ENVIRONMENTAL IMPACT STATEMENT – 1495 HERON ROAD REDEVELOPMENT

FINAL REPORT

July 20, 2022

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1 Introduction

1.1 Background and Objectives

Stantec Consulting Ltd. (Stantec) was retained by Canada Lands Company (CLC) to prepare an Environmental Impact Statement (EIS) to support the proposed redevelopment of 1495 Heron Road, Ottawa, Ontario (18T 448923E, 5025546N; the Site) (**Figure 1, Appendix A**). This EIS has been developed to support a Development Plan for the Site in order to guide the transformation of the property from a former institutional facility to a mixed-use community. This EIS will be used as supporting documentation in the City of Ottawa's (herein referred to as 'the City') planning applications for a Zoning By-law Amendment and a draft Plan of Subdivision.

The City's Official Plan (2021) requires an EIS for development or site alteration proposed in or adjacent to natural heritage features. The property located at 1495 Heron Road is 7.3 hectares (ha) in size and contains twelve vacant buildings (i.e., buildings A-M, **Figure 1, Appendix A**) that are dispersed amongst the Site. Natural heritage features also occur on the property and includes a 1.5 ha woodland feature along the northwest corner of the Site. CLC's intent is to redevelop the Site and existing buildings to revive the area into a liveable, mixed-use community consisting of residential, commercial, retail, and open space or parklands.

This report is intended to address the requirements of a Detailed EIS under the City's *Environmental Impact Statement Guidelines* (City of Ottawa 2015) by identifying environmental constraints that the proposed 1495 Heron Road Development Plan may have on the natural heritage features, wildlife and wildlife habitat, and Species at Risk (SAR) that may be present within the Study Area, which is defined as the Site including lands within 120 metres (m) of the Site. The potential for Significant Wildlife Habitat (SWH) and other features, which form the City's natural heritage system will also be considered. If identified, impacts on these natural features within the Study Area as a result of the proposed Development Plan will be outlined and, if applicable, best management practices and mitigation measures for each will be provided.

This EIS report was prepared in accordance with applicable policies and regulations described in **Section 2**.

1.2 Study Area Description

The Site is approximately 7.3 ha and includes a 1.5 ha woodland/park feature northwest of the property, which has been designated as non-developable under the City's OP (2021). Located within the Guildwood Estates neighborhood in the Alta Vista community, the property is bound to the north by natural parklands and existing single-family residential dwellings; bound to the south by Heron Road and medium-high density mixed residential and commercial buildings; bound to the west by St. Patrick High School and Queens of Angels School (not currently in use) as well as Orlando Park; and bound to the east by single-family residential dwellings.

The Study Area predominately consists of urban infrastructure with landscaping of maintained grass interspersed with planted trees. The only natural heritage feature observed on the Site includes the woodland to the northwest of the property. This woodland consists of relatively uniform topography with lowland pockets of marsh, an urbanized trail system, and meadow areas. A single, undefined and unmapped water feature/ditch was observed along the northern boundary of the Site. No other open aquatic features are present within the Study Area.

2 Environmental Policy Considerations

This report has been prepared to address policies and guidelines from legislation relevant to municipal development within the City of Ottawa, including the City of Ottawa's *Official Plan* (City of Ottawa 2021), as well as provincial policies including the Provincial Policy Statement, 2020, the *Conservation Authorities Act* and the *Endangered Species Act, 2007*. Additionally, the report also addresses federal policies, where applicable, related to the *Fisheries Act*, *Migratory Birds Convention Act, 1994*, and the *Species at Risk Act*.

The policy documents discussed below were used to assess the natural heritage features and functions of the Study Area and to determine natural heritage constraints within the Study Area, as well as scope the field and impact assessments.

2.1 Municipal Policy

2.1.1 City of Ottawa Official Plan

The City of Ottawa *Official Plan* (OP) was adopted by Council in November 2021. Schedule C11 designates the Natural Heritage System and Schedule C12 designates Urban Greenspace. Specifically, the Study Area is located in Schedule C11-C (East).

Section 4.8.1 of the OP states that "*the Natural Heritage System and the features within it are subject to a higher standard of protection than features outside*" and defined natural heritage features as the following:

- Significant Wetlands
- Significant Woodlands
- Significant Valleylands
- Significant Wildlife Habitat
- habitat for endangered and threatened species
- areas of natural and scientific interest (ANSI)
- urban natural features
- natural environment areas
- natural linkage features and corridors
- groundwater features
- surface water features, including fish habitat
- landform features

Section 5.6.4.1 of the OP states that "*the City shall protect natural heritage features for their natural character and ecosystem services*" and that "*development and site alteration shall have no negative impact on the Natural Heritage System and Natural Heritage Features*" and "*shall be consistent with the conclusions and recommendations of an approved environmental impact study.*"

Section 7.3 of the OP states that "*development and site alteration are prohibited in Urban Natural Features*" and that "*development and site alteration within 30 m of the boundary of an Urban Natural Feature must demonstrate no negative impacts on the natural features within the area or their ecosystem services.*" An Urban Natural Feature is defined as a woodland, wetland, and vegetated ravine throughout the urban area, protected and managed primarily for their environmental values and therefore, are not considered or designated as parklands. Additionally, Section 7.3 states that "*development and site alteration within 120 m of the boundary of a Significant Wetland must demonstrate no negative impacts on the natural features or their ecosystem services within the area*" and that "*development and site alteration within 120 m of the boundary of a Natural Environment Area must demonstrate no negative impacts on the natural features or their ecosystem services within the area.*"

Schedule C11-C (East) identifies the Study Area as occurring within the Urban Area and no natural heritage systems have been identified. However, within Schedule 12, the northwest portion of the site has been identified as Park, which connects to Urban Natural Features (UNFs) located north and south of the Site but beyond the Study Area.

No Significant Wetlands have been identified to occur within the Study Area.

2.1.2 City of Ottawa Tree By-Law

The City's Tree Protection By-law (Nº. 2020-340) (City of Ottawa 2020a) was developed in a response to community feedback and recommendations provided in the City's *Urban Forest Management Plan* (City of Ottawa 2017). As such the by-law aims to protect:

- All City-owned trees
- All trees ≥ 10-centimetre (cm) diameter at breast height (DBH) on private properties within the urban area that are subject to a *Planning Act* application for Site Plan, Plan of Subdivision or Plan of Condominium
- All trees ≥ 10 cm DBH on private properties within the urban area that over 1 ha in size
- All distinctive trees on private properties 1 ha in size, where distinctive trees are defined as:
  - trees measuring ≥ 30 cm DBH within the inner urban area (urban lands inside the Greenbelt)
  - trees measuring ≥ 50 cm DBH within the suburban area (urban lands outside the Greenbelt)

As the Study Area is located within the inner urban area of the City of Ottawa, trees on the Site measuring ≥ 30 cm DBH would require a permit if removal is anticipated to facilitate redevelopment. Additionally, any trees located on City-owned lands that may be impacted (e.g., infilling, removal) by redevelopment of the Site may require a permit.

2.2 Provincial Policy

2.2.1 Provincial Policy Statement, 2020

The Provincial Policy Statement, 2020 (PPS) was issued by the Ontario Ministry of Municipal Affairs and Housing (OMAH) under Section 3 of the *Planning Act* and came into effect on May 22, 1996. It was revised in 2005, 2014 and most recently in 2020. Decisions made by planning authorities shall be consistent with the policy statements issued under the *Planning Act*, such as the PPS, which includes policies on development and land use patterns, resources and public health and safety. Section 2.1 of the PPS deals with Natural Heritage and requires natural heritage systems to be identified in various Ecoregions including Ecoregion 6E, which includes the Study Area.

According to Section 2.1.4 of the PPS, development and site alteration is not permitted in the following features in Ecoregion 6E:

- Significant Wetlands
- Significant Coastal Wetlands

According to Section 2.1.5 of the PPS, development and site alteration is not permitted in the following features in Ecoregion 6E, *"unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions:"*

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

Sections 2.1.6 and 2.1.7 of the PPS state that development and site alteration is not permitted in the following features, "*except in accordance with provincial and federal requirements*:"

- Habitat of endangered or threatened species
- Fish habitat

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

2.2.2 Conservation Authorities Act

The *Conservation Authorities Act* is the enabling legislation that provides the legal basis for the creation of conservation authorities (CAs) in Ontario. Generally, the *Conservation Authorities Act* directs CAs to perform a number of critical functions regarding watershed planning and management including the prevention, elimination, or reduction of loss of life and property from flood hazards and erosion hazards,

as well as the conservation and restoration of natural resources. Section 28 of the *Conservation Authorities Act* empowers CAs to make regulations in the area under its jurisdiction, including the prohibition, regulation or permitting for development if the control of flooding, erosion, or the conservation of land may be affected by the redevelopment.

Pursuant to *Ontario Regulation 174/06, Development, Interference with Wetlands and Alterations to Shorelines and Watercourses,* prior permission is required from the Rideau Valley Conservation Authority (RVCA) for development within a floodplain, valleylands, wetland, or other hazardous land. Permission is also required from the RVCA for alteration to a river, creek, stream or watercourse or interference with the hydrological function of a wetland. Generally, development and/or alterations to shorelines and/or watercourses and interference with wetlands are subject to the regulation (RVCA 2018).

Development and/or site alteration within the jurisdiction of the RVCA and in, on or adjacent to natural heritage features must be in accordance with the policies and guidelines in the RVCA's *Development, Interference with Wetland and Alteration to Shorelines and Watercourses: Regulation Policies* (RVCA 2018) and must be to the satisfaction of the Authority.

2.2.3 Endangered Species Act, 2007

The *Endangered Species Act, 2007* (ESA) protects habitat and individuals of wildlife species designated as threatened, endangered, or extirpated in Ontario. Provincial species at risk (SAR) are identified and assessed by the Committee on the Status of Species at Risk in Ontario (COSSARO).

The ESA protects species and their habitats by prohibiting anyone from killing, harming, harassing, or possessing protected species, as well as prohibiting any damage or destruction to habitat of protected species. All listed species are provided with general habitat protection under the ESA aimed at protecting areas that species depend on to carry out their life processes, such as reproduction, rearing, hibernation, migration or feeding. Some species have had detailed habitat regulations passed that go beyond the general habitat protection to define specifically the extent and character of protected habitats.

Activities that may impact a protected species or its habitat require the prior issuance of a permit from the Ministry of the Environment, Conservation and Parks (MECP), unless the activities are exempted under a Regulation. Ontario Regulation (O. Reg.) 242/08 and O. Reg. 830/21 identifies activities which are exempt from the permitting requirements of the ESA subject to rigorous controls that include registration of the activity and preparation of mitigation. Activities that are not exempt under an applicable regulation require a complete permit application process.

2.3 Federal Policy

2.3.1 Species at Risk Act

The *Species at Risk Act* (SARA) prohibits the killing, harming, harassing, capturing, or taking of an individual of a species that is listed as an extirpated, endangered, or threatened species in Schedule 1 of the Act. It also prohibits the damage or destruction of the habitat of a species that is listed as endangered or threatened; or extirpated species provided that a recovery strategy has recommended the

reintroduction of the extirpated species into the wild in Canada. SARA applies primarily to federal lands, except for migratory birds and aquatic species which are protected throughout Canada by other acts and regulations (see below).

2.3.2 Migratory Birds Convention Act, 1994

The federal *Migratory Birds Convention Act, 1994* (MBCA) protects migratory birds and their nests (S.4). Published in Part 1 of the Canada Gazette on June 1, 2019, proposed updates to the MBCA Regulations were released. Proposed prohibitions under the Regulations are as follows:

- Section 5 (1) – A person who does not hold a permit authorizing one or more of the following activities or who is not otherwise authorized by these Regulations to carry out that activity must not:
    a) Capture, kill, take, injury or harass a migratory bird
    b) Destroy, take or disturb an egg; or
    c) Damage, destroy, remove, or disturb a nest, nest shelter, eider duck shelter or duck box

Proposed exemptions under the Regulations are as follows:

- Section 5 (2) – However, the following may be damaged, destroyed, removed, or disturbed without a permit:
    a) A nest shelter, eider duck shelter or duck box that does not contain a live bird or viable egg
    b) A nest that was built by a species that does not appear in a Table to Schedule 1 if that nest does not contain a live bird or a viable egg; and
    c) A nest that was built by a species that appears in a Table to Schedule 1 if the following conditions are met:
        i. The person who damages, destroys, removes, or disturbs that nest provided written notice to the Minister a number of months beforehand that corresponds to the number of months set out in column 4 of the relevant Table to that schedule for the species, and
        ii. The nest has not been used by migratory birds since the notice was received by the Minister

2.3.3 Fisheries Act

The *Fisheries Act* protects fish and fish habitats (s34) within Canadian waters. Under the recently amended fish and fish habitat protection provisions of the *Fisheries Act*, any works, undertaking or activity of project must incorporate measures to avoid causing the death of fish and the harmful alteration, disruption, or destruction (HADD) of fish habitat. To assist proponents with determining if their project will comply with the fish and fish habitat provisions, DFO has outlined several measures to protect fish and fish habitat (DFO 2019) as well as several standards and codes of practices (DFO 2021). If it is determined that a project cannot completely implement the measures to protect fish and fish habitat and if the standards and codes of practice do not apply or are considered non-applicable to the project, then it is recommended that the proponent request a review of the project by DFO. If it has been determined that a

project cannot avoid and/or mitigate impacts that will cause death of fish, a HADD to fish habitat and/or aquatic species at risk protected under the SARA, an Authorization under the *Fisheries Act* may be required (DFO 2021b).

2.4 Summary of Policy Implications

The policies summarized above provide the context within which the approval of CLC's 1495 Heron Road proposed Development Plan will be granted from a natural environment perspective. The corresponding opportunities and constraints established by these policies and supporting guidelines should be recognized and addressed through the development design, location and supporting documentation, including the identification of appropriate mitigation and compensation measures to offset potential negative impacts.

3 Methods for Data Collection

3.1 Background Data Collection and Literature Review

As part of this EIS, the following background documentation and related information sources were reviewed to identify natural heritage features and constraints in the Study Area:

- Ontario's Natural Heritage Information Centre (NHIC; NDMNRF 2022a)
- Land Information Ontario (LIO; NDMNRF 2022b)
- AgMaps (Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA 2022)
- The City of Ottawa Official Plan (City of Ottawa 2021)
- geoOttawa (City of Ottawa 2022)
- Satellite imagery (Google Earth Pro 2020)
- RVCA's Regulation Mapping Public Browser (RVCA 2022)

Natural heritage information gathered during the literature review was used to identify potentially significant natural heritage features in the Study Area.

A list of SAR, designated under the federal SARA and/or Ontario's ESA as endangered, threatened, or special concern, with potential to occur in the Study Area was developed by reviewing the following sources:

- Ontario's NHIC
- Fisheries and Oceans Canada (DFO) Species at Risk Mapping (DFO 2022)
- Ontario Breeding Bird Atlas (OBBA) (Cadman et al. 2007)
- eBird Canada (eBird 2022)
- Ontario Butterfly Atlas Online (OBA) (Toronto Entomologists' Association 2021a)
- Ontario Reptile and Amphibian Atlas (ORAA) (Toronto Entomologists' Association 2021a)
- Atlas of the Mammals of Ontario (AMO) (Dobbyn 1994)

Some of the sources above provide data at a scale as large as 10 x 10 kilometres (km). Results were therefore screened to assess their relevance to the Study Area and species were removed from consideration if no suitable habitat was observed in the Study Area.

3.2 Consultation

Agency consultation has primarily moved to a proponent driven process for many of the provincial agencies (i.e., MECP) as proponents are directed to review the background documentation and related information sources outlined above.

Municipal agencies have also placed relevant data regarding natural heritage features and constraints on publicly accessible geoportals or web viewers and encourage proponents to complete their own background data reviews. The following agency sources were consulted:

- geoOttawa (City of Ottawa 2022)
- RVCA's Regulation Mapping Public Browser (RVCA 2022)

3.3 Field Investigations

To support CLC's proposed redevelopment of the Site and EIS report, Stantec developed and initiated a natural heritage field program in 2021 and 2022 to identify and classify the existing site conditions (e.g., vegetation communities, SAR habitat) as well as confirming the natural heritage features in the Study Area that were identified through the literature review process. Stantec's field program was completed in conjunction within both wildlife active and vegetation growing seasons, which typically occurs between April and October in any given year.

Table 3.1 provides a summary of survey dates and environmental conditions during Stantec's EIS natural heritage field program.

Table 3.1 Dates and Environmental Conditions of the Natural Heritage Field Program for 1495 Heron Road Study Area

Purpose of Investigation	Date	Start/End Time (24 hour)	Weather Conditions	Biologist
• General Wildlife Habitat Assessment • SWH Assessment	October 6, 2021	0800 - 1400	Temperature: 12°C Wind (Beaufort scale): 1 Cloud Cover: 10% Precipitation: None 24/hr. Precipitation: None	L. Bennett
• Bat Maternity Roost Habitat Suitability Assessment • Amphibian Breeding Survey	April 26, 2022	0900 - 1400	Temperature: 14°C Wind (Beaufort scale): 1 Cloud Cover: 100% Precipitation: None 24/hr. Precipitation: None	L. Bennett
• Breeding Bird Survey #1 • Bat Acoustic Recording Unit Deployment	May 25, 2022	0600 - 1400	Temperature: 14-18°C Wind (Beaufort scale): 1 Cloud Cover: 100% Precipitation: Yes 24/hr. Precipitation: Yes	L. Bennett
• Breeding Bird Survey #2	June 8, 2022	0700 - 1200	Temperature: 17-19°C Wind (Beaufort scale): 2 Cloud Cover: 30% Precipitation: None	L. Bennett

Table 3.1 Dates and Environmental Conditions of the Natural Heritage Field Program for 1495 Heron Road Study Area

Purpose of Investigation	Date	Start/End Time (24 hour)	Weather Conditions	Biologist
			24/hr. Precipitation: Yes	
Breeding Bird Survey #3 • Ecological Land Classification • Bat Acoustic Recording Unit Removal	June 23, 2022	0630 - 1700	Temperature: 18-22°C Wind (Beaufort scale): 1 Cloud Cover: 70-100% Precipitation: None 24/hr. Precipitation: Yes	L. Bennett

3.3.1 Ecological Land Classification and Vegetation

Initial characterization of existing vegetation communities was completed by interpreting available aerial imagery. Vegetation was identified and communities were verified and assessed in the field within the Study Area following a meandering transect. Community characterizations (ecosites and vegetation types) were based on the Ontario Ecological Land Classification (ELC) system (Lee et. al. 2008).

Stantec completed vegetation community characterizations (ELC) on June 23, 2022; and were planned to occur during most plant species' respective flowering periods (i.e., late spring/early summer) in order to maximize observations of species. Dominant vegetation species within each community were recorded on ELC data cards (see **Appendix B**). Common names and scientific nomenclature of the species observed followed the provincial *Ontario Species List - Vascular Plants*. Provincial significance of vegetation communities and plant species was based on the rankings assigned by the NHIC.

See **Table 3.1** for ELC survey dates and environmental conditions.

3.3.2 Aquatic Features Identification Survey

A review of available background data and publicly available information sources was completed to determine the presence of aquatic features (e.g., wetlands, watercourses) within the Study Area.

To identify aquatic features that may not be mapped or are not large enough to be observed on aerial imagery, a survey was conducted on foot by completing meandering transects across the Study Area. Stantec searched for aquatic features concurrently while conducting wildlife and vegetation surveys as part of the natural heritage field program.

See **Table 3.1** for aquatic feature identification survey dates and environmental conditions.

3.3.3 Butternut Search

Stantec completed a dedicated search for butternut trees within the Study Area by meandering on foot through areas of potentially suitable habitat on April 26 and June 23, 2022. Additionally, Stantec searched for butternut trees concurrently during previous and subsequent wildlife and vegetation surveys within the Study Area. Adjacent private property parcels, where access was not permitted, was assessed from the boundaries of 1495 Heron Road with the use of binoculars in order to readily view butternut trees that may be present within 50 m of the site boundary.

See **Table 3.1** for butternut search survey dates and environmental conditions.

3.3.4 Breeding Amphibian Survey and Habitat Assessment

Bird Studies Canada's (BSC) Ontario *Marsh Monitoring Program* (MMP) survey protocol (BSC 2003), an industry standard protocol, was used to identify breeding anurans (frogs and toads) and their associated habitat in the Study Area. During the survey, observers approached each potential breeding habitat feature on foot and recorded the level (call code) of calling species heard within a three-minute period.

The amphibian call codes include four levels of calling based on abundance:

- 0 – No calls heard
- 1 – Individuals can be counted, and calls are not overlapping
- 2 – Numbers of some individuals can generally be estimated or counted, others overlapping
- 3 – Full chorus, calls continuous and overlapping, and individuals not distinguishable

In accordance with the MMP protocol, surveys began at least one-half hour after sunset and were completed before midnight. Due to the site's small scale, urban context, and limited wetland features, the MMP protocol's survey frequency was modified from three visits to one. This one visit was to gather baseline information to determine if subsequent amphibian breeding surveys should be warranted based on results of the first visit. Also, due to the small scale of the Study Area and lack of natural heritage features, only one breeding amphibian station was established (**Figure 5, Appendix A**).

Stantec completed breeding amphibian surveys on April 26, 2022, focusing on potentially suitable habitat features observed in the Study Area.

See **Table 3.1** for breeding amphibian survey dates and environmental conditions.

3.3.5 SAR Bat Maternity Roost Habitat Suitability Assessment

Trees on, or within 50 m of, the proposed redevelopment lands were assessed during leaf-off conditions on April 26, 2022, to identify trees that meet the criteria to support potential maternal roosts of SAR bats (e.g., cavities and peeling bark). The SAR Bat Maternity Roost Habitat Suitability Assessment was completed following the guidance in the Ministry of Natural Resources and Forestry's (MNRF) *Survey*

Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis & Tri-Colored Bat (MNRF 2017).

As outlined in the MNRF's survey protocol, any tree with a DBH of 10 cm or greater is considered to provide potential bat maternity roost habitat. However, trees ≥ 25 cm DBH and with a large amount of loose, peeling bark, cavities, or crevices at least 10 m high, and exhibiting the early stages of decay are considered to have higher suitability for maternal bat roosting (MNRF 2017).

Stantec biologists traversed the Site during leaf-off conditions to identify the best candidate roost trees (i.e., ≥ 25 cm diameter at breast height (DBH)) that meet the following criteria:

- Tree is one of the tallest snag/cavity trees in the survey area
- Tree exhibits cavities/crevices
- Tree has the largest DBH
- Tree is within the highest density of snags/cavity trees
- Tree has a large amount of loose, peeling bark
- Cavity/crevice is located high in the snag/tree (i.e., ≥ 10 m high on tree trunk)
- Tree canopy cover is relatively open
- Tree exhibits early stages of decay (i.e., decay Class 1 to 3)

The best candidate trees were identified, marked, and recorded using ArcGIS Field Maps.

See **Table 3.1** for SAR bat maternity roost habitat suitability assessment dates and environmental conditions.

3.3.6 SAR Bat Acoustic Monitoring

Acoustic bat surveys were conducted using Automatic Recording Units (ARUs), specifically Wildlife Acoustic SM4Bat FS Detectors, which were deployed throughout the Site. Two units were placed in amongst the existing vacant buildings, while the other two were placed along the woodland edge on the northwest boundary of the Site. Monitoring stations are shown on **Figure 5, Appendix A**.

The ARUs were deployed on May 25, 2022, and collected on June 23, 2022. Recording parameters followed the MNRF (2017) protocol where recording commenced 30 minutes before sunset and continued for five hours after sunset. The ARUs remained on Site for at least 10 nights in June during optimal weather of warm/mild nights (i.e., ambient temperature >10°C) with low winds and no precipitation.

The recordings by the EchoMeters and ARUs will be screened using Wildlife Acoustic's Kaleidoscope Pro Automatic ID and then visually assessed (i.e., spectrograph) to confirm identification of the calls.

See **Table 3.1** for SAR bat acoustic monitoring deployment and removal dates, as well as the associated environmental conditions.

3.3.7 Breeding Bird Survey

Three breeding bird surveys within the Study Area were completed by Stantec during the breeding bird season on May 25, June 8, and June 23, 2022, using a standard 10-minute, point-count approach with an unlimited radius, except where adjacent count circles overlap. These methods are consistent with previously approved methods by the Canadian Wildlife Service (CWS). All birds heard or seen, with the assistance of binoculars, during the ten-minute point-count survey were recorded. The highest level of breeding evidence observed (e.g., carrying food, nest with young, etc.), as defined in the *Ontario Breeding Bird Atlas* (Cadman et al. 2007), was recorded at each survey station for each species encountered. The total number of individuals of each species was recorded to develop an understanding of population dynamics in the proposed Study Area.

Four breeding bird survey stations were established in the Study Area. Stations 1 and 2 were situated within manicured landscape features associated with the existing buildings on Site, while stations 3 and 4 were situated within the woodland and meadow features, northwest of the Site. Survey stations are shown on **Figure 5, Appendix A**.

See **Table 3.1** for breeding bird survey dates and environmental conditions.

3.3.8 General Wildlife Habitat Assessment

General wildlife habitat assessments were completed in the Study Area concurrently during each of the surveys above. These assessments focused on the identification of wildlife habitat features, specifically Significant Wildlife Habitat (SWH) features as outlined in the MNRF's *Criteria Schedules for Ecoregion 6E* (MNRF 2015). When encountered, these features were identified, recorded, and assessed for significance. All wildlife species were observed by sight, sound and/or through distinctive signs (e.g., tracks, scat).

Wildlife habitat suitability assessments were also completed for SARA and ESA protected species that may occur in the area, including species identified in the NHIC database and Ontario wildlife atlases during the background data review process.

See **Table 3.1** for general wildlife habitat assessment survey dates and environmental conditions.

3.3.9 Significant Wildlife Habitat Assessment

To provide a comprehensive approach to identifying and evaluating SWH in the Study Area, significance has been determined based on guidance provided in the *Natural Heritage Reference Manual* (NHRM) (MNR 2010) and criteria from the *Significant Wildlife Habitat EcoRegion 6E Criterion Schedule* (MNRF 2015) with support from the *Significant Wildlife Habitat Technical Guide* (SWHTG) (MNR, 2000) as appropriate. The NHRM divides wildlife habitat into four broad categories:

1. Habitats of seasonal concentrations of animals
2. Rare vegetation communities or specialized habitats for wildlife

3. Habitats of species of conservation concern (SOCC) (excluding endangered and threatened species)
4. Animal movement corridors

For the purpose of this EIS, SOCC are defined as:

- Special concern species on the SARO list
- Species with provincial ranks of S1 to S3

Sub-national (Provincial) ranks (S ranks) are used by the NHIC to set protection priorities for rare species and vegetation communities. They are based on the number of occurrences in Ontario and are not legal designations. Species with provincial ranks of S1 to S3 are tracked by the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) and considered SOCC. Provincial S ranks are defined as follows:

S1: Critically imperiled; usually fewer than 5 occurrences
S2: Imperiled; usually fewer than 20 occurrences
S3: Vulnerable; usually fewer than 100 occurrences
S4: Apparently secure; uncommon but not rare, usually more than 100 occurrences
S5: Secure, common, widespread, and abundant

See **Table 3.1** for SWH assessment survey dates and environmental conditions.

3.3.10 Species at Risk Wildlife Habitat Assessment

SAR wildlife habitat suitability assessments were completed for SARA and ESA protected species that may occur in the area (e.g., SAR *Myotis* bats) including species identified in the NHIC database and Ontario wildlife atlases during the literature review process.

For the purpose of this EIS, SAR are defined as:

- Endangered and threatened species that are on the Species at Risk in Ontario (SARO) list and protected by the provincial ESA
- Endangered and threatened species that are listed on Schedule 1 of the federal SARA and protected by the SARA

See **Table 3.1** for SAR wildlife habitat assessment survey dates and environmental conditions.

4 Existing Ecological Conditions

4.1 General Overview of Site Conditions

4.1.1 Geology and Topography

Regional physiography is influenced by the historic Ottawa River valley and varies from clay plain to sand plain with extensive drumlins to the south (Chapman and Putnam 1984). The surficial geology of the Study Area consists primarily of fine-textured glaciomarine deposits (massive-well laminated) (Ontario Geological Survey 2022) (**Figure 3, Appendix A**).

4.1.2 Landscape Ecology

The Study Area is situated in the Kemptville Ecodistrict (6E-12) within the Lake Simcoe-Rideau Ecoregion. Over one third (37%) of this ecodistrict is under natural forest cover and an additional 22% of land cover is wetland, primarily swamp. Land use in Ecodistrict 6E-12 is predominantly agricultural (60%); secondary uses are conservation land (6%), settlement or other developed lands (3%), and aggregate extraction (0.8%) (Henson and Brodribb 2005).

The Study Area is located in the Upper St. Lawrence section of the Great Lakes-St. Lawrence Forest Region, characterized by predominantly deciduous forests, dominated by sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), red maple (*Acer rubrum*), yellow birch (*Betula papyrifera*), basswood (*Tilia americana*), white ash (*Fraxinus americana*), largetooth aspen (*Populus grandidentata*), red oak (*Quercus rubra*), and bur oak (*Quercus macrocarpa*). Other tree species occurring in the Upper St. Lawrence section include white oak (*Quercus alba*), green ash (*Fraxinus pennsylvanica*), grey birch (*Betula populifolia*), rock elm (*Ulmus thomasii*), blue-beech (*Carpinus caroliniana*), and bitternut hickory (*Carya cordiformis*). White elm is typically prominent in contemporary settled landscapes. Less frequent species in this section include butternut (*Juglans cinerea*), eastern cottonwood (*Populus deltoides*), slippery elm (*Ulmus rubra*), black maple (*Acer nigrum*), silver maple (*Acer saccharinum*), and black ash (*Fraxinus nigra*). Coniferous trees such as eastern hemlock (*Tsuga canadensis*), white spruce (*Picea glauc*a), and balsam fir (*Abies balsamea*) occur frequently on shallow, acidic, or eroding materials. Eastern white pine (*Pinus strobus*), red pine (*Pinus resinosa*), black spruce (*Picea mariana*), and eastern white cedar (*Thuja occidentalis*) may be found where soil conditions are favorable (Rowe 1972).

Schedule C11-C (East) of the OP identifies the Study Area as an Urban Area with no surrounding natural heritage features and/or natural heritage systems. Schedule C12 of the OP identifies the northwestern portion of the Study Area as Park. The Park feature within the Study Area is part of and connected to a larger linear Park feature, which extends beyond the Study Area boundaries. Natural Heritage Features (NHF) occur north and south of the Park section within the Study Area but are beyond 120 m. It is anticipated that this corridor would not provide habitat for suitable wildlife connectivity or a linkage feature as it is fragmented by arterial roadways, recreation parklands and their associated facilities.

4.1.3 Surface Hydrology

There are no identified and/or mapped surface water features within the Study Area. A description of unmapped surface hydrological features observed in the Study Area during Stantec's natural heritage field program is provided below in **Section 4.2.2**.

4.1.4 Natural Heritage Features

Using the provincial Land Information Ontario (LIO) (NDMNRF 2022b) database, natural heritage features (e.g., wetlands, watercourses) are absent from the Study Area. However, a deciduous woodland with an area of low topographical relief occurs in the northwest portion of the Study Area.

4.1.5 Species at Risk

A search of the NHIC's database identified the following two 1 x 1 km squares as overlapping the Study Area: 18VR4825 and 18VR4925. Butternut (endangered) was the only species protected under the ESA with a record of occurrence within the local landscape of the Study Area.

Further desktop background review of online biodiversity atlases resulted in a total of 14 species that are either federally or provincially listed as threatened or endangered that have been previously documented as historically occurring or have the potential to occur within the Study Area. They are summarized below in **Table 4.1**.

Table 4.1 Species at Risk with Potential to Occur in the Study Area

Species	Status		Potential Habitat within Site (Y/N)	Potential Habitat within 120 m of Site (Y/N)
	Ontario ESA	Federal SARA, Schedule 1		
Plants				
Butternut (*Juglans cinerea*)[1]	Endangered	Endangered	N	N
Reptiles and Amphibians				
Blanding's turtle (*Emydoidea blandingii*) [2]	Threatened	Threatened	N	N
Birds				
Common nighthawk (*Chordeiles minor*)[3,4]	Special Concern	Threatened	N	N
Chimney swift (*Chaetura pelagica*)[3,4]	Threatened	Threatened	N	N
Golden eagle (*Aquila chrysaetos*)[3]	Endangered	Not at Risk	N	N
Bank swallow (*Riparia riparia*)[4]	Threatened	Threatened	N	N
Barn swallow (*Hirundo rustica*)[4]	Threatened	Threatened	Y	N
Wood thrush (*Hylocichla mustelina*)[4]	Special Concern	Threatened	N	N
Bobolink (*Dolichonyx oryzivorus)*[4]	Threatened	Threatened	N	N

Table 4.1 Species at Risk with Potential to Occur in the Study Area

Species	Status		Potential Habitat within Site (Y/N)	Potential Habitat within 120 m of Site (Y/N)
	Ontario ESA	Federal SARA, Schedule 1		
Eastern meadowlark (*Sturnella magna*)[4]	Threatened	Threatened	N	N
Mammals				
Eastern small-footed myotis (*Myotis leibii*) [5]	Endangered	No Status	Y	Y
Little brown myotis (*Myotis lucifungus*) [5]	Endangered	Endangered	Y	Y
Northern myotis (*Myotis septentrionalis*) [5]	Endangered	Endangered	Y	Y
Tri-colored bat (*Perimyotis subflavus*) [5]	Endangered	Endangered	Y	Y

[1] NHIC (NDMNRF 2022a)

[2] Ontario Reptile and Amphibian Atlas (Ontario Nature 2020b)

[3] eBird Canada (eBird 2022)

[4] Ontario Breeding Bird Atlas (Cadman et al. 2007)

[5] Atlas of the Mammals of Ontario (Dobbyn et al. 1994)

4.1.6 Species of Conservation Concern

Completed in conjunction with the SAR desktop background review, a total of 9 SOCC were identified that have been previously documented as historically occurring and have the potential to occur within the Study Area. They are summarized below in **Table 4.2**. Provincially rare lichen of blistered jellyskin (*Leptogium corticola*) and cupped fringe lichen (*Heterodermia hypoleuca*), both ranked as S2 (imperiled; usually fewer than 20 occurrences), also have records of occurrence. Such records are understood to be historical due the City's ongoing expansion and urban development and therefore, suitable habitat is no longer present.

Two of these species have been considered to have suitable habitat within the Study Area.

Table 4.2 Species of Conservation Concern with Potential to Occur within the Study Area

Species	Status			Potential Habitat and/or Species Observed within Site (Y/N)	Potential Habitat and/or Species Observed within 120 m of Site (Y/N)
	SARO List	SARA (Schedule 1)	Provincial S Rank		
Invertebrates					
Monarch (*Danaus plexippus*)[2]	Special Concern	Special Concern	S2N,S4B	Y	Y
Reptiles					
Snapping turtle (*Chelydra serpentina*)[3]	Special Concern	Special Concern	S3	N	N

Table 4.2 Species of Conservation Concern with Potential to Occur within the Study Area

Species	Status			Potential Habitat and/or Species Observed within Site (Y/N)	Potential Habitat and/or Species Observed within 120 m of Site (Y/N)
	SARO List	SARA (Schedule 1)	Provincial S Rank		
Eastern musk turtle (*Sternotherus odoratus)*[3]	Special Concern	Special Concern	S3	N	N
Midland painted turtle (*Chrysemys picta marginata)*[3]	Not at Risk	Special Concern	S5	N	N
Northern map turtle (*Graptemys geographica)*[3]	Special Concern	Special Concern	S3	N	N
Eastern milksnake (*Lampropeltis triangulum)*[3]	Not at Risk	Special Concern	S3	Y	Y
Birds					
Eastern wood-pewee (*Contopus virens*)[4,5]	Special Concern	Special Concern	S4B	N	N
Bald eagle (*Haliaeetus leucocephalus*)[4]	Special Concern	Not at Risk	S4B,S2N	N	N
Peregrine falcon (*Falco peregrinus*)[4,5]	Special Concern	Special Concern	S3B	N	Y

[1] NHIC (NDMNRF 2022a)

[2] Ontario Butterfly Atlas (Ontario Nature 2020a)

[3] Ontario Reptile and Amphibian Atlas (Ontario Nature 2020b)

[4] eBird Canada (eBird 2022)

[5] Ontario Breeding Bird Atlas (Cadman et al. 2007)

4.2 Field Investigations

4.2.1 Ecological Land Classification and Vegetation

Vegetation communities located within the Study Area were delineated into ELC units (**Figure 4, Appendix A**). Four naturalized vegetation communities were identified in the Study Area. Descriptions of these communities are found in **Table 4.3** below. Adjacent land uses (e.g., transportation, parkland) and anthropogenically influenced communities within the Study Area (e.g., institutional, commercial and residential development) were identified by air photo interpretation and confirmed during a roadside reconnaissance and are not described further in **Table 4.3**.

Table 4.3 Ecological Land Classification Vegetation Types

ELC TYPE	Community Description
Meadow (ME)	
Mixed Meadow (MEM)	
Mixed Meadow (MEM)	This mixed meadow community was associated with the surrounding deciduous thicket (THD) and was observed to be succeeding towards a thicket community. The MEM was observed to be dominated by reed-canary grass, goldenrod species, and aster species. Common milkweed (*Asclepias syriaca*) was also observed occasionally throughout.
Thicket (TH)	
Deciduous Thicket (THD)	
Deciduous Thicket (THD)	This deciduous thicket community located in the northern portion of the Study Area is associated with the City designated Park feature and includes a trail network. Shrub species were variable in composition and abundance throughout as a result of previous disturbances. They included, Staghorn sumac (*Rhus typhina*), red-osier dogwood (*Cornus sericea*), willow species (*Salix spp*.), European buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Frangula alnus*), and elderberry (*Sambucus sp.*). The understorey and ground layer included, reed-canary grass (*Phalaris arundinacea*), goldenrod species (*Solidago spp*.), aster species (*Aster spp*.), and wild parsnip (*Pastinaca sativa*) to name a few.
Woodland (WO)	
Deciduous Woodland (WOD)	
Fresh-Moist Deciduous Woodland Ecosite (WODM5)	The canopy and sub-canopy of this low-lying deciduous woodland feature was abundant with green ash (either alive, declining, or dead due to emerald ash borer (*Agrilis planipennis*), trembling aspen (*Populus tremuloides*), *Salix* species, and Manitoba maple (*Acer negundo*), and American elm (*Ulmus americana*). The understorey was heavily vegetated with non-native/invasive species of European and glossy buckthorn and dog-strangling vine (*Vincetoxicum nigrum*). Red clover (*Trifolium pratense*), common burdock (*Arctium minus*), and *Carex* species occurred in the ground layer in sparse abundance. This community exhibited a high amount of non-native and pioneer species, thereby representing a disturbed vegetation community due to past influences.
Marsh (MA)	
Cattail Graminoid Mineral Meadow Marsh Type (MAMM1-2)	This isolated MAMM1-2 vegetation community was observed in the middle of the WODM5 community an represented an area of low topographical relief. Narrow-leaved cattail (*Typha angustifolia*) and broad-leaved cattail (*Typha latifolia*) were dominant species in this vegetation type.

The vascular plant species observed are considered to be either native, non-native, and common in Ontario. No provincial or federal SAR/SOCC were recorded during the vegetation inventory.

See **Figure 4, Appendix A** for ELC communities within the Study Area. A partial list of plant species recorded in the Study Area during ELC surveys is provided in **Appendix B**.

Stantec completed a tree inventory survey in September 2021 to satisfy the City's requirements of a Tree Conservation Report, which is a supporting document to this EIS. Results of the survey are included and summarized under a separate cover and entitled; *Tree Conservation Report – 1495 Heron Road* (Stantec 2022). Scots pine (*Pinus sylvestris*) trees were the dominant tree observed at the Site and accounted for 23.2% of all tree species identified in the tree inventory. Red pine (*Pinus resinosa*) was the second most abundant species (17.6%) with Norway Maple (*Acer platanoides*), red maple (*Acer rubrum*), silver maple (*Acer saccharrinum*), and sugar maple (*Acer saccharum*) accounting for a large portion of the remaining percentage within the Site.

4.2.2 Aquatic Features Identification Survey

A small, isolated wetland feature identified as a cattail graminoid meadow marsh (MAMM1-2) was present within the Study Area and was within an area of low topographical relief in the middle of the deciduous woodland (WODM5) vegetation community in the northwest portion of the Study Area. Likewise, a surface runoff feature, void of water at the time of field investigations, was also observed running throughout the WODM5 community. Photos have been documented of the feature and are included in **Appendix D**. This feature has not been previously mapped by LIO, NHIC, or geoOttawa and is not considered as an aquatic feature.

4.2.3 Butternut Search

No butternut trees were observed within the Study Area during the extent of Stantec's 2021 and 2022 natural heritage field program.

4.2.4 Breeding Amphibian Survey

Wetland features with the potential to support breeding amphibians were present within the Study Area in the form of a cattail graminoid meadow marsh (MAMM1-2) and vernal pools within the deciduous woodland (WODM5). However, no amphibians were seen or heard during the initial survey on April 26, 2022 or on subsequent field visits to the Site.

See **Figure 5, Appendix A** for the breeding amphibian survey location and observations in the Study Area.

4.2.5 SAR Bat Maternity Roost Habitat Assessment

Fifteen planted trees within the Site were observed to have suitable SAR bat roost habitat characteristics. Four trees contained cavities high up (≥10m) in the main trunk, while the remainder of the trees only contained peeling bark. Potential bat habitat trees are described below in **Table 4.4** and shown on **Figure 6, Appendix A**.

No SAR bat species protected under the federal SARA (Schedule 1) and/or the provincial ESA were observed in the Study Area during Stantec's diurnal SAR bat maternity roost habitat suitability surveys.

Table 4.4 Suitable SAR Bat Maternity Roosting Trees

Tree ID	Latin Name	Common Name	Health	Cavities	High Cavity	Peeling Bark	Leaf Clusters	Site or Study Area (50 m of Site)
B01	*Acer saccharinum*	Silver maple	Good (full canopy)	No	No	Yes	No	Site
B02	*Acer saccharinum*	Silver maple	Good (full canopy)	No	No	Yes	No	Site
B03	*Acer saccharinum*	Silver Maple	Good (full canopy)	No	No	Yes	No	Site
B04	*Acer saccharinum*	Silver maple	Good (full canopy)	No	No	Yes	No	Site
B05	*Acer saccharinum*	Silver Maple	Good (full canopy)	No	No	Yes	No	Site
B06	*Acer saccharinum*	Silver Maple	Good (full canopy)	No	No	Yes	No	Site
B07	*Acer saccharinum*	Silver Maple	Good (full canopy)	No	No	Yes	No	Site
B08	*Acer saccharinum*	Silver Maple	Good (full canopy)	Yes	Yes	Yes	No	Site
B09	*Acer saccharinum*	Silver Maple	Good (full canopy)	Yes	Yes	Yes	No	Site
B10	*Acer saccharinum*	Silver Maple	Good (full canopy)	No	No	Yes	No	Site
B11	*Acer saccharinum*	Silver Maple	Good (full canopy)	No	No	Yes	No	Site
B12	*Acer saccharinum*	Silver Maple	Good (full canopy)	Yes	Yes	Yes	No	Site
B13	*Catalpa speciosa*	Northern Catalpa	Good (full canopy)	Yes	No	No	No	Site
B14	*Unknown species*	Unknown species	Good (full canopy)	No	No	Yes	No	Site
B15	*Quercus rubra*	Red Oak	Fair (some dead branches, but >50% healthy canopy)	No	No	Yes	Yes	Site

4.2.6 SAR Bat Acoustic Monitoring

Due to a conflict in project timelines and survey timing requirements (i.e., surveys to be conducted in June as per the MNRF 2017 protocol), acoustic analysis of bat species identification could not be completed at this stage of the Project. As such, results of the SAR bat acoustic monitoring will be discussed in an addendum to this EIS at a later date.

4.2.7 Breeding Birds

A total of 30 species of birds were recorded in the Study Area during Stantec's breeding bird surveys. All species observed are ranked S5 (common and secure in the province) or S4 (apparently secure in the province; uncommon but not rare), with the exception of European starling (*Sturnus vulgaris*) and House finch (*Haemorhous mexicanus)*, which are introduced species and ranked SNA.

No bird species protected under the federal SARA (Schedule 1) and/or the provincial ESA were observed in the Study Area during Stantec's breeding bird surveys.

See **Figure 5, Appendix A** for breeding bird survey locations in the Study Area. See **Appendix C** for a complete list of bird species observed during Stantec's 2022 breeding bird surveys.

4.2.8 General Wildlife Habitat Assessment

4.2.8.1 Mammals

During Stantec's 2022 natural heritage field program, observations of mammals were recorded as incidental observations in the Study Area. The following mammal species were observed: red squirrel (*Tamiasciurus hudsonicus*), eastern gray squirrel (*Sciurus carolinensis*), and eastern cottontail (*Sylvilagus floridanus*). All of these mammal species are ranked S5 (common and secure in the province).

No mammal species protected under the federal SARA (Schedule 1) and/or the provincial ESA were observed in the Study Area during Stantec's 2021/2022 field program.

4.2.8.2 Reptiles

No reptile species protected under the federal SARA (Schedule 1) and/or the provincial ESA were observed in the Study Area during Stantec's 2021/2022 natural heritage field program.

5 Significant Natural Heritage Features

5.1 Significant Woodlands

The woodland feature within the Study Area was assessed for significance by following the *Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment* (2019b), as outlined in the City of Ottawa Official Plan Amendment No. 179 (Section 2.4.4 of the Official Plan (City of Ottawa, 2003)). As per City requirements, if a woodland meets any of the below criteria than the woodland is deemed significant.

1. Any treed area meeting the definition of woodlands in the *Forestry Act*, R.S.O 1990, c.F.26 or forest in Ecological Land Classification for southern Ontario
2. In the rural area, meeting any one of the criteria in the *Natural Heritage Reference Manual* (MNR 2010), as assessed in a subwatershed planning context and applied in accordance with Council-approved guidelines, where such guidelines exist
3. In the urban area, any area 0.8 hectares in size or larger, supporting woodland 60 years of age and older at the time of evaluation

The Study Area is located in the urban area, therefore, Criteria 3 was applied to the WODM5 vegetation community in the northwest corner of the Study Area. Through desktop analysis and historical images provided by geoOttawa, it was determined that this woodland is less than 60 years of age and, therefore, is not considered to have met the City's criteria for significance as outlined above.

5.2 Significant Wetlands

There are no Provincially Significant Wetlands in the Study Area.

5.3 Significant Valleylands

There are no Significant Valleylands in the Study Area.

5.4 Significant Wildlife Habitat

Wildlife habitat includes habitat for SAR listed as Special Concern under the ESA, are ranked as provincially rare (S1-S3) in the four categories of SWH. The *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (MNRF 2015) provide descriptions of wildlife habitats and guidance on criteria for determining the presence of candidate and confirmed wildlife habitats. Results of targeted surveys for amphibians and birds discussed above were used in the assessment where appropriate. Presence or absence of candidate habitats in the Study Area are discussed below.

The NHRM divides wildlife habitat into four broad categories:

1. Habitats of seasonal concentrations of animals

2. Rare vegetation communities or specialized habitats for wildlife
3. Habitats of species of conservation concern (excluding endangered and threatened species)
4. Animal movement corridors

The presence or absence of candidate habitats in the Study Areas is discussed below.

5.4.1 Seasonal Concentration Areas

Seasonal concentration areas are sites where large numbers of a species gather together at one time of the year, or where several species congregate. Only the best examples of these concentration areas are typically designated as SWH. The potential for seasonal concentration areas to occur in the Study Area is discussed below and further assessed in **Table 5.1**.

Table 5.1 Seasonal Concentration Area Determination

Habitat Type	Habitat Features	Candidate SWH in the Study Area
Bat hibernacula	Abandoned mine shafts, underground foundations, caves, and crevices.	None
Deer wintering congregation areas	Deer yards are mapped by NDMNRF.	None
Colonially – nesting bird breeding habitat (bank and cliff)	Eroding banks, sandy hills, steep slopes, rock faces or piles.	None
Colonially – nesting bird breeding habitat (trees/shrubs)	Dead trees in large marshes and lakes, flooded timber, and shrubs, with nests of colonially nesting heron species.	None
Colonially – nesting bird breeding habitat (ground)	Rock islands and peninsulas in a lake or large river.	None
Waterfowl stopover and staging areas	Field with evidence of annual spring flooding from meltwater or runoff; aquatic habitats such as ponds, marshes, lakes, bays, and watercourses used during migration, including large marshy wetlands.	None
Shorebird migratory stopover area	Beaches and un-vegetated shorelines of lakes, rivers, and wetlands.	None
Raptor wintering areas	Combination of fields and woodland (>20 ha).	None
Bat maternity colonies	Mixed and deciduous forests and swamps with large diameter dead or dying trees with cavities.	Yes. See **Section 4.2.5**.
Reptile hibernacula	Rock piles or slopes, stone fences, crumbling foundations.	None
Turtle wintering area	Permanent waterbodies and large wetlands with sufficient depth and dissolved oxygen.	None
Migratory butterfly stopover area	Meadows and forests that are a minimum of 10 ha and are located within 5 km of Lake Erie or Lake Ontario.	None
Landbird migratory stopover area	Woodlands of a minimum size located within 5 km of Lake Erie or Lake Ontario.	None

5.4.2 Rare Vegetation Communities or Specialized Habitats of Wildlife

Rare or specialized habitats are defined as separate components of SWH. Rare habitats are habitats with vegetation communities that are considered rare (S1-S3) in the province. These habitats are generally at risk and may support wildlife species that are considered significant. Specialized habitats are microhabitats that are critical to some wildlife species. Candidate rare or specialized habitats are discussed below and further assessed in **Table 5.2**.

No rare vegetation communities or specialized habitat for wildlife were observed within the Study Area during Stantec's field program.

Table 5.2 Rare of Specialized Habitats Determination

Habitat Type	Habitat Features	Candidate SWH in the Study Area
Sand barren, alvar, cliffs and talus slopes	Sand barren, Alvar, Cliff and Talus ELC Community Classes, and other areas of exposed bed rock and patchy soil development, near vertical exposed bedrock and slopes of rock rubble.	None
Prairie and savannah	Open canopy habitats (tree cover < 60%) dominated by prairie species.	None
Old growth forest	Relatively undisturbed, structurally complex, dominant trees > 100 years' old, woodland > 30 ha with at least 10 ha of interior habitat.	None
Other rare vegetation communities	Vegetation communities ranked S1-S3 by the NHIC.	None
Waterfowl nesting areas	Upland habitats within 120 m of wetlands > 0.5 ha.	None
Bald eagle and osprey nesting, foraging and perching habitat	Treed communities adjacent to rivers, lakes, ponds, and other wetlands with stick nests of bald eagle or osprey.	None
Woodland raptor nesting habitat	Forested ELC communities > 30 ha with 10 ha of interior habitat.	None
Turtle nesting areas	Exposed soil, including sand and gravel in open sunny areas within 100 m of a wetland.	None
Seeps, springs, and mineral licks	Any forested area with groundwater at surface within the headwaters of a stream or river system	None
Amphibian breeding habitat (woodland and wetland)	Treed uplands with vernal pools and wetland ecosites.	None
Woodland area sensitive breeding bird habitat	Large mature forest stands, woodlots > 30 ha and > 200 m from the forest edge	None

5.4.3 Habitats of Species of Conservation Concern (Excluding Endangered and Threatened Species)

Habitat for SOCC includes four types of species: those that are rare, those whose populations are significantly declining, those that have been identified as being at risk to certain common activities, and those with relatively large populations in Ontario compared to the remainder of the globe. Candidate habitats for SOCC are discussed below and further assessed in **Table 5.3**.

Refer to **Table 4.2** for an assessment of SOCC that have been identified as potentially occurring in the Study Area.

5.4.3.1 Plants

Besides the provincially endangered butternut tree, a review of the NHIC database, available background documentation as well as vegetation field data did not identify any additional records of plant SOCC ranked S1-S3 within 1 km of the Study Area.

5.4.3.2 Birds

A review of available background documentation identified three SOCC with known records within 10 km of the Study Area. They include bald eagle, peregrine falcon and eastern wood-pewee. Potentially suitable habitat was not observed within the Study Area for any of these SOCC species.

5.4.3.3 Reptiles

The Ontario Reptile and Amphibian Atlas (Ontario Nature 2020b) identified the following turtles as occurring within square 18TVR42; eastern musk turtle, midland painted turtle, northern map turtle, and snapping turtle. The eastern milksnake (federally listed as special concern) also had a record of occurrence overlapping the Study Area.

No provincially significant reptile species were observed in the Study Area during the 2022 natural heritage field program. Open fields and woodland edges are present and may provide suitable habitat for eastern milksnake, if present, within the Study Area.

5.4.3.4 Insects

Monarch (S4B,S2N) was identified as potentially occurring within the Study Area by the Ontario Butterfly Atlas Online (Ontario Nature 2020a). Common milkweedstems were observed throughout the meadow/thicket community (i.e., MAM/THD), however, no observations of monarch were made during Stantec's 2022 field program.

Table 5.3 Habitat for Species of Conservation Concern Determination

Habitat Type	Habitat Features	Candidate SWH in the Study Area
Open country bird breeding habitat	Large grasslands and fields (>30 ha).	None
Shrub/early successional bird breeding habitat	Large shrub and thicket habitats (>10 ha).	None
Marsh bird breeding habitat	Wetlands with shallow water with emergent aquatic vegetation.	None
Terrestrial Crayfish	Wet meadows and edges of shallow marshes.	None

5.4.4 Wildlife Movement Corridors

The NHRM defines animal movement corridors as habitats that link two or more habitats that are critical to the maintenance of a population of a particular species or group of species. As such, the emphasis is on the linkage function between habitats, as opposed to the habitats themselves.

By applying the above definition to the ecological context of the Study Area, it has been determined that animal movement corridors are absent from the Study Area. Significant habitat associated with deer and/or amphibians were not identified to occur based on the results of background review and survey results, respectively. The Site is also constrained by urban barriers such as, transportation corridors and recreational parks. Candidate animal movement corridors are further assessed in **Table 5.4**.

Table 5.4 Animal Movement Corridor Determination

Habitat Type	Habitat Features	Candidate SWH in the Study Area
Deer movement corridors	Associated with confirmed significant deer wintering habitat identified by the NDMNRF.	None
Amphibian movement corridors	Associated with confirmed significant amphibian breeding habitat.	None

5.5 Areas of Natural and Scientific Interest

There are no Areas of Natural and Scientific Interest (ANSI) within the Study Area.

5.6 Species At Risk (Threatened and Endangered Species)

Under the PPS (OMAH 2020) development and site alteration are prohibited in significant habitat of threatened and endangered species.

Based on a review of the habitat requirements for the species identified in **Table 4.1**, as prescribed in the SWHTG (MNR 2000), and the available habitats in the Study Area, it was determined that potential habitat and/or direct observations was absent in the Study Area for the following species. Therefore, they are no longer considered as potential to occur:

- Butternut (specimens not observed throughout the Study Area during field program)
- Blanding's turtle (due to the absence of suitable wetlands)
- Common nighthawk (due to the absence of suitable gravel rooftops)
- Golden eagle (due to the absence of suitable nesting habitat of mature interior forest)
- Bank swallow (due to the absence of suitable nesting habitat of vertical sandy banks)
- Bobolink (due to the absence of suitable grassland habitat)
- Eastern meadowlark (due to the absence of suitable grassland habitat)
- Wood thrush (due to the absence of suitable woodland/forest habitat)

Those SAR that remains as potential to occur based on occurrence records and suitable habitat within the Study Area include:

- Barn swallow
- Little brown myotis
- Northern myotis
- Eastern small-footed myotis
- Tri-colored bat

5.7 Significant Natural Heritage Features Summary

Table 5.5 provides a summary of the natural heritage features within the Study Area.

Table 5.5 Summary of Significant Natural Heritage Features in the Study Area

Natural Heritage Features	Species/Feature Observed within the Study Area	Habitat Present within the Study Area
Habitat of endangered and threatened species • Barn swallow • Suitable maternity trees for endangered bats	Y	Y

Table 5.5 Summary of Significant Natural Heritage Features in the Study Area

Natural Heritage Features	Species/Feature Observed within the Study Area	Habitat Present within the Study Area
Significant Wildlife Habitat		
1. Seasonal Concentration Areas – Bat maternity colonies	Y	Y
2. Rare Vegetation Communities or Specialized Habitats	N	N
3. Habitats of Species of Conservation Concern – Eastern milksnake – Monarch	N	Y
4. Animal movement corridors	N	N
Significant Natural Heritage Features		
Significant Wetlands	N	N
Significant Woodlands	N	N
Significant Valleylands	N	N
Areas of Natural & Scientific Interest	N	N

There are three identified natural heritage features occurring within the Study Area:

1. Habitat for threatened and endangered species was observed throughout the Site and include habitat for the following:
   a. Barn swallow and SAR bat maternity colonies
2. Significant Wildlife Habitat:
   a. Seasonal concentration area for SAR bat maternity colonies
   b. Potential habitat for species of conservation concern (eastern milksnake, and monarch) was observed during Stantec's 2021/2022 surveys throughout the Study Area.

6 Description of the Proposed Development

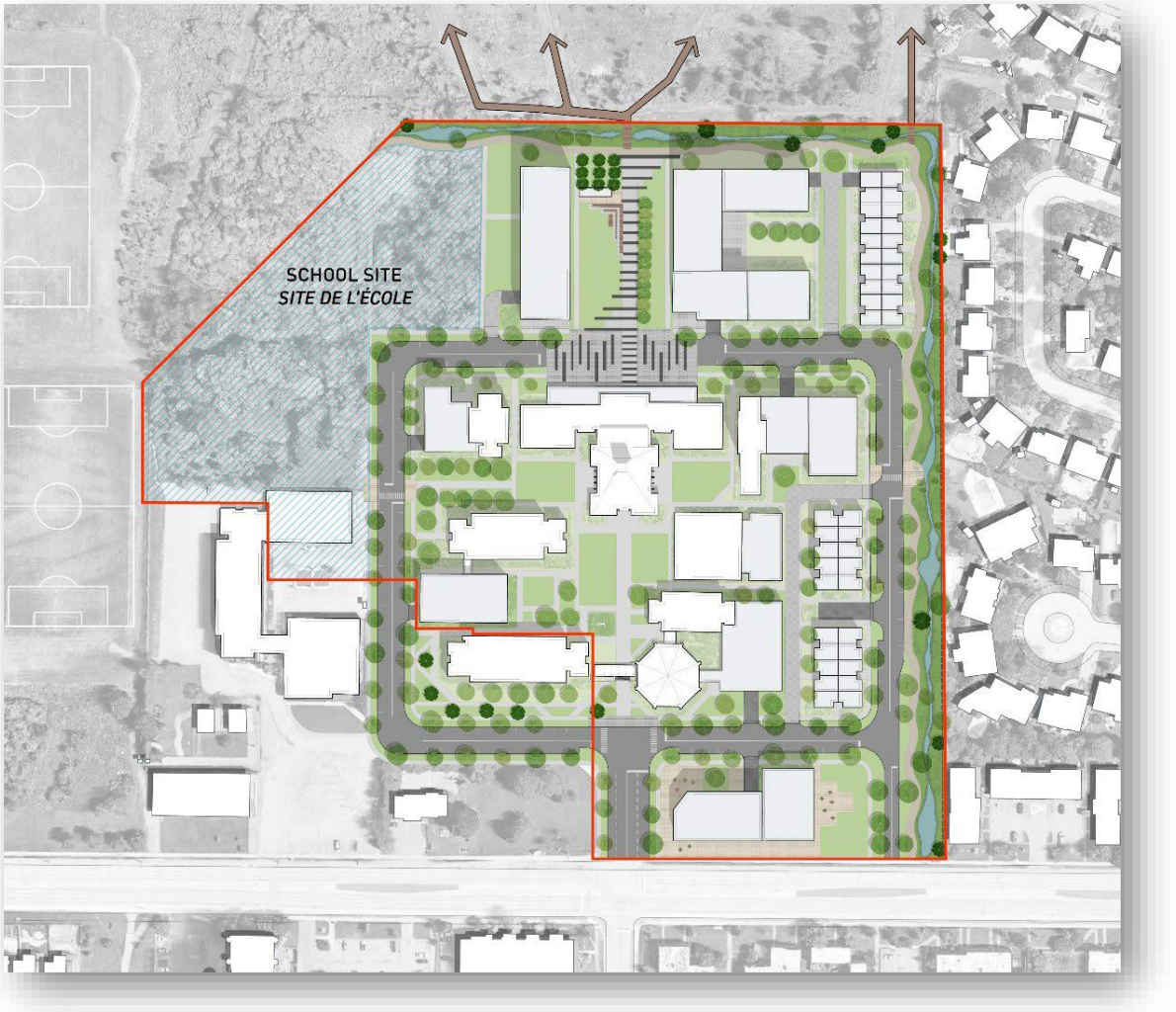
For this project, CLC's intent is to redevelop the property located at 1495 Heron Road into a mixed-used community combining residential, commercial, retails, and open spaces. Although the proposed development is intended to be predominantly a medium-density residential neighborhood with low and mid-rise housing, the Site is reimagined as a vibrant mixed-use community with many open spaces framed by nature through a new blue-green corridor along the eastern and northern property lines. The location of the blue-green corridor along the eastern property line will provide the opportunity to preserve and protect the neighboring natural areas, existing wildlife habitat and mature trees.

Building upon the campus footprint, nearly all the heritage buildings are proposed to be rehabilitated and reused with additional buildings to be built; this strategy will preserve and enhance the site's original form and character.

Space for a future elementary school has been set aside within the proposed development on the northwestern edge of the property.

The Subdivision Plan developed for this project was used to determine natural area preservation, if possible and to recommend mitigation measures to reduce impacts that the proposed redevelopment may have on natural areas within the Site. **Figure 6.1** represents a rendering of the Development Plan for the property providing details of the Master Plan for the Subject Site.

Figure 6.1 Site Rendering of 1495 Heron Road Redevelopment



7 Potential Impacts of Development and Mitigation Recommendations

The environmental effects identified as being of potential concern as a result of the proposed development are identified and discussed in this section. Potential direct and indirect impacts, as well as long-term impacts, have been considered separately.

The impact assessment and recommendations for mitigation were developed in consideration of the policies that pertain to the natural heritage features identified within the Study Area.

7.1 Direct Impacts

In order to facilitate construction of the 1495 Heron Road Redevelopment Project, extensive vegetation removal and site grading will be required within the Site boundary, specifically within the woodland/marsh feature northwest of the Site. Direct impacts are discussed below, including loss to vegetation cover and wildlife and wildlife habitat as a result of the anticipated development impacts.

As outlined in **Table 5.5** above, the following significant natural heritage features have been identified as potential to occur within the Site and are anticipated to be directly impacted:

- Habitat of endangered and threatened species (i.e., barn swallow, SAR bat maternity roost)
- Seasonal concentration areas (i.e., candidate SAR bat maternity roosts)
- Habitats of SOCC (i.e., eastern milksnake (federally listed as special concern) and monarch)

Construction related impacts including sedimentation and erosion, encroachment outside of the development footprint, and direct (i.e., mortality) or indirect (i.e., noise, barriers to movement) impacts to wildlife may also occur, although they are expected to be temporary and short-term in duration.

Feature-specific impacts are described below with mitigation measures presented in **Section 7.4**.

7.1.1 Vegetation Cover and Wetlands

To accommodate the construction of the proposed school site, rehabilitation of existing buildings and new development of residential and commercial space, it is anticipated that portions of the Site and associated vegetation communities will be cleared and graded. The impacts associated with this clearing will include:

- The permanent loss of or disturbance to vegetation cover is approximately 1.4 ha within the WODM5 vegetation community
- Permanent loss of or disturbance of approximately 0.08 ha of vegetation cover within the MAMM1-2 vegetation community
- Permanent loss of landscaped/planted mature trees and shrubs within the Site

- Accidental damage or loss of trees and other vegetation features because of site alteration or construction activities
- Permanent loss of habitat for general wildlife
- Erosion and sedimentation into adjacent vegetation communities

7.1.2 Species at Risk

Proposed re-development activities within the Site boundary have the potential to impact SAR that have been identified above as potentially occurring, based on field observations and habitat characteristics (e.g., SAR bats). The SAR species identified above in **Table 4.1** have been screened for relevance to the Study Area and are carried forward below. A summary of potential interactions with SAR that have the potential to occur is provided below in **Table 7.1**.

Table 7.1 Potential SAR Interactions within the Study Area

Species	Potential Interactions
Barn swallow	Buildings with suitable nesting areas were identified to occur within the Site. No barn swallow individuals or their nests were present within the Site at the time of field investigations. However, barn swallows may become present in subsequent breeding seasons and have potential to be impacted by the proposed works as existing buildings may be demolished or altered.
Eastern small-footed myotis Little brown myotis Northern myotis Tri-colored bat	Fifteen potentially suitable SAR bat maternity roost trees were identified within the Site. Additionally, the existing buildings on the Site have the potential to provide roosting opportunities for SAR bats, if present. Vegetation clearing and site grading activities within the Site have the potential to directly impact individuals if present. Vegetation clearing and site grading activities within the Site have the potential to remove potential maternity and general roost habitat, if determined to be present. If proposed, demolition of the Site's buildings may impact roosting SAR bats, if present. Consideration related to the timing of vegetation clearing and building removal activities should be made.

7.1.3 Significant Wildlife Habitat

The relevant SWH categories described in the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (MNRF, 2015) are discussed below. Of note, the SWH features discussed below remain candidate (i.e., potential) as survey results have either indicated non-significance or has yet to be determined.

7.1.3.1 SAR Bats

Due to the presence of suitable SAR bat maternity roost trees, candidate SWH is present within the Site. Anticipated land/vegetation clearing activities within the Site could potentially directly impact the 15 SAR bat maternity roost trees.

7.1.3.2 Species of Conservation Concern

No SOCC observations were recorded within the Study Area during Stantec's 2022 field program. However, potential habitat has been identified for eastern milksnake (federally listed as special concern) and monarch.

It is anticipated that habitat for monarch and eastern milksnake will not be directly impacted.

Mitigation measures to reduce direct impacts to candidate SWH features are provided in **Sections 7.4.1.4**.

7.1.4 Migratory Birds

The MBCA protects migratory birds and their active nests from damage and disruption, including nests in natural vegetation or on anthropogenic structures. Proposed activities within the Study Area, specifically anticipated land/vegetation clearing activities within the Site, have the potential to disturb breeding birds and damage active nests of protected species. Measures to avoid contravention of the MBCA during land/vegetation clearing activities in the Site are provided in **Section 7.4.1.6**.

Bird strikes on the proposed buildings could result in direct mortality to migratory birds in the Study Area. Bird strikes on buildings and other structures are the second largest anthropogenic cause of bird mortality in Canada and the collision rates tend to be highest during spring (March through May) and fall (August through November) migration. Most collisions occur close to the ground where birds are most active and buildings adjacent to natural areas have an increased probability of bird collisions (City of Ottawa 2020b). Mitigation measures to reduce the potential for bird strikes are provided in the *Bird-safe Design Guidelines* (City of Ottawa 2020b). It is recommended for CLC to consider mitigation measures and best practices outlined in the City's guidelines, which are further discussed in **Section 7.4.2.1.**

7.2 Indirect Impacts

Potential indirect effects may occur as a result of activities including sensory disturbance to SAR (e.g., SAR bats), if present. Currently, existing sensory disturbances are present in the general area in the form of institutional, commercial, residential, and transportation development. Temporary construction activities and long-term occupancy within the Site are expected to marginally contribute to the omnipresent disturbance of noise and light.

Potential indirect impacts that are relevant to the Study Area are outlined below.

- Disturbance and damage of vegetation adjacent to the Site. Heavy machinery may damage trees and shrubs within Study Area. This impact can be mitigated by clearly delineating the Site (i.e., construction area) from the Study Area.
- Detailed tree protection recommendations, for trees not scheduled for removal, are provided under separate cover in the *Tree Conservation Report – 1495 Heron Road* (Stantec 2022). Recommendations includes monitoring tree health for trees located adjacent to the construction area and protecting the trees to be retained by installing protection fences around the critical root zone (CRZ). Within the CRZ for trees to be retained all excavation work must be done by hand or hydro

excavation, no trenching (tunnel or bore), and roots that are exposed by construction activities must be covered with native topsoil immediately. A certified arborist or qualified tree worker must supervise all instances where root pruning is required.

- Disturbance and damage of vegetation through dust deposition on vegetation can be mitigated by the use of dust suppressants to reduce or eliminate dust, if necessary.
- Disturbance and damage to wildlife features adjacent to the Site. Heavy machinery may damage adjacent wildlife habitat features [e.g., active bird nest(s)]. This impact can be mitigated by clearly delineating any construction areas and/or required wildlife buffers in the Study Area.
- Sedimentation and erosion resulting from construction activities.
- Potential contamination resulting from spills or other contaminants.

7.3 Long-term Development Impacts

The anticipated vegetation clearing activities throughout the Site have potential for long-term/permanent impacts to a woodland and marsh community influenced by anthropogenic activities and SAR bat maternity roost habitat (if present), as described in **Section 7.1**. A total of 15 bat maternity roost trees were observed within the Site. In the event that Stantec's 2022 acoustic SAR bat survey results indicate the presence of SAR bats within the Site, impacts to SAR bat maternity roost habitat may occur.

7.4 Recommended Mitigation Measures

Due diligence for the natural heritage features within the Study Area should include general mitigation measures and best management practices to reduce or eliminate potential negative effects. These general mitigation measures and best management practices should be applied to the land/vegetation clearing activities associated with the proposed redevelopment activities within the Site.

7.4.1 Construction Mitigation

7.4.1.1 Erosion and Sediment Control

The potential indirect impacts associated with development of the Site are primarily from construction related activities. Most of the potential impacts are common to various types of construction and can be controlled using standard mitigation measures for erosion and sediment control. The primary principles associated with sedimentation and erosion protection measures are to:

- Minimize the duration of soil exposure
- Retain existing vegetation, where feasible
- Encourage re-vegetation
- Divert runoff away from exposed soils
- Keep runoff velocities low
- Trap sediment as close to the source as possible

To address these principles, mitigation measures recommended for implementation during construction are described below.

- Minimize the access and temporary workspace to the extent possible to limit destabilization of soils near the work area.
- Silt fencing and/or barriers such as sediment logs (i.e., SiltSoxx™) could be used along all work zones where there is potential for sedimentation into a waterbody (pond), or inadvertent encroachment of construction vehicles into trees or natural areas.
- Dust could be controlled by using water instead of chemical suppressants in dust-sensitive areas such as the mapped natural heritage features.
- No equipment should be permitted to enter natural areas beyond the barrier fencing.
- All exposed soil areas should be stabilized (native seed mixes; sourced locally if possible) and re-vegetated, through the placement of seed and mulching or seed and an erosion control blanket, promptly upon completion of construction activities.
- Equipment should be re-fueled 30 m away from sensitive natural features (e.g., wetlands and waterbodies) to avoid potential impacts if an accidental spill occurs.
- In addition to any specified requirements, additional silt fence and/or silt logs should be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency.
- Sediment and erosion controls should be monitored regularly and properly maintained as required. Controls are to be removed only after the soils of the construction area have been stabilized and adequately protected or until cover is re-established.
- The limits of construction adjacent to natural features to be retained will be fenced prior to construction and monitored during construction (along with sediment and erosion control measures) to make sure that the limits are maintained with respect to vehicular traffic and soil or equipment stockpiling.
- The Contractor should be required to restore disturbance to any natural features affected by construction to pre-construction conditions.

7.4.1.2 Vegetation Cover

The following general mitigation measures are recommended to reduce direct impacts on the vegetation cover within the Site:

- Silt fencing as described in **Section 7.4.1.1** should be used to delineate the construction limits from the woodland/park that continues beyond the Site boundary. This will prevent further encroachment of construction activities into the adjacent natural feature. This fencing should be monitored regularly to ensure it is functioning properly. Any deviancy in the fencing should be dealt with promptly.
- Erosion and sediment control plan (which should include erosion and sediment control fencing) should be implemented to prevent sedimentation outside of work areas, as described in **Section 7.4.1.1**.

- Landscaping plans should consider the use of appropriate native species to offset the loss of species and biodiversity from vegetation removals.
- Machinery will arrive on-site in a clean condition and will be free of fluid leaks, invasive species, and noxious weeds.
- All excess construction material will be removed from the site and the area restored with seeding of native species upon project completion as required.

7.4.1.3 Wetlands

The following general mitigation measures are recommended to reduce direct impacts to the MAMM1-2 vegetation community:

- Erosion and sediment control measures (as discussed in **Section 7.4.1.1**) should be installed adjacent to the associated wetland features to clearly demarcate the construction area and prevent erosion and sedimentation into adjacent habitats. Erosion and sediment control measures should be monitored regularly to ensure they are functioning properly and if issues are identified should be dealt with promptly.
- Stockpiling of excavated material should not occur outside the delineated work area. If stockpiling is to occur outside of this area, silt fencing should be used to contain any soil piles to prevent sedimentation into adjacent wetland areas.
- Erosion and sediment control plan should be implemented to prevent sedimentation outside of work areas.
- Materials storage sites and equipment parking will be located at a minimum distance of 30 m from any wetland.

7.4.1.4 SAR Bat Maternity Roost Trees

Bats are vulnerable to disturbances during the summer roosting (April 1 through September 30) and maternity season (June 1 through July 31). Activities that may disturb summer/maternity roosting habitat (i.e., removal of trees ≥10 cm DBH) should avoid the summer/maternity roosting season if possible (i.e., be scheduled after September 30 and before April 1). If work cannot avoid the summer/maternity roosting season, a search for active roosts should be completed immediately prior to construction as bats can change roosting locations frequently. Surveys should be completed by a qualified biologist and follow the methodology outlined by MNRF (2017) *Survey Protocol for Species at Risk Bats within Treed Habitat – Little Brown Myotis, Northern Myotis, and Tri-Colored Bats*. If SAR bats are observed to be using a tree as summer/maternity roosting habitat the tree should not be removed between April 1 through September 30 and the MECP may require habitat compensation (i.e., installation of bat boxes).

7.4.1.5 Avoidance of Wildlife

The City's *Protocol for Wildlife Protection during Construction* (2015b) provides a guidance document which outlines general mitigation measures to avoid impacts to wildlife during Project construction and includes the following recommendations:

- A visual search of the work area should be conducted by construction contractors before work commences each day, particularly for the period when most wildlife is active (generally April 1 to September 30). Visual inspections will locate and avoid snakes, turtles, and other ground dwelling wildlife such as small mammals. Visual searches will include inspection of machinery and equipment left in the work area overnight prior to starting equipment.
- If wildlife is encountered, work at that location should stop, and the animal(s) should be permitted reasonable time to leave the work area on their own. Construction personnel cannot threaten, harass, or injure wildlife.
- Construction equipment and vehicles are to yield to wildlife.
- Any observations of SAR or SOCC should be reported to MECP within 48 hours. SAR should not be handled, harassed, or moved in any way, unless they are in immediate danger.
- Site clearing (i.e., vegetation removal) should proceed in phases with the most disturbed part of the site being cleared first and the least disturbed last.

7.4.1.6 Migratory Birds

The MBCA provides legal protection of migratory birds and their nests in Canada. The loss of migratory bird nests, eggs and or nestlings due to tree cutting or other vegetation clearing can be avoided by limiting clearing of vegetation to outside of the general nesting period for forest nesting migratory birds in this region (C3) as identified by Environment and Climate Change Canada (ECCC) (i.e., between April 15 and August 15) (ECCC 2018).

In cases of limited tree clearing (e.g., individual tree and/or shrub removal) during the breeding bird season, a migratory breeding bird nest sweep could be conducted prior to activities. If a nest is located, a designated buffer will be delineated within which no vegetation clearing or construction activities will be allowed while the nest is active. The radius of the buffer will be determined by a qualified biologist and is established on a case-by-case basis. The qualified biologist will consider the species (e.g., sensitive, or rare), alert and flush distance (e.g., the distance at which the bird alerts to human presence and the distance at which the bird flushes from the nest), and the proposed activities (e.g., intensity, noise, duration) (ECCC 2018) when establishing the buffer.

A qualified biologist is a person who has demonstrated experience in bird ecology and is skilled at visual and auditory identification of birds and at recognizing behavioral cues that indicate the presence of a nest. Once the nest is determined to be inactive (e.g., the young have fledged the nest), clearing and other activities in the area may proceed.

Due to the potential for birds to establish a nest after the survey, it is recommended that a nest search occur within 48 hours of the start of planned activities within the migratory bird nesting period.

7.4.1.7 Species at Risk

The most current SAR information available for the Study Area has been reviewed and reported in this EIS (**Table 4.1**). However, federal and provincial lists of SAR are periodically updated to reflect changes in species status and occurrence data for these species is also subject to change. This information should be reviewed immediately prior to the commencement of on-site activities to confirm that any newly listed SAR are adequately addressed.

Prior to any site alterations, the following mitigation measures are recommended:

- Implement a worker awareness program for construction staff that includes SAR identification and habitat characteristics
- Conduct a daily pre-construction search of the work area to identify presence of SAR
- If threatened or endangered species are seen in or near the work area, stop work immediately
  - Take photographs, if possible, but do not interact with the animal
  - Contact MECP

7.4.2 Operation

7.4.2.1 Migratory Birds

It is recommended for CLC to consider bird safe mitigation measures as outlined in the City's *Bird-safe Design Guidelines* (City of Ottawa 2020b) to reduce the potential for bird strikes at the Site. Bird-safe designs that are recommended include the incorporation of dark materials on the bottom three floors to create visual contrast, the use of punch windows for less transparent surfaces, and creating a visual break between windows. Other potential mitigation measures to decrease the likelihood of bird strikes to the building that may be considered include:

- Avoiding monolithic, undistinguished expanses of glazing
- Incorporating visual interest or differentiation of material, texture, colour, opacity or other features to fragment reflections
- Applying treatments to the glass to make it more visible to birds (i.e., bars dividing individual panes of glass, application of films or markers, screens, grilles, shutters, etc.)
- Add bird-safe treatments to glass corners, glass railing, parapets, and similar clear barriers
- Add treatments to glass or other reflective surfaces to minimize reflections of trees and shrubs if planted next to building

Install bird friendly lighting (i.e., avoid up-lighting, use minimum wattage fixtures, avoid use of floodlighting, etc.).

8 Conclusions and Recommendations

This report provides an evaluation of the anticipated environmental impacts associated with the proposed construction and long-term occupation of a mixed-use community located at 1495 Heron Road **(Figure 1**). The anticipated environmental impacts are based on field investigation results completed in October 2021, April to June 2022, as well as a background data and literature review.

The naturalized vegetation communities present within the subject property were comprised mainly of mixed meadow (MEM), deciduous thicket (THD), deciduous woodland (WODM5) and marsh community (MAMM1-2). The WODM5 exhibited low quality habitat based on the presence of invasive species prevalent throughout as well as fragmentation as a result of surrounding urban infrastructure and development.

Direct impacts towards the MAMM1-2 is anticipated to accommodate the proposed redevelopment (i.e., school site) project at 1495 Heron Road. Impacts will be managed by mitigation measures recommended in **Section 7.4** to maintain the ecological function, and if required by the City of Ottawa and/or RVCA, a wetland compensation plan may need to be followed.

No SAR and/or SOCC were observed during Stantec's 2021 and 2022 field program. Potentially suitable habitat is present in the Study Area for barn swallow, SAR bats, eastern milksnake, and monarch.

Impacts to wildlife and natural features, arising from the proposed development of the Site can be reduced using the following mitigation measures, detailed in **Section 7.4**:

- Prior to the start of construction activities, clearly mark the limits of construction
- Standard ESC measures are recommended, to be monitored regularly and properly maintained, as required
- Where evidence of sedimentation or erosion exists, undertake corrective action as soon as conditions permit
- Sediment and erosion controls are to be removed only after the soils of the construction area have been stabilized and adequately protected until cover is re-established
- Disturbance to nesting birds protected under the MBCA and/or *Fish and Wildlife Conservation Act*, *1997* (FWCA) can be avoided through the restriction of vegetation clearing activities between April 1 and August 31, in any given year
- Disturbance to roosting SAR bats protected under the ESA can be avoided through the restriction of tree clearing activities within potentially suitable habitat between April 1 and September 30, in any given year

Candidate SAR bat maternity roost habitat have been observed within the landscaped planted mature trees within the existing development of the Site. Bat acoustic monitoring to determine the presence/ absence of SAR bats within the Study Area have been completed. However, the acoustic analysis to determine species identification has yet to be completed due to a conflict in project timelines and survey

timing window. Results of this survey type will be included in an addendum to this EIS. If required, consultation with MECP and ECCC is recommended to determine permitting requirements for removal of SAR bat maternity roosting trees, under the ESA and SARA, respectively.

This EIS provides an assessment of the potential impacts on the natural heritage features and functions that may result from the proposed development at the Site and the anticipated land/vegetation clearing activities associated the development. The following are the key natural heritage features and functions that may experience impacts as a result of the proposed development:

- Vegetation removal – damage or loss of vegetation during site alteration activities
- Wetland removal – damage or loss of wetland vegetation and habitat during site alteration activities
- The loss of migratory bird nests, eggs and or nestlings if present, due to vegetation removal
- The loss of SAR bat maternity roost habitat, if present, due to tree removal

To conclude, the proposed redevelopment of a multi-use community will occur predominately on lands that have existing infrastructure and buildings already established. Approximately 1.56 ha of natural areas are proposed for removal but are currently heavily influenced by the surrounding urban landscape, thereby representing low quality habitat for vascular plant species and for wildlife and wildlife habitat. Based on this assessment, it is expected that the proposed redevelopment plans at 1495 Heron Road will not have a high impact on the overall ecological function of the existing landscape due to other current stressors from the surrounding urban environment.

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APPENDICES

Appendix A Figures

Stantec

Legend

- Site Boundary
- Study Area (120m)

0 100 Meters

1:3,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2022.
3. Aerial Imagery from City of Ottawa, 2022. Imagery date, 2019.

Project Location
City of Ottawa

160410368 REV4
Prepared by KB on 2022-07-20
Technical Review by DH on 2022-06-15

Client/Project
CANADA LANDS COMPANY (CLC)
1495 HERON ROAD
EIS

Figure No.
1

Title
Site Plan

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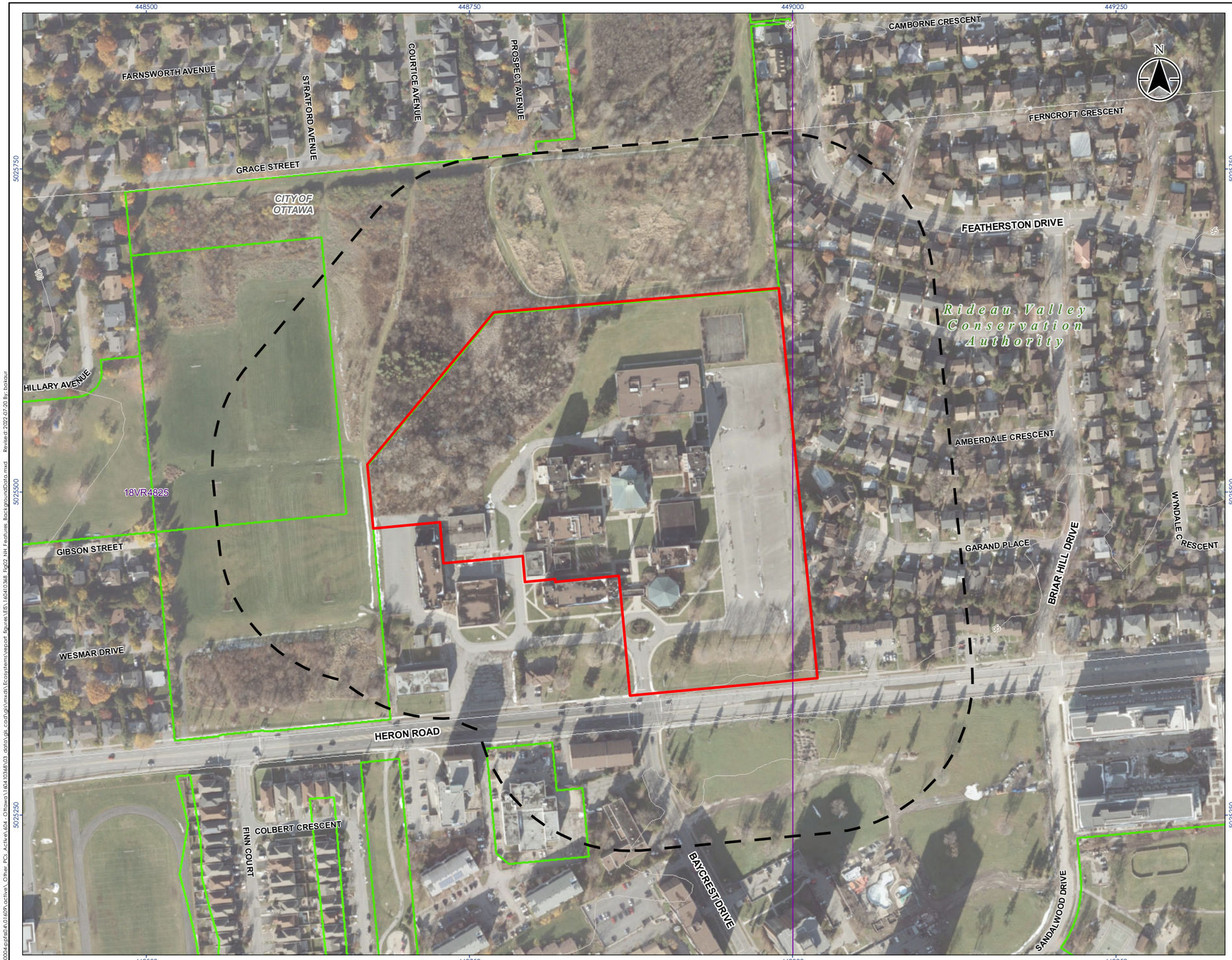


Stantec

Legend

- Site Boundary
- Study Area (120m)
- Parks (City of Ottawa, 2022)
- Lot
- 1 km UTM Grid

0 100 Meters

1:3,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2022.
3. Parks Dataset and Aerial Imagery from City of Ottawa, 2022. Imagery date, 2019.

Project Location
City of Ottawa

160410368 REV4
Prepared by KB on 2022-07-20
Technical Review by DH on 2022-06-15

Client/Project
CANADA LANDS COMPANY (CLC)
1495 HERON ROAD
EIS

Figure No.
2

Title
Natural Heritage Features and Background Data

\\cd0004-pprfs01\01669\active_Other PCs_Active\64 - Ottawa\160410368\03_data\gis\arcgis\mxds\EcosystemsVerport_figures\EIS\160410368_Fig02 NH Features_Background Data_Revised 2022-07-20 By: bakour.mxd

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

Stantec

Legend

- Site Boundary
- Study Area (120m)
- Road

Surficial Geology

- 10a: Fine-textured glaciomarine deposits (Massive-well laminated)

0 100 Meters

1:3,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2022.
3. Aerial Imagery from City of Ottawa, 2022. Imagery date, 2019.
4. Surficial geology data source: Ontario Geological Survey 2010. Surficial geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 128-REV ISBN 978-1-4435-2483-4.

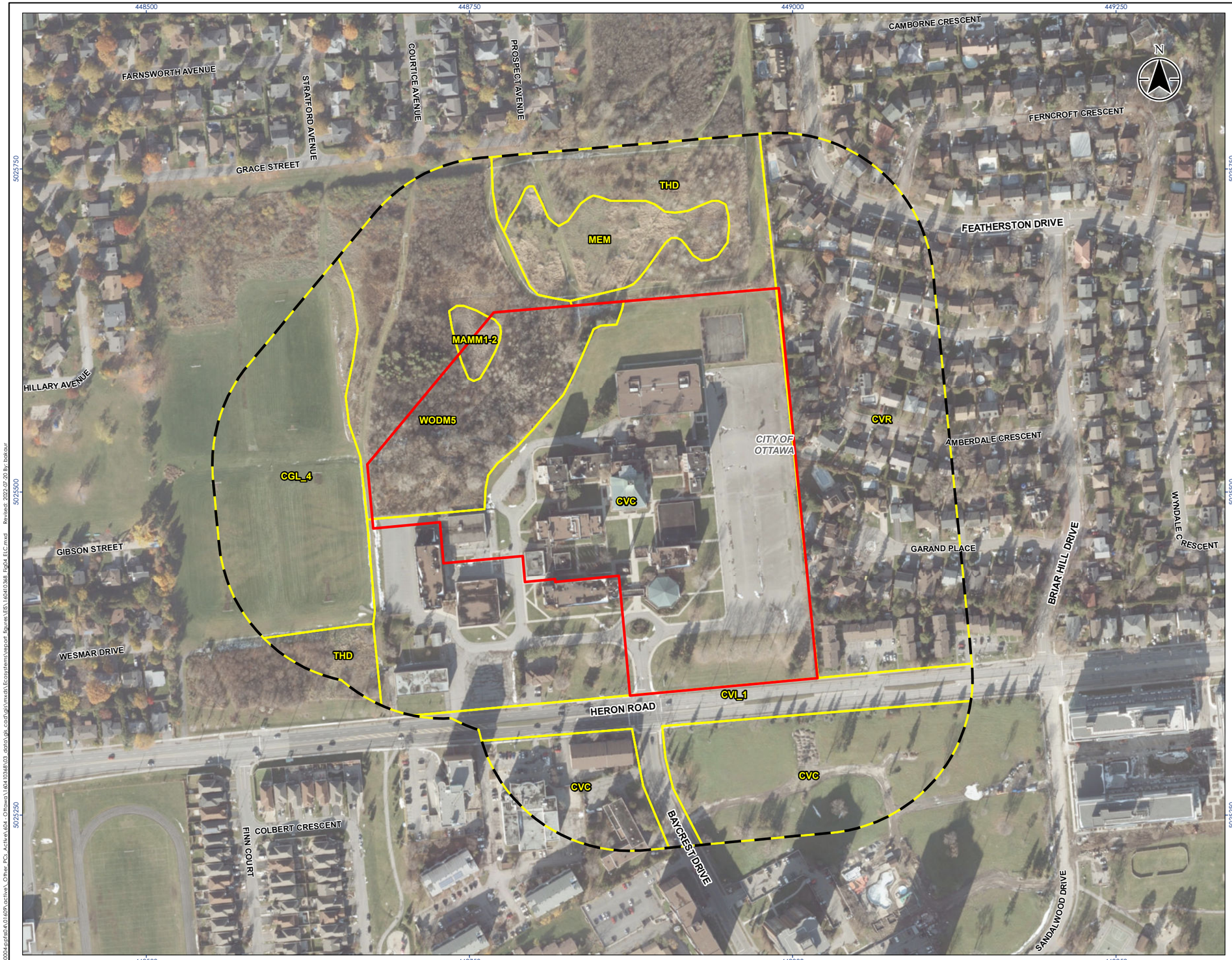
Project Location: City of Ottawa

160410368 REV4
Prepared by KB on 2022-07-20
Technical Review by DH on 2022-06-15

Client/Project
CANADA LANDS COMPANY (CLC)
1495 HERON ROAD
EIS

Figure No.
3

Title
Surficial Geology



Stantec

Legend

- Site Boundary
- Study Area (120m)
- ELC Boundary

ELC Description

- CGL_4 (Recreational)/<Null>
- CVC (Commercial and Institutional)/<Null>
- CVI_1 (Transportation)
- CVR (Residential)
- MAMM1-2 (Cattail Graminoid Mineral Meadow Marsh Type)
- MEM (Mixed Meadow)
- THD (Deciduous Thicket)
- WODM5 (Fresh - Moist Deciduous Woodland Ecosite)

0 100 Meters

1:3,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
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3. Aerial Imagery from City of Ottawa, 2022. Imagery date, 2019.

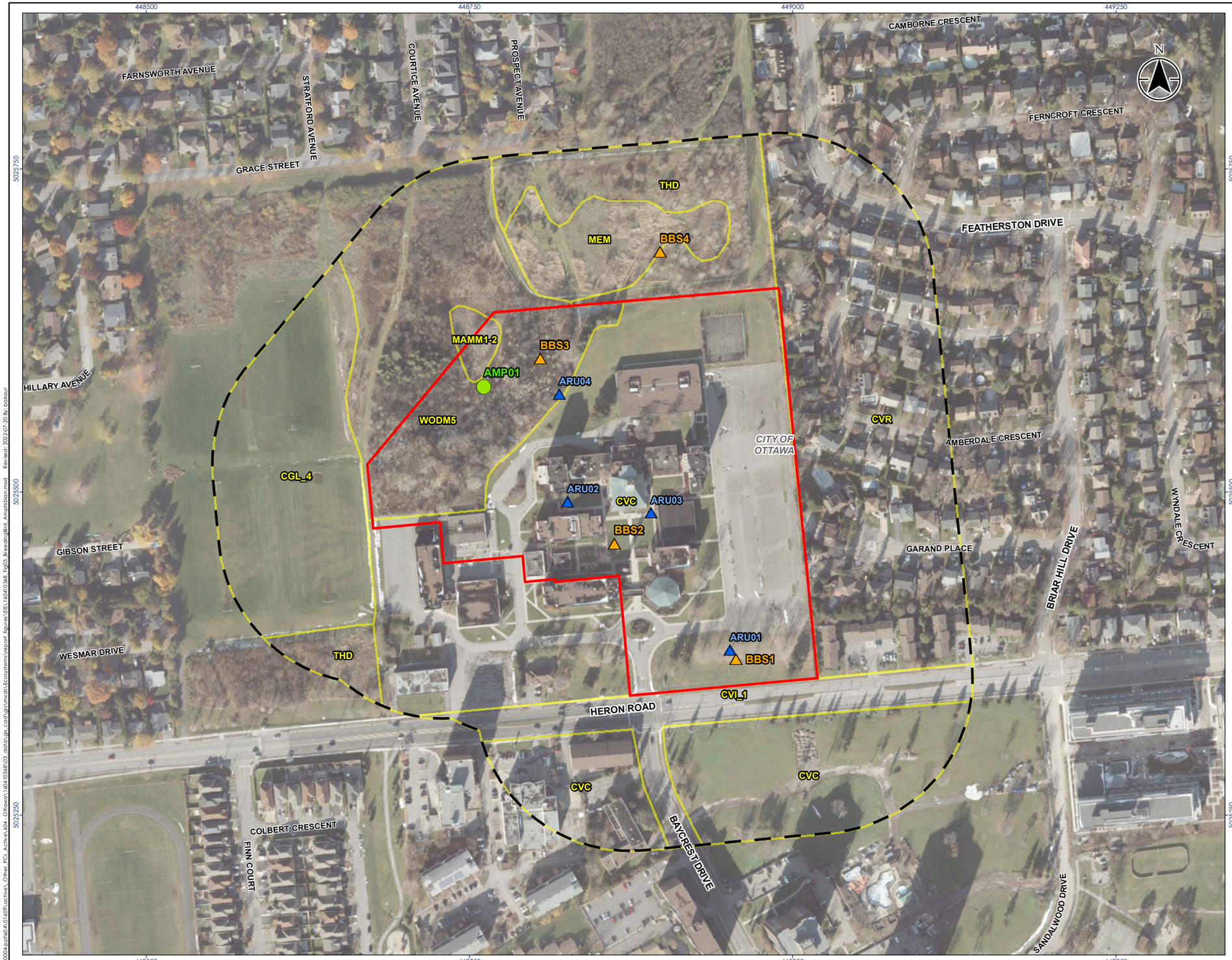
Project Location
City of Ottawa

160410368 REV4
Prepared by KB on 2022-07-20
Technical Review by DH on 2022-06-15

Client/Project
CANADA LANDS COMPANY (CLC)
1495 HERON ROAD
EIS

Figure No.
4

Title
Ecological Land Classification



Stantec

Legend

- Site Boundary
- Study Area (120m)
- Amphibian Survey Station
- Bat Acoustic Monitoring Station
- Breeding Bird Survey Station
- ELC Boundary

0 100 Meters

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Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2022.
3. Aerial Imagery from City of Ottawa, 2022. Imagery date, 2019.

Project Location
City of Ottawa

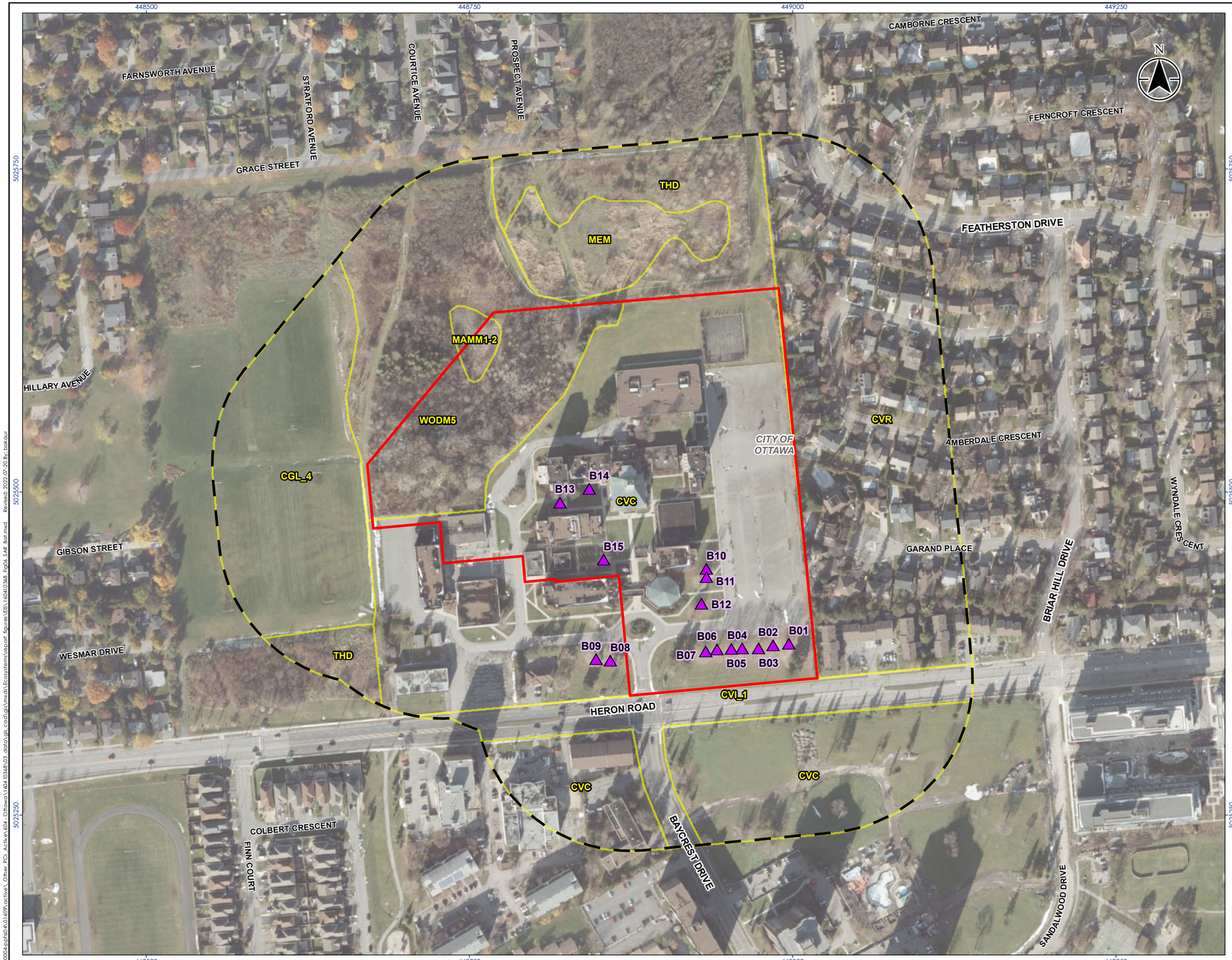
160410368 REV4
Prepared by KB on 2022-07-20
Technical Review by DH on 2022-06-15

Client/Project
CANADA LANDS COMPANY (CLC)
1495 HERON ROAD
EIS

Figure No.
5

Title
Wildlife Survey Locations

\\cd0004-pprfs01\01609\active_Other PCs_Active\64 - Ottawa\160410368\03 data\gis\mxds\EcosystemsVerport figures\ES\160410368 Fig05 BreedingBird_Amphibian.mxd Revised: 2022-07-20 By: bokour



Stantec

Legend
- Site Boundary
- Study Area (120m)
- Potential Bat Maternity Roost Tree
- ELC Boundary

0 100 Meters

1:3,000 (At original document size of 11x17)

Notes
1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2022.
3. Aerial Imagery from City of Ottawa, 2022. Imagery date, 2019.

Project Location
City of Ottawa

160410368 REV4
Prepared by KB on 2022-07-20
Technical Review by DH on 2022-06-15

Client/Project
CANADA LANDS COMPANY (CLC)
1495 HERON ROAD
EIS

Figure No.
6

Title
Bat Maternity Roost Habitat Suitability Assessment

Appendix B Ecological Land Classification Field Data Cards

WOD

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE (project no./name): 1405 Heron		POLYGON:	
SURVEYOR(S): LB		DATE:	PHOTO No.:
START:	END:	ZONE & UTM:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
SITE	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
☐ OPEN WATER		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
☐ SHALLOW WATER		☐ CLIFF		☐ DECIDUOUS	☐ BOG
☐ SURFICIAL DEP.		☐ TALUS	COVER	☐ CONIFEROUS	☐ BARREN
☐ BEDROCK		☐ CREVICE / CAVE	☐ OPEN	☐ MIXED	☐ MEADOW
		☐ ALVAR	☐ SHRUB		☐ PRAIRIE
		☐ ROCKLAND	☐ TREED		☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:		<10		10 – 24		25 – 50		>50
STANDING SNAGS:		<10		10 – 24		25 – 50		>50
DEADFALL/LOGS:		<10		10 – 24		25 – 50		>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE	OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes: (e.g. disturbance, surface water depths, etc.)

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COLL.
Salix sp.					
Acer negundo					
buckthorn					
POPTREM					
red osier dogwood					
American elm					
green ash					
Prunus sp					
betula pap.					
Jack pine					
rubus sp.					

SPECIES CODE	LAYER 1	2	3	4	COLL.
herbs					
Tanacetum					
RANACRIS					
red clover					
Canada thistle					
Poa					
carex.					
(illegible)					
OSV					
ox eye					
daisy					
Chamomile					
vipers bugloss					
ground ivy					
Vitis riparia					
solidago sp.					
Philadelphus					
fleabane					
poison ivy					
spotted jewel					
weld					
cow vetch					
burdock					
epilobium					
coloratum					
common valerian					
mint					

Page ___ of ___

Quality Control: This form is complete ☐ & legible ☐

Print Name: _____ (Field Notes Author)

Signature: _____ (Field Notes QA/QC personnel)

THD

or Fallmans?

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE (project no./name): Lyas Heron		POLYGON:	
	SURVEYOR(S):		DATE:	PHOTO No.:
	START:	END:	ZONE & UTM:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
SITE		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
☐ OPEN WATER		☐ CLIFF		☐ DECIDUOUS	☐ BOG
☐ SHALLOW WATER		☐ TALUS	COVER	☐ CONIFEROUS	☐ BARREN
☐ SURFICIAL DEP.		☐ CREVICE / CAVE	☐ OPEN	☐ MIXED	☐ MEADOW
☐ BEDROCK		☐ ALVAR	☐ SHRUB		☐ PRAIRIE
		☐ ROCKLAND	☐ TREED		☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:							BA:
SIZE CLASS ANALYSIS:		<10		10 – 24		25 – 50	>50
STANDING SNAGS:		<10		10 – 24		25 – 50	>50
DEADFALL/LOGS:		<10		10 – 24		25 – 50	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes: (e.g. disturbance, surface water depths, etc.)

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COLL.
salix					
red osier					
pop trem.					
buckthorn					
catalpa					
silver					
maple					
green ash					
cedar					
common					
hackberry					
man maple					
rhus					
typhina					
sambucus					
nigra					

SPECIES CODE	LAYER 1	2	3	4	COLL.
poa					
carex					
solidago					
symphytrichum					
wild					
parsnip					
cow vetch					
canada					
thistle					
bulrush					
creeping					
jenny					
devils					
beggar					
ticks					
carex					
scapona					
pen steman					
digitalis					
common					
motherwort					

Page ___ of ___

Quality Control: This form is complete ☐ & legible ☐

Print Name: _____ (Field Notes Author)

Signature: _____ (Field Notes QA/QC personnel)

MAMM

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE (project no./name): 1495 Heron		POLYGON:
	SURVEYOR(S):	DATE:	PHOTO No.:
	START:	END:	ZONE & UTM:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
SITE		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
☐ OPEN WATER		☐ CLIFF		☐ DECIDUOUS	☐ BOG
☐ SHALLOW WATER		☐ TALUS	COVER	☐ CONIFEROUS	☐ BARREN
☐ SURFICIAL DEP.		☐ CREVICE / CAVE	☐ OPEN	☐ MIXED	☐ MEADOW
☐ BEDROCK		☐ ALVAR	☐ SHRUB		☐ PRAIRIE
		☐ ROCKLAND	☐ TREED		☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:							BA:
SIZE CLASS ANALYSIS:		<10		10 – 24		25 – 50	>50
STANDING SNAGS:		<10		10 – 24		25 – 50	>50
DEADFALL/LOGS:		<10		10 – 24		25 – 50	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
☐ INCLUSION		CODE:
☐ COMPLEX		CODE:

Notes: (e.g. disturbance, surface water depths, etc.)

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COLL.
Salix sp.					
red osier					
dogwood.					

SPECIES CODE	LAYER 1	2	3	4	COLL.
Cattail					
sensitive fern					
horstails					
Carex					
RAN ACEIS					
symphytichum sp.					
Canada thistle					
dry fibers					
swamp milkweed					
water hemlock					
Carex					
sedge					
reed canary grass					
marsh bedstraw					

Page ___ of ___

Quality Control: This form is complete ☐ & legible ☐

Print Name: _____ (Field Notes Author)

Signature: _____ (Field Notes QA/QC personnel)

Appendix C Wildlife Species Observation List

Appendix C - Wildlife Species Observation List for 1495 Heron Road Study Area

COMMON NAME	SCIENTIFIC NAME	ONTARIO STATUS	GLOBAL STATUS	SARO	SARA	AREA SENSITIVITY (ha)
BIRDS						
Mallard	*Anas platyrhynchos*	S5	G5			
Ring-billed Gull	*Larus delawarensis*	S5B,S4N	G5			
Yellow-bellied Sapsucker	*Sphyrapicus varius*	S5B	G5			30-50
Downy Woodpecker	*Dryobates pubescens*	S5	G5			
Northern Flicker	*Colaptes auratus*	S4B	G5			
Eastern Phoebe	*Sayornis phoebe*	S5B	G5			
Red-eyed Vireo	*Vireo olivaceus*	S5B	G5			
Blue Jay	*Cyanocitta cristata*	S5	G5			
American Crow	*Corvus brachyrhynchos*	S5B	G5			
Black-capped Chickadee	*Poecile atricapillus*	S5	G5			
American Robin	*Turdus migratorius*	S5B	G5			
Gray Catbird	*Dumetella carolinensis*	S4B	G5			
Brown Thrasher	*Toxostoma rufum*	S4B	G5			
European Starling	*Sturnus vulgaris*	SNA	G5			
Cedar Waxwing	*Bombycilla cedrorum*	S5B	G5			
House Finch	*Haemorhous mexicanus*	SNA	G5			
American Goldfinch	*Spinus tristis*	S5B	G5			
Chipping Sparrow	*Spizella passerina*	S5B	G5			
Song Sparrow	*Melospiza melodia*	S5B	G5			
Swamp Sparrow	*Melospiza georgiana*	S5B	G5			
Red-winged Blackbird	*Agelaius phoeniceus*	S4	G5			
Brown-headed Cowbird	*Molothrus ater*	S4B	G5			
Common Grackle	*Quiscalus quiscula*	S5B	G5			
Northern Waterthrush	*Parkesia noveboracensis*	S5B	G5			20
Common Yellowthroat	*Geothlypis trichas*	S5B	G5			
American Redstart	*Setophaga ruticilla*	S5B	G5			20-30
Yellow Warbler	*Setophaga petechia*	S5B	G5			
Blackpoll Warbler	*Setophaga striata*	S4B	G5			
Yellow-rumped Warbler	*Setophaga coronata*	S5B	G5			
Northern Cardinal	*Cardinalis cardinalis*	S5	G5			
MAMMALS						
European Hare	*Lepus europaeus*	SNA	G5			
Eastern Chipmunk	*Tamias striatus*	S5	G5			
Grey Squirrel	*Sciurus carolinensis*	S5	G5			
Red Squirrel	*Tamiasciurus hudsonicus*	S5	G5			
SUMMARY						

Total Odonata: 0						
Total Butterflies: 0						
Total Other Arthropods: 0						
Total Amphibians: 0						
Total Reptiles: 0						
Total Birds: 30						
Total Breeding Birds: 30						
Total Mammals: 4						
SIGNIFICANT SPECIES						
Global: 0						
National: 0						
Provincial: 0						
Regional: 0						
Local: 0						
Explanation of Status and Acronymns						
COSSARO: Committee on the Status of Species at Risk in Ontario						
COSEWIC: Committee on the Status of Endangered Wildlife in Canada						
REGION: Rare in a Site Region						
S1: Critically Imperiled—Critically imperiled in the province (often 5 or fewer occurrences)						
S2: Imperiled—Imperiled in the province, very few populations (often 20 or fewer),						
S3: Vulnerable—Vulnerable in the province, relatively few populations (often 80 or fewer)						
S4: Apparently Secure—Uncommon but not rare						
S5: Secure—Common, widespread, and abundant in the province						
SX: Presumed extirpated						
SH: Possibly Extirpated (Historical)						
SNR: Unranked						
SU: Unrankable—Currently unrankable due to lack of information						
SNA: Not applicable—A conservation status rank is not applicable because the species is not a suitable target for conservation activities.						
S#S#: Range Rank—A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species						
S#B- Breeding status rank						
S#N- Non Breeding status rank						
?: Indicates uncertainty in the assigned rank						
G1: Extremely rare globally; usually fewer than 5 occurrences in the overall range						
G1G2: Extremely rare to very rare globally						
G2: Very rare globally; usually between 5-10 occurrences in the overall range						
G2G3: Very rare to uncommon globally						
G3: Rare to uncommon globally; usually between 20-100 occurrences						
G3G4: Rare to common globally						
G4: Common globally; usually more than 100 occurrences in the overall range						
G4G5: Common to very common globally						

G5: Very common globally; demonstrably secure						
GU: Status uncertain, often because of low search effort or cryptic nature of the species; more data needed.						
GNR: Unranked—Global rank not yet assessed.						
T: Denotes that the rank applies to a subspecies or variety						
Q: Denotes that the taxonomic status of the species, subspecies, or variety is **questionable**.						
END: Endangered						
THR: Threatened						
SC: Special Concern						
2, 3 or NS after a COSEWIC ranking indicates the species is either on Schedule 2, Schedule 3 or No Schedule of the Species At Risk Act (SARA)						
NAR: Not At Risk						
IND: Indeterminant, insufficient information to assign status						
DD: Data Deficient						
6: Rare in Site Region 6						
7: Rare in Site Region 7						
Area: Minimum patch size for area-sensitive species (ha)						
* The Pileated Woodpecker will incorporate smaller woodlots into its homerange, therefore it may not be a true area-sensitive species (Naylor et al. 1996)						
NOTE						
All rankings for birds refer to breeding birds unless the ranking is followed by N						
REFERENCES						
COSSARO Status						
Endangered Species Act, 2007 (Bill 184). Species at Risk in Ontario List.						
COSEWIC Status						
COSEWIC. 2007. Canadian Species at Risk. Committee on the Status of Endangered Wildlife in Canada.						
Local Status						
Ontario Partners in Flight. 2006. Ontario Landbird Conservation Plan: Lower Great Lakes/St. Lawrence Plain (North American Bird Conservation Region 13), Priorities, Objectives and Recommended Actions. Environment Canada and Ontario Ministry of Natural Resources. Draft, February 2006.						
Area-sensitive Information						
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Appendix D Photographic Record of Site Conditions

Photo 1: Existing institutional building on Site featuring landscaping of trees and shrubs. June 23, 2022

Photo 2: Potential bat maternity roost tree with cavities present (B13); planted tree within Site. June 23, 2022

Photo 3: Mowed lawn and thicket/woodland edge, facing north. June 23, 2022

Photo 4: Roadway and mowed lawn within developed area of Site; facing thicket/woodland edge. June 23, 2022

Photo 5: Landscaping features along existing buildings. June 23, 2022

Photo 6: Existing buildings and manicured lawns, frequently occurring throughout the developed portion of the Site. June 23, 2022

Photo 7: Typical conditions observed within the MEM community. June 23, 2022

Photo 8: Typical conditions observed within the MEM community. June 23, 2022

Photo 9: Pedestrian trail throughout the WODM5 community. June 23, 2022

Photo 10: Typical conditions observed within the WODM5 community. June 23, 2022

Photo 11: Urban disturbance (firepit) within WODM5 community. June 23, 2022

Photo 12: Drainage ditch/channel with water present in the fall. October 2021

Photo 13: Typical conditions observed in WODM5 community. May 2022

Photo 14: MAMM1-2 vegetation community observed on May 2022

Photo 15: MAMM1-2 vegetation community observed on May 2022

Photo 16: Mixed meadow (MEM) community and edge of deciduous thicket (THD) community. June 2022

Photo 17: Woodland community (WODM5) with vernal pools present in spring. May 2022

Photo 18: Existing conditions observed within the WODM5 community. June 2022