine	*Pinus strobus*	1	58	G	F	2	45.02838433° -74.68697850°	61.34
443	White Pine	*Pinus strobus*	1	60	G	F	2	45.02840417° -74.68700233°	63.94
444	White Pine	*Pinus strobus*	1	34	G	G	1	45.02874033° -74.68729133°	60.54
445	White Pine	*Pinus strobus*	1	42	G	G	4	45.02889533° -74.68740767°	59.94
446	White Pine	*Pinus strobus*	1	55	G	G	1	45.02897600° -74.68747567°	59.34
447	White Pine	*Pinus strobus*	1	60	G	G	1	45.02916367° -74.68765700°	59.74
448	White Pine	*Pinus strobus*	1	36	G	G	1	45.03080217° -74.68419950°	64.34
449	White Pine	*Pinus strobus*	1	42	G	G	1	45.03081583° -74.68418783°	63.54
450	White Pine	*Pinus strobus*	1	40	G	G	1	45.03083967° -74.68413050°	62.14
451	White Pine	*Pinus strobus*	1	51	G	G	1	45.03092233° -74.68403117°	60.34
452	White Pine	*Pinus strobus*	1	42	G	G	1	45.02974817° -74.68037983°	71.74
453	White Pine	*Pinus strobus*	1	35	G	G	1	45.02980967° -74.68031950°	69.04
454	White Pine	*Pinus strobus*	1	40	G	G	1	45.02978767° -74.68028900°	71.64
455	White Pine	*Pinus strobus*	1	33	G	G	1	45.02983633° -74.68030533°	67.44
456	White Pine	*Pinus strobus*	1	30	G	G	1	45.02984550° -74.68030550°	66.84
457	White Pine	*Pinus strobus*	1	39	G	G	1	45.02984317° -74.68030833°	66.34
458	White Pine	*Pinus strobus*	1	38	G	G	1	45.02990333° -74.68027550°	64.54
459	White Pine	*Pinus strobus*	1	30	G	G	1	45.02992767° -74.68027483°	63.64

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
460	White Pine	*Pinus strobus*	1	32	G	G	1	45.02994900° -74.68023750°	67.84
461	White Pine	*Pinus strobus*	1	35	G	G	1	45.02997017° -74.68021250°	69.64
462	White Pine	*Pinus strobus*	1	13	G	G	1	45.02998800° -74.68015967°	70.14
463	White Pine	*Pinus strobus*	1	14	G	G	1	45.03001883° -74.68018017°	69.14
464	White Pine	*Pinus strobus*	1	40	G	G	1	45.03003267° -74.68021933°	68.64
465	White Pine	*Pinus strobus*	1	17	G	G	1	45.03007233° -74.68018650°	68.34
466	White Pine	*Pinus strobus*	1	33	G	G	1	45.03013283° -74.68011717°	68.14
467	White Pine	*Pinus strobus*	1	30	G	G	1	45.03016283° -74.68010783°	63.54
468	White Pine	*Pinus strobus*	1	39	G	G	1	45.03018750° -74.68012167°	64.64
469	White Pine	*Pinus strobus*	1	29	G	G	1	45.03021300° -74.68016533°	65.24
470	White Pine	*Pinus strobus*	1	53	G	G	1	45.03024283° -74.68017933°	64.84
471	White Pine	*Pinus strobus*	1	40	G	G	1	45.02980533° -74.68050300°	64.04
472	White Pine	*Pinus strobus*	1	32	G	G	1	45.02981050° -74.68055000°	69.44
473	White Pine	*Pinus strobus*	1	32	G	G	1	45.02985883° -74.68050483°	71.74
474	White Pine	*Pinus strobus*	1	33	G	G	1	45.02987867° -74.68056800°	73.44
475	White Pine	*Pinus strobus*	1	33	G	G	1	45.02991250° -74.68066367°	70.84
476	White Spruce	*Picea glauca*	1	18	G	G	1	45.02761650° -74.68350800°	63.94
477	White Spruce	*Picea glauca*	1	29	G	G	1	45.02759633° -74.68354867°	63.34
478	White Spruce	*Picea glauca*	1	28	G	G	1	45.02760667° -74.68347050°	63.14
479	White Spruce	*Picea glauca*	1	29	G	G	1	45.02787517° -74.68332433°	71.54
480	White Spruce	*Picea glauca*	1	22	G	G	1	45.02787683° -74.68329617°	69.74
481	White Spruce	*Picea glauca*	1	22	G	G	1	45.02785133° -74.68331883°	68.24
482	White Spruce	*Picea glauca*	1	28	G	G	1	45.02783817° -74.68331367°	68.34

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
483	White Spruce	*Picea glauca*	1	26	G	G	1	45.02782600° -74.68329900°	65.24
484	White Spruce	*Picea glauca*	1	20	G	G	1	45.02776417° -74.68330650°	62.64
485	White Spruce	*Picea glauca*	1	20	G	G	1	45.03013700° -74.67993050°	62.94
486	White Spruce	*Picea glauca*	1	16	G	G	1	45.03009283° -74.67988800°	64.94
487	White Spruce	*Picea glauca*	1	35	G	G	1	45.03007183° -74.67987917°	62.34
488	White Spruce	*Picea glauca*	1	29	G	G	1	45.02999817° -74.67986350°	67.04
489	White Spruce	*Picea glauca*	1	23	G	G	1	45.02995217° -74.67975233°	68.64
490	White Spruce	*Picea glauca*	1	27	G	G	1	45.02982450° -74.67967867°	68.44
491	White Spruce	*Picea glauca*	1	34	G	G	1	45.02980900° -74.67966317°	67.54
492	White Spruce	*Picea glauca*	1	33	G	G	1	45.02976417° -74.67964117°	68.94
493	White Spruce	*Picea glauca*	1	33	G	G	1	45.02968017° -74.67958250°	67.94
494	White Spruce	*Picea glauca*	2	29	G	G	1	45.02965133° -74.67955150°	67.54
495	White Spruce	*Picea glauca*	1	39	G	G	1	45.02959333° -74.67950783°	67.74
496	White Spruce	*Picea glauca*	1	34	G	G	1	45.02955733° -74.67945933°	67.94
497	White Spruce	*Picea glauca*	1	30	G	G	1	45.02951100° -74.67942067°	70.54
498	White Willow	*Salix alba*	4	46	F	G	1	45.02726800° -74.67780450°	53.04
499	White Willow	*Salix alba*	4	51	G	G	1	45.02721467° -74.67815750°	49.24
500	White Willow	*Salix alba*	1	77	G	G	1	45.02717133° -74.67828533°	53.74
501	White Willow	*Salix alba*	1	45	F	F	2	45.02694533° -74.67920750°	53.14
502	White Willow	*Salix alba*	4	49	G	G	1	45.02686133° -74.67944767°	54.74
503	White Willow	*Salix alba*	4	44	G	G	1	45.02668867° -74.67964700°	56.34
504	White Willow	*Salix alba*	7	66	F	F	2	45.02661550° -74.67996767°	54.04
505	White Willow	*Salix alba*	6	47	G	G	1	45.02648700° -74.68026700°	53.84

Tree ID	Species Name	Taxonomic Name	Number of stems	DBH (cm)	Trunk Health	Canopy Health	Decay Class	Location	Elevation (m)
506	White Willow	*Salix alba*	4	43	F	F	2	45.02632117° -74.68072550°	55.14

Trunk and Canopy Health: **G= Good**, tree displays less than 15% deficiency; **F= Fair**, tree displays 15-40% deficiency; **P= Poor**, tree displays greater than 40% deficiency

Decay Class: **1**= Healthy live tree; **2**= Declining live tree, part of canopy lost; **3**= Very recently dead, no live canopy, bark and branches intact; **4**= Recently dead, bark peeling, only large branches intact; **5**= Older dead tree, 90% of bark lost, few branch stubs, broken top; **6**= Very old dead tree, advanced decay, no branches, part of the stem has rotted away

Appendix D Breeding Bird Survey Results

Common Name	Scientific Name	Station Observed	Date(s) Observed	Highest Breeding Evidence
American Crow	*Corvys brachyrhynchos*	BBS-5, BBS-6, BBS-7	2023-06-01, 2023-06-15	Confirmed
American Goldfinch	*Spinus tristis*	BBS-1, BBS-3, BBS-6	2023-06-01, 2023-06-15	Possible
American Redstart	*Setophaga ruticilla*	BBS-1	2023-06-15	Possible
American Robin	*Turdus migratorius*	All Stations	2023-06-01, 2023-06-15	Possible
Bank Swallow	*Riparia riparia*	BBS-7	2023-06-01	Possible
Black-capped Chickadee	*Poecile atricapillus*	BBS-1, BBS-2, BBS-3, BBS-4, BBS-6	2023-06-01, 2023-06-15	Possible
Blue Jay	*Cyanocitta cristata*	BBS-2, BBS-4	2023-06-01, 2023-06-15	Possible
Canada Goose	*Branta canadensis*	BBS-6, BBS-7	2023-06-01	Possible
Cedar Waxwing	*Bombyicila cedrorum*	BBS-3, BBS-7	2023-06-01, 2023-06-15	Observed
Chipping Sparrow	*Spizella passerine*	BBS-1, BBS-3	2023-06-01	Observed
Common Grackle	*Quiscalus quiscula*	BBS-1,BBS-3, BBS-4, BBS-6, BBS-7	2023-06-01, 2023-06-15	Possible
Double-crested Cormorant	*Nannopterum auritum*	BBS-6	2023-06-01	Observed
European Starling	*Sturnus vulgaris*	BBS-1, BBS-3, BBS-4, BBS-5, BBS-6, BBS-7	2023-06-01, 2023-06-15	Probable
House Sparrow	*Passer domesticums*	BBS-1, BBS-7	2023-06-01	Possible
House Wren	*Troglodytes aedon*	BBS-5	2023-06-15	Observed
Killdeer	*Charadrius vociferus*	BBS-4	2023-06-01	Observed
Mourning Dove	*Zenaida macroura*	BBS-3	2023-06-01	Observed
Northern Cardinal	*Cardinalis cardinalis*	BBS-2, BBS-6	2023-06-01, 2023-06-15	Observed
Northern Ficker	*Colaptes auratus*	BBS-6	2023-06-01	Possible
Osprey	*Pandion haliaetus*	BBS-2, BBS-3, BBS-4, BBS-7	2023-06-01, 2023-06-15	Confirmed
Purple Finch	*Haemorhous purpureus*	BBS-1	2023-06-15	Possible
Red-eyed Vireo	*Vireo olivaceus*	BBS-1, BBS-3, BBS-7	2023-06-01, 2023-06-15	Possible
Red-winged Blackbird	*Agelaius phoeniceus*	BBS-1, BBS-4, BBS-7	2023-06-01	Possible
Ring-billed Gull	*Larus delawarensis*	BBS-1, BBS-4	2023-06-01, 2023-06-15	Observed
Rock Pigeon (Feral Pigeon)	*Columba livia*	BBS-3	2023-06-15	Observed
Song Sparrow	*Melospiza melodia*	All Station	2023-06-01, 2023-06-15	Possible
Tree Swallow	*Tachycineta bicolor*	BBS-1, BBS-7	2023-06-15	Observed
Turkey Vulture	*Cathartes aura*	BBS-1	2023-06-15	Observed
Warbling Vireo	*Vireo gilvus*	BBS-7	2023-06-15	Possible
Yellow Warbler	*Setophaga petechia*	BBS-1, BBS-3, BBS-5, BBS-7	2023-06-01, 2023-06-15	Possible