

# **Environmental Impact Study for 2380 Tenth Line Road Ottawa, Ontario**

**2025-10-28**

**Final Report**

**Submitted To:**

Victoria St. Pierre  
Claridge Homes

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Project Number: CLAR 1904.1



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### List of Acronyms and Abbreviations

CRZ – Critical Root Zone  
DBH – Diameter at Breast Height  
DFO – Fisheries and Oceans Canada (Department of Fisheries and Oceans)  
ECCC – Environment and Climate Change Canada  
EIS – Environmental Impact Study  
ELC – Ecological Land Classification  
ESA – Endangered Species Act  
ESC – Erosion and Sedimentation Control  
FWCA – Fish and Wildlife Conservation Act  
KAL – Kilgour & Associates Ltd.  
MBCA – Migratory Birds Convention Act  
MECP – Ministry of Environment, Conservation and Parks  
MMAH – Ministry of Municipal Affairs and Housing  
MNR(F) – Ministry of Natural Resources (and Forestry)



NHIC – Natural Heritage Information Centre  
NHRM – Natural Heritage Reference Manual  
PPS – Provincial Planning Statement  
SAR – Species at Risk  
SARA – Species at Risk Act  
SNC – South Nation Conservation  
SWH – Significant Wildlife Habitat  
UNA – Urban Natural Area



## 1.0 INTRODUCTION

This report is an Environmental Impact Study (EIS) prepared by Kilgour & Associates Ltd. (KAL; Appendix A) on behalf of Riverstone Retirement (2380 Tenth Line Road) Inc. (the “Client”) in support of a site plan for a new retirement home at 2380 Tenth Line Road in Ottawa, Ontario (“the Site”; Figure 1). The Site is currently undeveloped, approximately 0.62 ha in size, and situated adjacent to a new residential development (currently under construction by others). The proposed project works would comprise a six-storey retirement home, comprising 141 units, with supporting infrastructure (surface parking, sidewalks, landscaping/garden features etc.).

In the City of Ottawa, an EIS is required when development or site alteration is proposed in or adjacent to natural heritage features, as outlined in Section 4.8 of the Official Plan (City of Ottawa, 2022). The purposes of an EIS are to:

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



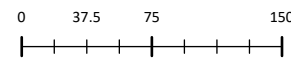


**Legend**

 Site Boundary



**Figure 1. Site context**



Spatial Reference:  
 PCS: WGS 1984 UTM Zone 18N  
 Map Units: Meter

Project: CLAR 1904.1  
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## 2.0 ENVIRONMENTAL POLICY CONTEXT

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

### 2.1 The Provincial Planning Statement, 2024

The Provincial *Policy* Statement, previously issued under Section 3 of the *Planning Act* (MMAH, 2020), was updated to become the Provincial *Planning* Statement (PPS) on August 20, 2024. The PPS came into effect on October 20, 2024 (MMAH, 2024). Under the PPS, natural features are afforded protection under Section 4. The included protections address the maintenance, restoration, and improved function of diversity, connectivity, ecological function, and biodiversity of natural heritage systems. These protections restrict development and site alteration in significant natural areas (e.g., woodlands, wetlands, wildlife habitat) except where it can be demonstrated that there will be no negative effects on the features and ecological functions of those natural areas. Technical guidance for implementing the natural heritage policies of the PPS is found within the second edition of the *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005* (NHRM;(MNR, 2010). This manual recommends the approach and technical criteria for protecting natural heritage features and areas in Ontario.

### 2.2 City of Ottawa Official Plan, 2022

The City of Ottawa Official Plan (2022) provides direction for future growth in the City and is a policy framework to guide physical development to 2031 in accordance with the PPS. The Official Plan was first approved in 2003 and is typically updated every five years. The Official Plan includes a Natural Heritage Features map (Schedule C11-A), providing additional information on wetlands, watercourses, and wooded areas within the City boundaries (City of Ottawa, 2022). The City of Ottawa Official Plan, as approved by the Minister of Municipal Affairs and Housing, came into effect on November 4, 2022.

### 2.3 *Species at Risk Act, 2002*

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

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



## **2.4 *Endangered Species Act, 2007***

The provincial *Endangered Species Act* (ESA; Government of Ontario, 2007) is administered by the Ministry of Environment, Conservation, and Parks (MECP) and provides protection for species at risk (SAR) and their habitat. The ESA states that it is illegal to harm the habitat of species listed as Extirpated, Endangered, and Threatened. It is also illegal to kill, harm, harass, possess, transport, buy, or sell Extirpated, Endangered, and Threatened species, whether it is living or dead. Species listed as Endangered, Threatened, or Extirpated and their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation, and migration) are automatically afforded legal protection under the ESA. The ESA include provisions that may authorize development activities to proceed where the impacts of such development on protected species and/or their habitat would otherwise be prohibited. The associated permitting processes typically work to limit the potential for harm to the subject species through mitigation measures and to achieve an overall net benefit for the species through offsetting measures.

Significantly, Ontario's *Protect Ontario by Unleashing our Economy Act, 2025*, was enacted on June 5, 2025. This Act introduces numerous changes to the ESA, including altering the definition of "habitat" for various species groups. At the time of writing for this EIS, however, most standing policies managing the implementation of the ESA have not yet been updated. As such, recommendations within this ECR related to the ESA consider existing ESA-related policies but also recognize upcoming changes to the extent feasible. Such changes include the possible replacement of the ESA with the *Species Conservation Act*. The *Species Conservation Act* is not in force as of the date of this EIS. However, it must be recognized that, if permitting processes were to be required/employed to ensure a net benefit for SAR under future site projects, they may ultimately be managed under the *Species Conservation Act* rather than the ESA.

## **2.5 *Fisheries Act, 1985***

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

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

## **2.6 *Migratory Birds Convention Act, 1994***

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



apply across Canada that can be used to greatly reduce the risk of harming/destroying active nests by ensuring works that may impact nests are performing outside of the nesting period.

## **2.7 *Fish and Wildlife Conservation Act, 1997***

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

## **2.8 *Conservation Authorities Act, 1990***

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

The *More Homes Built Faster Act*, which was passed on November 28, 2022, and received Royal Assent the same day, introduced a series of legislative and proposed regulatory changes affecting conservation authorities. Among the changes under Bill 23, the definition of “watercourse” was updated from an identifiable depression to a defined channel, having a bed, and banks or sides.

## **3.0 PROPERTY IDENTIFICATION**

The Site is approximately 0.62 hectares (ha) in size and is located at 2380 Tenth Line Road, in Orleans, Ottawa, Ontario (Lat: 45.447923°N, Long: 75.481415°W; Figure 1). The Site is currently undeveloped, situated at the northwest corner of the intersection of Tenth Line Road and Décoeur Drive and adjacent to a new residential development (currently under construction). The zoning of the Site is General Mixed-Use (GM).

The Site is bordered by:

- New residential development, Brian Coburn Boulevard, and commercial properties to the north;
- Tenth Line Road and residential neighbourhoods to the east;
- Décoeur Drive and residential neighbourhoods to the south; and



- New residential development, Notre-Place Catholic Elementary School, and residential neighbourhoods to the west.

## 4.0 METHODOLOGY

### 4.1 Desktop and Background Data Review

#### 4.1.1 Agency Oversight

The Site is located within the jurisdictions of the City of Ottawa and South Nation Conservation Authority (SNC). The need for an EIS was triggered by the potential for the proposed development to impact species at risk (SAR) and/or SAR habitat, trees, and surface water features on and adjacent to the Site.

#### 4.1.2 Site Overview

Aerial imagery from Google Earth (*Google Earth*, n.d.), the City of Ottawa's geoOttawa system (City of Ottawa, 2025), and SNC's property mapping system (South Nation Conservation, 2020) was used to develop preliminary mapping of existing site features and landcover and to inform how the Site may be divided into vegetation communities.

Existing data on soils in the vicinity of the Site were obtained from the Ontario Ministry of Agriculture, Food and Agribusiness's AgMaps (Ontario Agriculture, Food and Agribusiness, 2025) and the Ontario Geotechnical Boreholes dataset (Ontario Ministry of Mines, 2012). These data were supplemented by soil cores taken in the field using a 120 cm soil auger at select locations across the Site.

#### 4.1.3 Preliminary SAR Review

The review of existing information included a preliminary SAR screening for species listed under the federal SARA and provincial ESA. The screening functions to identify SAR having some potential to be in the broader vicinity of the Site. The screening was completed following the *Draft Client's Guide to Preliminary Screening for Species at Risk* (MECP, 2019; Appendix B). The Preliminary Screening considered data sources including:

- Species at Risk in Ontario (SARO; Ministry of Environment, Conservation, and Parks (MECP, 2023);
- Species at Risk Public Registry (Government of Canada, 2023);
- Natural Heritage Information Centre (NHIC; Ministry of Natural Resources, and Forestry (MNRF, 2025b);
- Land Information Ontario (MNRF, 2025a);
- Aquatic Species at Risk Map (Fisheries and Oceans Canada (DFO), 2024);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2019);
- Ontario Breeding Birds Atlas (Birds Canada et al., 2009);
- Ontario Butterfly Atlas (Toronto Entomologists' Association, 2024);
- eBird (The Cornell Lab of Ornithology, 2023);



- iNaturalist (California Academy of Sciences and National Geographic Society, 2023);
- Bumble Bee Watch (Wildlife Preservation Canada et al., 2023);
- Recovery Strategy for the Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Ontario (Humphrey & Fotherby, 2019);
- Recovery Strategy for the Eastern Small-footed Myotis (*Myotis leibii*) in Ontario (Humphrey, 2017); and
- Fish ON-Line (MNRF, 2024).

## 4.2 Field Studies

A Site investigation was undertaken on October 8, 2025 (Table 1). The Site visit included an Ecological Land Classification (ELC) survey, tree survey, and a surface water characterization. The 2025 field surveys are detailed in the sections below.

**Table 1: Summary of 2025 field studies**

Date	Purpose	Conditions	Personnel
October 8, 2025	<ul style="list-style-type: none"> <li>• Ecological Land Classification (ELC)</li> <li>• Tree survey</li> <li>• Surface water characterization</li> </ul>	<ul style="list-style-type: none"> <li>• 13°C</li> <li>• Wind 3-4 on the Beaufort Scale</li> <li>• 0-25% cloud cover</li> <li>• No precipitation</li> </ul>	<ul style="list-style-type: none"> <li>• Véronique Landriault</li> </ul>

### 4.2.1 Surface Water and Fish Habitat

Aerial imagery and public databases were reviewed to identify watercourses and waterbodies in the vicinity of the Site (City of Ottawa, 2025; *Google Earth*, n.d.; South Nation Conservation, 2020). Potential surface water features on the Site were reviewed during the Site visit.

### 4.2.2 Vegetation

#### 4.2.2.1 Ecological Land Classification

Vegetation communities on the Site were based on standard ELC methods for Ontario (Lee, 2008; Lee et al., 1998). The ELC methodology provides a consistent approach to identify, describe, and map vegetation communities or physiographic features on the landscape based on dominant plant species and soil composition. This method results in a standardized description of each vegetation community to capture the natural diversity and variability of communities within a site and to provide insight into available habitat and the types of species that may be present. More specifically, the classifications from ELC provide a basis for determining whether potential habitat for a given SAR or other ecological value may be present.

The desktop review of available aerial imagery informed how the Site was divided into vegetation communities based on variation in land cover, topography, and vegetation structure. During the ELC survey conducted on October 8, 2025, the dominant plant species within each proposed ecosite were recorded in the field to further divide ecosites into vegetation types (the finest resolution in ELC), where



possible. As part of the ELC, individual trees (i.e., not situated within forested communities) with diameter and breast height (DBH) measurements greater than 10 cm were identified and characterized. Butternut (*Juglans cinerea*; Endangered under SARA and the ESA) and Black Ash (*Fraxinus nigra*; no status under SARA and Endangered under the ESA) trees were specifically searched for.

Representative photos of each ELC unit on the Site were taken and are included with the community descriptions in this report.

## 5.0 EXISTING CONDITIONS

### 5.1 Landforms, Soils and Geology

The Site is located within the Ottawa Valley Clay Plains physiographic region (Chapman & Putnam, 1984; Ontario Agriculture, Food and Agribusiness, 2025). Soils in the vicinity of the Site are identified in Report No. 58 of the Ontario Institute of Pedology, The Soils of the Regional Municipality of Ottawa-Carleton (Schut & Wilson, 1987) and are characterized by heavy clay overlaying sand and silty clay of the Bearbrook and Rideau soil associations. Available data from geotechnical boreholes in the vicinity of the Site indicate sand and gravel overlying clay and silt (Schut & Wilson, 1987). During the site visit, soil samples were taken using a 120 cm hand-held soil auger. Soil cores on the Site indicated extensive presence of rocky/gravelly fill.

### 5.2 Surface Water and Fish Habitat

A linear ditch feature extends across a portion of the Site (Figure 2). The feature was characterized by steeply incised banks over much of its length, with a channel bed approximately 1.5 m wide and a bankfull width of approximately 5 m at its widest point (Figure 3). The feature is characterized as being somewhat poorly defined toward the west side, extending to the roadway at the west property boundary, and becoming more channelized toward the east. The feature was dry at the time of survey, with a portion of the channel characterized by a gravel fill bottom and other areas characterized by sparse vegetation cover. There were no culverts at either end of the feature (i.e., under David Lewis Private to the west or Tenth Line Road to the east), disconnecting the feature from any other natural watercourse features. A grated catch basin situated at the east end of the feature, approximately 38 m west of Tenth Line Road, vertically drops rainfall and snowmelt flows into the storm sewer system (Figure 3).




geoOttawa (City of Ottawa, 2025) mapping suggests the presence of a roadside ditch along the eastern side of the site, mostly *within* the paved portion of Tenth Line Road. Google Streetview imagery from 2009 clearly depicts this feature when Tenth Line Road was a narrow, two-lane route with gravel shoulders. By 2012, the road had been widened and the shoulders paved, such that feature had been realigned westward and significantly reduced in width and depth. By 2018, the road had been substantially widened; the ditch had been fully removed and was presumably replaced by the SWM system beneath the roadway. The feature mapping within geoOttawa is out of date and should be revised accordingly.




As the linear ditch onsite serves only as an engineered drainage component (i.e. with no natural heritage connectivity or functionality) of the existing SWM system for the broader Site that is currently being redeveloped, and the Tenth Line Road roadside ditch does not exist at all, no setbacks are required on either feature.

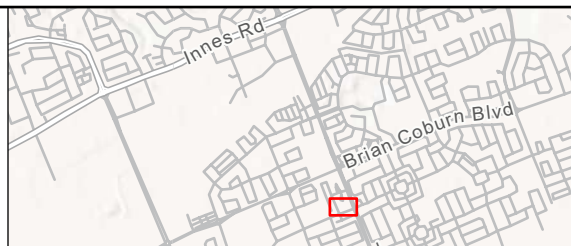




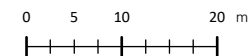
**Legend**

-  Tree
- ELC
-  CUM1-1
-  Disturbed

-  Phragmites Infestation
-  HDF
-  Site Boundary



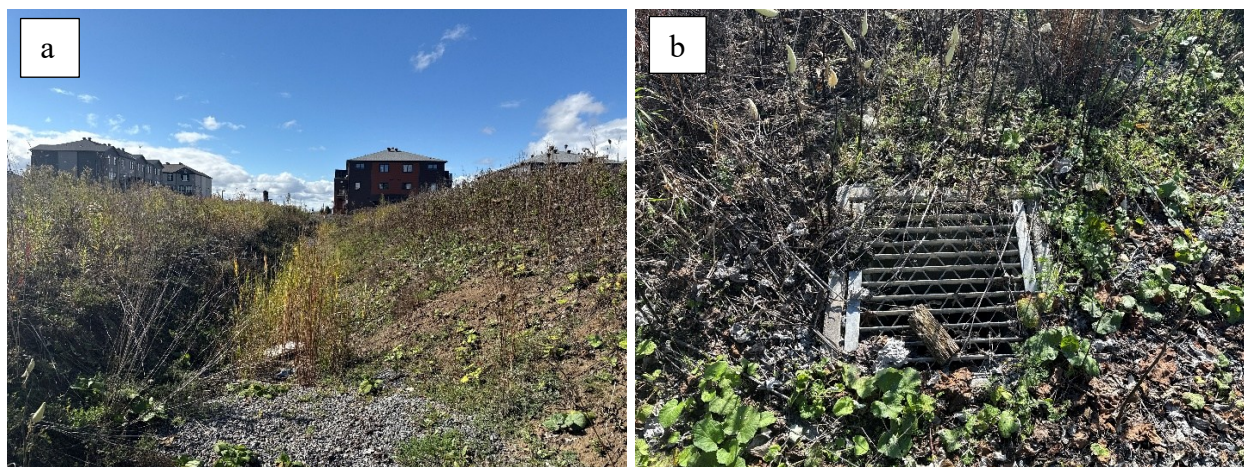
**Figure 2. Existing site conditions**



Spatial Reference:  
PCS: WGS 1984 UTM Zone 18N  
Map Units: Meter

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**Figure 3 Linear ditch, looking west (a) and showing the grated catch basin at the east end of the feature (b)**

## 5.3 Vegetation

### 5.3.1 Ecological Land Classification

Two distinct landcovers or ELC units were delineated on the Site (Figure 2). The central portion of the Site is characterized as a disturbed mixed meadow (CUM1-1), supporting a mixture of native and exotic grass and forb species, as well as an extensive infestation of Common Reed (*Phragmites australis*) within the northernmost area. Portions of the west and east sides of the Site are characterized as disturbed (no ELC code), supporting gravel fill and sparse vegetation. A comprehensive list of plant species observed is provided in Appendix C.

#### 5.3.1.1 Dry – Moist Old Field Meadow Type (CUM1-1)

The central portion of the Site is characterized as a Dry – Moist Old Field Meadow (CUM1-1; Figure 2). It is generally characterized as open, with one White Willow (*Salix alba*) tree and a small Green Ash (*Fraxinus pennsylvanica*) sapling situated in the southwest corner of the unit. Groundcover was diverse and included Reed Canary Grass (*Phalaris arundinacea*), Canada Goldenrod (*Solidago canadensis*), Aromatic Aster (*Symphotrichum oblongifolium*), Purple Loosestrife (*Lythrum salicaria*), and Queen Anne’s Lace (*Daucus carota*; Figure 4). An extensive infestation of Common Reed (*Phragmites australis*) is situated in the north-central portion of this unit (Figure 2; Figure 5). Soils within this unit are characterized by gravelly fill.





**Figure 4 Dry – Moist Old Field Meadow, looking east (October 8, 2025)**



**Figure 5 Common Reed infestation in the north-central portion of the Site; photo looking east (October 8, 2025)**



### 5.3.1.2 Disturbed Area (no ELC Code)

A Disturbed Area (no ELC code) encompasses most of the west side of the Site, with a smaller patch in the southeast corner of the Site (Figure 2). It is characterized by rocky/gravelly fill and sparse vegetation (Figure 6). Occasional species include Common Dandelion (*Taraxacum officinale*), Bird's-foot Trefoil (*Lotus corniculatus*), Prostrate Knotweed (*Polygonum aviculare*), and Queen Anne's Lace. Soil cores were not taken in this location due to the presence of fill.



**Figure 6 Disturbed area on the west side of the Site, looking north (October 8, 2025)**

### 5.3.2 Trees

One tree with a DBH measurement larger than 10 cm is present in the southeast portion of the Site (Figure 2). The tree is a White Willow, with a DBH measurement of 25 cm. It appears to be in good condition and is a healthy live tree with no indications of cavities or peeling bark (Figure 7).





**Figure 7 White Willow at the southeast corner of the Site (October 8, 2025)**

#### **5.4 Species at Risk**

The Preliminary SAR screening identified a total of 36 SAR with some potential to occur within the *broader vicinity* of the Site based on a desktop review of observation records and publicly available databases (Appendix B). Those 36 SAR initially screened for consideration were assessed based on species habitat requirements and the general habitat conditions of the Site to identify the subset of species having potential to occur within the project area, and/or a likelihood of interactions generally with future development. As a result of that subsequent assessment, three (3) out of the 36 SAR were considered to have some potential to occur on the Site and/or interact with future development (Table 2). These species were subject to further study of their specific presence on the Site and/or evaluation of the suitability of the Site as a habitat area through the field studies conducted under this review.



**Table 2 Listed species with a moderate or high potential to be impacted by future site works**

Common Name	Taxonomic Name	ESA Status	SARA Status	Observed On Site	Assessed Potential for Future Project Interaction
<b>Birds</b>					
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern	Threatened	No observations on Site (targeted surveys not undertaken)	Site is highly disturbed and adjacent to active construction and major roads. The potential for occurrence directly on the Site is Low.  Potential for project interaction is Low if work is completed outside the active period for birds.
<b>Reptiles</b>					
Eastern Milksnake	<i>Lampropeltis triangulum</i>	Not Listed	Special Concern	Surveys not required	No potential hibernacula onsite. Potential for presence on the Site is Low.  Potential for project interaction is Low.
<b>Arthropods</b>					
Monarch	<i>Danaus Plexippus</i>	Special Concern	Endangered	Surveys not required	Limited Common Milkweed on the Site to support Monarchs. With no part of the Site more suitable than the remainder of the broader vicinity, the potential for occurrence directly on the Site is Low.  Potential for project interaction is Low.

SAR presented in Table 2 that are listed as Special Concern under the SARA or ESA are not considered further as SAR in this report because they do not generally receive individual or habitat protection (whereas listed Threatened and Endangered species do). However, individuals of these species are protected under other regulations addressing wildlife conservation generally, such as the FWCA, MBCA, and the PPS. In addition, species listed as Special Concern under the ESA may receive habitat protection if they are observed in habitats that meet the criteria for designation as SWH for Special Concern Species (MNRF, 2015a). Provincially-listed Species of Special Concern will be discussed with SWH in Section 5.5.

## 5.5 Significant Wildlife Habitat

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



### **5.5.1 Seasonal Concentration Areas**

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

The Site itself does not meet the criteria for candidate SWH. No obvious signs or evidence of use as a seasonal concentration area were observed on the Site during the field survey.

### **5.5.2 Rare Vegetation Communities or Specialized Habitat for Wildlife**

#### **Rare Vegetation Communities**

Rare vegetation communities typically include those that have developed on cliff and talus slopes, sand barrens, shallow soils over limestone bedrock (alvar), old growth forests, savannahs, and tallgrass prairies. No rare vegetation communities were observed on the Site.

#### **Specialized Wildlife Habitat**

Specialized wildlife habitat includes waterfowl nesting areas, Bald Eagle and Osprey nesting, foraging and perching habitat, woodland raptor nesting habitat, turtle nesting areas, seeps and springs, woodland amphibian breeding habitat, amphibian wetland breeding habitat, and woodland area-sensitive bird breeding habitat. The Site does not meet the criteria for candidate SWH for specialized wildlife habitats.

#### **Habitats of Species of Conservation Concern**

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

MNRF (MNRF, 2015a) defines candidate SWH for special concern and rare wildlife species as when an element occurrence is identified within a 1 or 10 km grid and suitable candidate habitat is found onsite based on ELC. As such, the forested communities have potential to meet the criteria for candidate SWH for two species (Common Nighthawk and Monarch), based on existing species records identified through the SAR screening and the potential for suitable habitat to occur in the vicinity of the Site (Table 2; Appendix B).

### **5.6 Other Natural Heritage Features**

The Site does not contain significant wetlands, significant woodlands, significant coastal wetlands, ANSIs (life/earth science), or fish habitat. The Site does not contain significant valleylands, greenspace linkages, or urban natural areas. The nearest UNA is the Bilberry Creek Valley, situated approximately 1.8 km northwest of the Site.



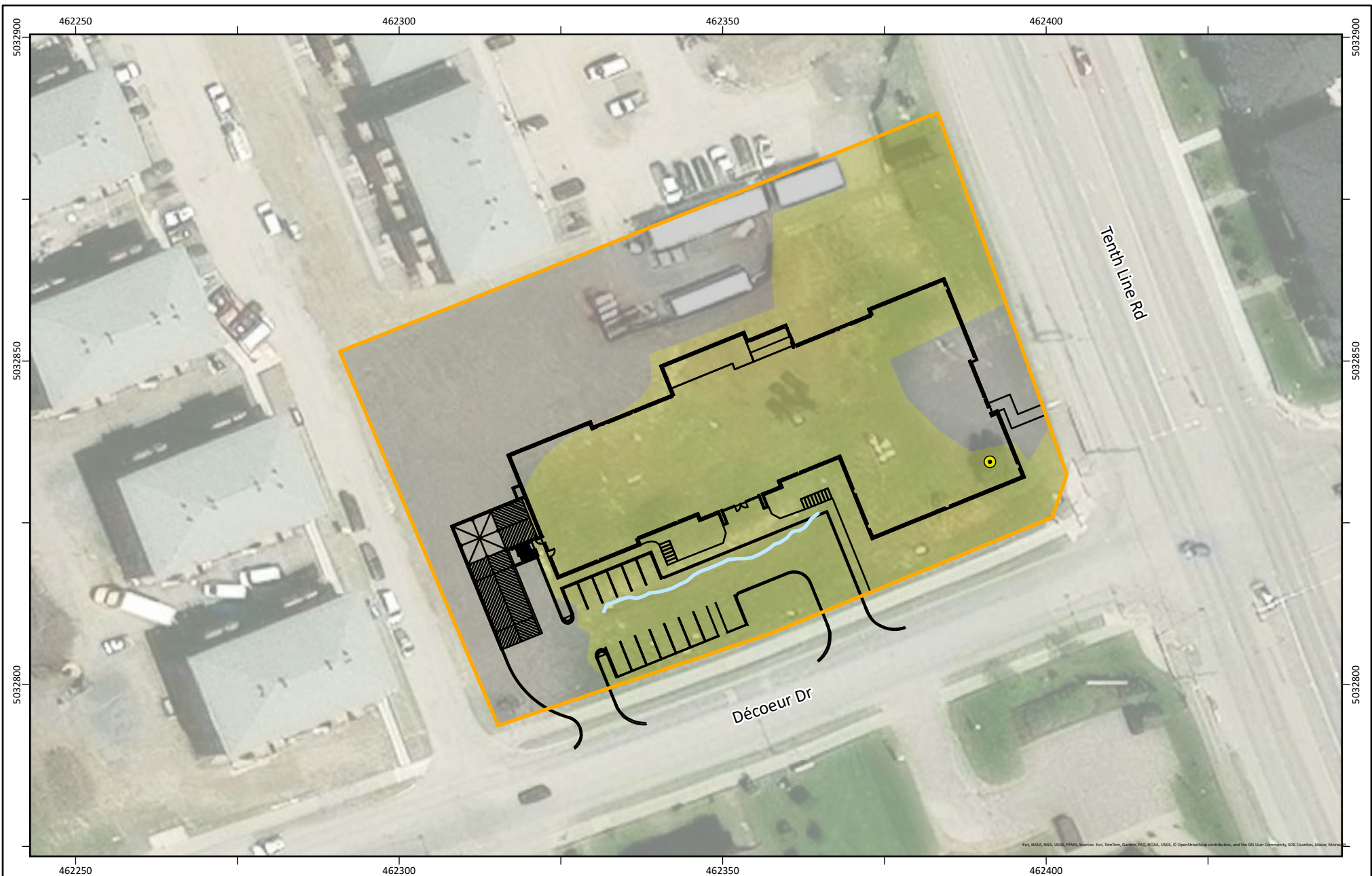
No other significant natural heritage features are located within 120 m of the Site.

## **6.0 DESCRIPTION OF THE PROPOSED PROJECT**

The proposed project comprises a six-storey retirement home (Figure 8). The building will support 141 units, with a mix of assisted care and independent-living units. Amenity spaces (e.g., sunroom, pool), will be situated primarily on the ground floor. Main access for the building will be via two points of entry/exit on Décoeur Drive, with additional pedestrian access to Tenth Line Road. Surface (visitor) parking will comprise 15 vehicle spaces and additional bicycle parking areas. Below-ground parking will be accessed via a ramp on the west side of the building. Areas surrounding the building will comprise driveway access, concrete sidewalks and accessible pathways and landscaped plantings and garden space. A proposed landscaped pond will be situated in the northwest corner of the Site. Tree plantings will be concentrated in the northwest corner of the Site, with planted deciduous and coniferous trees surrounding an outdoor patio space and pond feature. It is intended that seasonal snow removal will take snow offsite.

It is anticipated that the Site will be fully cleared of existing vegetation, and the existing ditch will be removed. The single tree onsite is anticipated to be removed to accommodate construction.



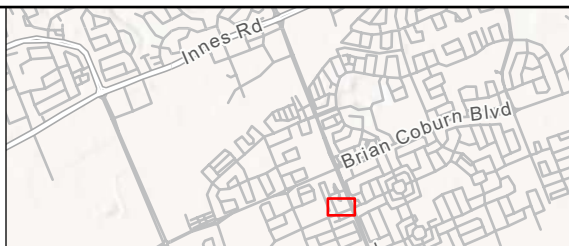


**Legend**

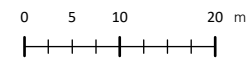
- Proposed Development
- Tree (to be removed)
- HDF

**ELC**

- CUM1-1
- Disturbed
- Site Boundary



**Figure 8. Proposed development plan**



Spatial Reference:  
 PCS: WGS 1984 UTM Zone 18N  
 Map Units: Meter

Project: CLAR 1904.1  
 Map File Name: CLAR 1904.1  
 Date Exported: 10/21/2025 3:39 PM



## 7.0 IMPACT ASSESSMENT AND MITIGATION

### 7.1 Surface Water, Groundwater, and Fish Habitat

There are no permanent surface water features or fish habitat on the Site. The ditch feature onsite is anticipated to be removed to accommodate construction. That feature appears to convey flows only in spring and/or following major rain events. The ditch does not appear to receive runoff directly from David Lewis Private or adjacent lands (i.e., does not extend to or beyond the west property boundary; as such, offsite runoff will continue to be directed offsite. Snow will be removed off-site and will not enter the ditches or stormwater system in the vicinity of the Site. With these design measures in place, the proposed development is expected to have negligible potential to directly impact surface water and/or fish habitat on or near the Site.

To protect waters within the broader catchment area during future development of the Site, an Erosion and Sediment Control (ESC) Plan will be required. The ESC Plan should include:

- A multi-faceted approach to provide ESC.
- Silt fence paired with sturdy construction fence along the project perimeter. This fencing can also act as a wildlife exclusion measure for smaller and less mobile animals that may occupy or traverse through the Site, such as amphibians, turtles, and snakes.
- Regularly inspecting and maintaining the ESC measures during all phases of the project.
- Retention of existing vegetation and stabilization of exposed soils with native vegetation where possible.
- Keeping the ESC measures in place until all disturbed ground has been permanently stabilized
- Using biodegradable ESC materials where possible and removing all exposed non-biodegradable ESC materials once the Site is stabilized.
- Limiting the duration of soil exposure and phasing project works.
- Limiting the size of disturbed areas by minimizing nonessential clearing and grading.
- Minimizing the total slope length and the gradient of disturbed areas.
- Refueling of machinery should occur >30 m from surface water features and all machinery will remain on the project side of silt and construction fence.
- Maintaining overland sheet flow and avoiding concentrated flows.
- Storing/stockpiling materials >30 m away from the wetland and other surface water features.
- Fencing or tarping stockpiled material (<150 millimetre gravel) during the turtle nesting period (late May to early July) (MNRF, 2015b) to prevent turtles from nesting in stockpiles. If the stockpile is within a properly fenced area (i.e., the project footprint), additional fencing is not necessary for turtle management but is recommended for ESC if piles will be left unused for extended periods.
- Regularly inspecting the Site for signs of sedimentation during all phrases of work and taking corrective action if required.



- Developing a response plan to be implemented immediately in the event of a spill of a deleterious substance.
- Keeping an emergency spill kit on the Site.
- Stopping work and containing deleterious substances to prevent dispersal.
- Reporting any spills of sewage, oil, fuel, or other deleterious material whether near or directly into a surface water feature.

## 7.2 Vegetation

The proposed development is situated in the disturbed area and cultural meadow (CUM1-1) ELC units, characterized by minimal tree cover. However, the existing tree onsite will be cleared to accommodate construction.

The following general protection measures are recommended during site preparation and construction to limit impacts to vegetation overall:

- Tree removal on the Site should be limited to that which is necessary to accommodate construction.
- Ensure equipment is clean prior to vegetation removal to avoid introducing invasive species to the Site, and clean equipment prior to leaving Site to avoid spreading the aforementioned invasive species elsewhere.
- Erect a fence beyond the critical root zone (CRZ; i.e., 10x the diameter at breast height) of any trees to be retained (e.g., offsite). The fence should be highly visible (orange construction fence) and paired with erosion control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment
- Signage should be attached to the CRZ fence every 6.0 m indicating 1) the fencing is to protect the tree's CRZ and 2) the fence must not be moved.
- Do not place any material or equipment within the CRZ of trees;
- Do not attach any signs, notices, or posters to any trees;
- Do not raise or lower the existing grade within the CRZ of trees without approval;
- Tunnel or bore when digging within the CRZ of a tree;
- Do not damage the root system, trunk, or branches of any remaining trees; and
- Ensure that exhaust fumes from all equipment are not directed toward any tree's canopy.

## 7.3 Species at Risk

The SAR review in Section 5.4 did not identify any Threatened or Endangered species with potential to interact with the proposed project. The general wildlife mitigation measures provided in Section 7.5, while not species-specific, are anticipated to protect the SAR that may potentially occur on the Site.



## 7.4 Significant Natural Heritage Features

The Site does not contain significant wetlands, significant coastal wetlands, ANSIs (life/earth science), or fish habitat. The Site does not contain significant woodlands, significant valleylands or greenspace linkages. The nearest UNA is the Bilberry Creek Valley, situated approximately 1.8 km northwest of the Site.

## 7.5 General Wildlife Mitigation

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

- The final design of buildings must consider the City Ottawa *Bird-Safe Design Guidelines* (City of Ottawa, 2020):
  - Under these guidelines, Guideline 1 is the consideration of environmental context. The Site is not located within a major bird migration corridor. It is surrounded by higher density, low-rise residential development and major arterial roads. There are no natural areas for features in the vicinity; there is, and will continue to be, limited canopy cover nearby. As such, the potential for bird strikes is considered to be substantially mitigated;
  - However, Guideline 2 addresses the most critical factor of bird-safe design (glazing), and it should be applied regardless of the project's context. The following guidelines are strongly recommended with respect to glazing, to reduce risks to birds:
    - Avoid monolithic, undistinguished expanses of glazing;
    - Incorporate visual interest or differentiation of material, texture, colour, opacity, or other features to fragment reflections.;
    - Where glazing is used, bird-safe glass or glass with integrated protection measures is preferred. Treatments should be applied to a minimum of 90% of the glass within the first 16 metres of height as measured from the finished grade, or to the height of the adjacent mature tree canopy, whichever is greater; and
    - d) Where green roofs, rooftop gardens or terraces are included, any adjacent glazing should also be treated to a height of 4 m from the surface of the roof or terrace or the height of the adjacent mature vegetation, whichever is greater.
  - Guideline 3 calls for additional considerations to avoid "design traps" including:
    - All glazing that could create a fly-through, mirror maze or black hole effect should be made bird-safe, using bird-safe glass or integrated protection measures as described in Guideline 2 above;
    - Glass corners should be treated to render them bird-safe for 5 metres in each direction; and
    - Glass railings, parapets, and similar clear barriers should use bird-safe glass as specified in Guideline 2;



- Guideline 4 adds further design considerations not otherwise associated with glazing. These include:
  - Minimize the number of exterior antennas and other tall structures, including cell phone, television and other media equipment. Where feasible, consolidate all necessary antennas and tall equipment into a single tower, and locate it to minimize conflicts with birds;
  - Utilize self-supporting lattice or monopole towers that do not require the use of guy wire supports;
  - Avoid up-lighting rooftop antennas and tall equipment, as well as decorative architectural spires;
  - Any grates around the base of the building should have a maximum porosity of 20 mm by 20 mm or 40 mm by 10 mm, or should be screened to prevent birds from falling through; and
  - Ensure that vertical pipes, flues and vents are capped or screened to prevent wildlife entry.
- Areas shall not be altered or cleared during sensitive times of year for wildlife unless mitigation measures are implemented and/or the habitat has been inspected by a qualified Biologist;
  - Clearing of trees and/or vegetation should not take place April 1 to September 30 inclusive unless a qualified Biologist has determined that no birds are nesting or suitable bat roosting trees are present. The bird nest sweep would be valid for five days:
    - The MBCA protects the nests and young of migratory breeding birds in Canada. The timing of nesting for birds in the area spans April 1 to August 31 (Government of Canada, 1994);
    - The Site contains suitable foraging and habitat for bats. To eliminate and mitigate any possibility of impacts to at-risk bats directly, tree clearing is recommended to take place outside of the roosting season (April 1 to September 30 inclusive; MNRF, 2017). The breeding and roosting period for bats is recognized as April 1 to September 30 (MNRF, 2015c);
- Temporary exclusion fence should be installed prior to the turtle active season (April through October; MECP, 2021a) and should follow recommendations in *Reptile and Amphibian Exclusion Fencing: Best Practices* (MECP, 2021b). Temporary exclusion fence (e.g., silt fence) may be paired with ESC measures and should be installed along the perimeter of the project area. Temporary exclusion measures should be inspected and repaired weekly by a qualified biologist during the turtle active season;
- Develop an ESC plan. Install sediment control fence and inspect/maintain it periodically and after each rain event to ensure its integrity and continued function;
- Ensure that a qualified biologist develops a wildlife management plan for the construction process and delivers environmental compliance and biodiversity training to all site workers to implement the plan. The plan should include (but not be limited to) requirements to:



- Utilize silt fence paired with sturdy construction fence along the project perimeter and around soil stockpiles to serve as a wildlife exclusion measure to prevent smaller animals from accessing/utilizing temporary habitats on the Site (e.g., prevent turtles from nesting in stockpiles on the Site);
- Check the entire work site for wildlife prior to beginning work each day;
- Do not harm, feed, or unnecessarily harass wildlife;
- Manage waste to prevent attracting wildlife to the work site. Effective mitigation measures include litter prevention and keeping all trash secured in wildlife-proof containers and promptly removing it from the work site, especially during warm weather;
- Enforce a speed limit of 20 km/h during the active season (April 1 to September 30) to reduce wildlife mortality; and
- Manage stockpiles and equipment at the work site to prevent wildlife from being attracted to artificial habitat. Cover and contain any piles of soil, fill, brush, rocks, and other loose materials and cap ends of pipes where necessary to keep wildlife out. Ensure that trailers, bins, boxes, and vacant buildings are secured at the end of each workday to prevent access by wildlife.



## 8.0 CONCLUSION

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

## 9.0 CLOSURE

This report was prepared for exclusive use by Riverstone Retirement (2380 Tenth Line Road) Inc. and may be distributed only by Riverstone Retirement (2380 Tenth Line Road) Inc. Questions relating to the data and interpretation can be addressed to the undersigned.

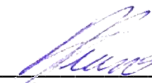
Respectfully submitted,

**KILGOUR & ASSOCIATES LTD.**



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## **Appendix A Qualifications of Report Authors**



**Kesia Miyashita, MSc (Senior Biologist, Project Manager)**

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

**Anthony Francis, PhD (Senior Ecologist, Director of Land Development)**

Dr. Francis is a Senior Ecologist with 20 years' consulting experience to both government agencies and private industry. He has worked on a diversity of projects relating to species at risk, invasive species, terrestrial and aquatic habitat, environmental effects monitoring and mitigation, and fate/effects of contaminants. Within each of these subject areas, Dr. Francis has completed projects addressing specific site concerns and broader policy initiatives.

In the Ottawa area he helps clients work their way through the land development process by producing key supporting studies such Environmental Impact Statements, Integrated Environmental Reviews, and by obtaining various permits and approvals from local regulatory agencies including the conservation authorities and Ministries of Environment and Natural Resources. Dr. Francis is our local in-house geomatics specialist, capable of carrying out detailed and complex analyses of geospatial data of plant and animal distribution. He often utilizes his skills to carry out constraint studies prior to a client purchasing or planning a development for a property.



## **Appendix B Species at Risk Site Review**



Species Name (Taxonomic Name)	Status under Endangered Species Act (ESA)	Status under Schedule 1 of the Species at Risk Act (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements <sup>1</sup>		Potential for Negative Interactions with Protected Elements <sup>2</sup>
						Habitat	Individuals	
<b>Birds</b>								
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Special Concern	Not at Risk	Birds Canada et al. (2009) ~ 5 km from Site	Nest in mature forests near open water. In large trees such as pine and poplar.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Bank Swallow ( <i>Riparia riparia</i> )	Threatened	Threatened	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023) ~ 4 km from Site	Colonial nester; burrows in eroding silt or sand banks, sand pit walls, and human-made sand piles. Often found on banks of rivers and lakes.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Barn Swallow ( <i>Hirundo rustica</i> )	Special Concern	Threatened	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023), MNRF (2023a), California Academy of Sciences and National Geographic Society (2023) ~ 1 km from Site	Nests on barns and other structures. Forages in open areas for flying insects. Lives in close association with humans and prefers to nest on structures such as open barns, under bridges, and in culverts.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Black Tern ( <i>Chlidonias niger</i> )	Special Concern	Not at Risk	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023) ~ 3 km from Site	Build floating nests in loose colonies in shallow marshes with abundant emergent vegetation, especially in cattails.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Bobolink ( <i>Dolichonyx oryzivorus</i> )	Threatened	Threatened	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023), MNRF (2023a) ~ 5 km from Site	Breeds in hayfields, pastures, agricultural fields, and abandoned fields with tall grass that are ≥5 ha, and preferably >30 ha.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Chimney Swift ( <i>Chaetura pelagica</i> )	Threatened	Threatened	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023) ~ 1 km from Site	Nests in traditional-style open brick chimneys (and rarely in hollow trees). Tends to stay close to water.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Common Nighthawk ( <i>Chordeiles minor</i> )	Special Concern	Threatened	Cornell Lab of Ornithology (2023) ~ 5 km from Site	Nests in a wide variety of open sites, including beaches, fields, and gravel rooftops with little to no ground vegetation. They also nest in cultivated fields, orchards, urban parks, mine tailings and along gravel roads/railways but tend to occupy more natural sites.	Open areas with very little ground cover on-site may provide suitable nesting and foraging habitat.	Moderate	Moderate	Moderate



Species Name (Taxonomic Name)	Status under Endangered Species Act (ESA)	Status under Schedule 1 of the Species at Risk Act (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements <sup>1</sup>		Potential for Negative Interactions with Protected Elements <sup>2</sup>
						Habitat	Individuals	
Eastern Meadowlark ( <i>Sturnella magna</i> )	<b>Threatened</b>	<b>Threatened</b>	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023), MNRF (2023a) ~ 5 km from Site	Breeds in hayfields, pastures, agricultural fields, and abandoned fields with tall grass that are ≥5 ha, and preferably >30 ha.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Eastern Whip-poor-will ( <i>Antrostomus vociferus</i> )	<b>Threatened</b>	<b>Threatened</b>	Cornell Lab of Ornithology (2023) ~ 5 km from Site	Suitable breeding habitats generally include open and half treed areas and often exhibit a scattered distribution of treed and open space. Lays eggs directly on the forest floor. Roosts are typically located in forest habitat on a low branch or directly on the ground. Home range size varies from 20 to 500 ha (mean 136 ha) (ECCC, 2018a).	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Eastern Wood-Pewee ( <i>Contopus virens</i> )	<b>Special Concern</b>	<b>Special Concern</b>	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023), MNRF (2023a) ~ 1 km from Site	Woodland species often found in the mid-canopy layer near clearings and edges of intermediate age and mature deciduous and mixed forests with little understory.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Golden Eagle ( <i>Aquila chrysaetos</i> )	<b>Endangered</b>	<b>Not at Risk</b>	Cornell Lab of Ornithology (2023) ~ 5 km from Site	Nests in remote, undisturbed areas, usually building their nests on ledges on a steep cliff/riverbank or large trees if needed. Most hunting is done near open areas such as large bogs or tundra. Migration only; no reported nests in Ottawa.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Grasshopper Sparrow ( <i>Ammodramus savannarum</i> )	<b>Special Concern</b>	<b>Special Concern</b>	MNRF (2023a): <5 km from Site	Lives in open grassland areas with well-drained sandy soil. Will also nest in hayfields and pastures, as well as alvars, prairies, and occasionally grain crops such as barley. It prefers areas that are sparsely vegetated, and its nests are well hidden in the field, woven from grasses in a small cup-like shape.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible



Species Name (Taxonomic Name)	Status under Endangered Species Act (ESA)	Status under Schedule 1 of the Species at Risk Act (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements <sup>1</sup>		Potential for Negative Interactions with Protected Elements <sup>2</sup>
						Habitat	Individuals	
Least Bittern ( <i>Ixobrychus exilis</i> )	Threatened	Threatened	Birds Canada et al. (2009), MNRF (2023a), Cornell Lab of Ornithology (2023), California Academy of Sciences and National Geographic Society (2023) ~ 2 km from Site	Found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. They prefer larger marshes >5 ha in size and are intolerant of loss of habitat and human disturbance (OMNR, 2000).	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Lesser Yellowlegs ( <i>Tringa flavipes</i> )	Threatened	No Status	Cornell Lab of Ornithology (2023), California Academy of Sciences and National Geographic Society (2023) ~1 km from Site	Breeds in boreal wetlands. Nests on dry ground or forest openings near peatlands, marshes, and ponds in the boreal forest and taiga (Government of Canada, 2021). Migrant only; nests in far north.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Olive-sided Flycatcher ( <i>Contopus cooperi</i> )	Special Concern	Threatened	Cornell Lab of Ornithology (2023) ~ 4 km from Site	Found along coniferous or mixed forest edges and openings. Will use forests that have been logged or burned if there are ample tall snags and trees to use for foraging perches.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Peregrine Falcon ( <i>Falco peregrinus</i> )	Special Concern	Special Concern	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023) ~ 1 km from Site	Nests on tall, steep cliff ledges close to large bodies of water. Urban peregrines raise their young on ledges of tall buildings, even in busy downtown areas.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Rusty Blackbird ( <i>Euphagus carolinus</i> )	Special Concern	Special Concern	Cornell Lab of Ornithology (2023), California Academy of Sciences and National Geographic Society (2023) ~ 1 km from Site	Prefers wet wooded or shrubby areas. Nests at edges of boreal wetlands and coniferous forests. These areas include bogs, marshes, and beaver ponds.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Wood Thrush ( <i>Hylocichla mustelina</i> )	Special Concern	Threatened	Birds Canada et al. (2009), Cornell Lab of Ornithology (2023) ~ 4 km from Site	Lives in mature deciduous and mixed forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing and perching. Prefers nesting in large forest mosaics, but will also use fragmented forests. Usually build nests in Sugar Maple or American Beech.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
<b>Mammals</b>								



Species Name (Taxonomic Name)	Status under Endangered Species Act (ESA)	Status under Schedule 1 of the Species at Risk Act (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements <sup>1</sup>		Potential for Negative Interactions with Protected Elements <sup>2</sup>
						Habitat	Individuals	
Eastern Small-footed Myotis ( <i>Myotis leibii</i> )	Endangered	Not Listed	Humphrey (2017) – in region	In the spring and summer, Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. Overwinters in caves and abandoned mines.	The Site does not appear to contain suitable roosting habitat	Negligible	Negligible	Negligible
Little Brown Myotis ( <i>Myotis lucifugus</i> )	Endangered	Endangered	Humphrey and Fotherby (2019) – in region	During the day they roost in trees and buildings. They often select attics, abandoned buildings, and barns for summer colonies where they can raise their young. They can squeeze through very tiny spaces (as small as six millimetres across) allowing them access to many different roosting areas.	The Site does not appear to contain suitable roosting habitat	Negligible	Negligible	Negligible
Northern Myotis / Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )	Endangered	Endangered	Humphrey and Fotherby (2019) – in region	Associated with deciduous and mixed forests, choosing to roost under loose bark and in the cavities of trees. They forage along and within forests as well as in hayfields and pastures adjacent to mixed forests.	The Site does not appear to contain suitable roosting habitat	Negligible	Negligible	Negligible
Tri-colored Bat / Eastern Pipistrelle ( <i>Perimyotis subflavus</i> )	Endangered	Endangered	Humphrey and Fotherby (2019) – in region	Roosts mainly in trees during summer; overwinters in caves and mines along with other species, but often uses deeper parts of the hibernaculum. Foraging occurs in forested riparian areas, over water, and within gaps in forest canopies.	The Site does not appear to contain suitable roosting habitat	Negligible	Negligible	Negligible
<b>Reptiles</b>								
Blanding's Turtle ( <i>Emydoidea blandingii</i> )	Threatened	Endangered	Ontario Nature (2019): within 5 km of Site	Quiet lakes, streams, and wetlands with abundant emergent vegetation. Also frequently occurs in adjacent upland forests.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Eastern Milksnake ( <i>Lampropeltis triangulum</i> )	Not Listed	Special Concern	Ontario Nature (2019), MNR (2023a): within 5 km of Site	Found in a variety of open and edge habitats, including meadows, rocky outcrops, and forest edges. They can also inhabit forests. Further, they are often associated with human-	Open areas onsite may provide suitable habitat	Moderate	Moderate	Moderate



Species Name (Taxonomic Name)	Status under Endangered Species Act (ESA)	Status under Schedule 1 of the Species at Risk Act (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements <sup>1</sup>		Potential for Negative Interactions with Protected Elements <sup>2</sup>
						Habitat	Individuals	
				made structures such as barns (Environment Canada, 2015b).				
Eastern Musk Turtle / Stinkpot ( <i>Sternotherus odoratus</i> )	Special Concern	Special Concern	Ontario Nature (2019): within 5 km of Site	Found in lakes, ponds, marshes, and rivers that are generally slow-moving, have abundant emergent vegetation, and muddy bottoms that they burrow into for winter hibernation.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Midland Painted Turtle ( <i>Chrysemys picta marginata</i> )	Not Listed	Special Concern	Ontario Nature (2019), MNR (2023a): within 5 km of Site	Inhabits waterbodies, such as ponds, marshes, lakes, and slow-moving creeks that have a soft bottom and provide abundant basking sites and aquatic vegetation. Often bask on shorelines or on logs and rocks that protrude from the water.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Northern Map Turtle ( <i>Graptemys geographica</i> )	Special Concern	Special Concern	Ontario Nature (2019), California Academy of Sciences and National Geographic Society (2023): within 5 km of Site	Lives in rivers and lakeshores where it basks on emergent rocks and fallen trees throughout the spring and summer. In winter, they hibernate on the bottom of deep, slow-moving sections of river.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Snapping Turtle ( <i>Chelydra serpentina</i> )	Special Concern	Special Concern	Ontario Nature (2019), MNR (2023a), California Academy of Sciences and National Geographic Society (2023): within 5 km of Site	Spend most of their lives in the water. Prefer shallow waters so they can hide under the soft mud and leaf litter with only their noses exposed to the surface to breathe.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
<b>Arthropods</b>								
Monarch ( <i>Danaus plexippus</i> )	Special Concern	Endangered	California Academy of Sciences and National Geographic Society (2023) ~750 m from Site	Milkweeds are the sole food plant for Monarch caterpillars. These plants predominantly grow in open and periodically disturbed habitats such as roadsides, fields, wetlands, prairies, and open forests.	If Milkweeds are present on the Site, the Site may contain suitable habitat.	Moderate	Moderate	Moderate
<b>Vascular Plants</b>								
Butternut ( <i>Juglans cinerea</i> )	Endangered	Endangered	California Academy of Sciences and National Geographic Society (2023), approximately 3.1 km from Site	Commonly found in riparian habitats but is also found on rich, moist, well-drained loams and well-drained gravels, especially those of limestone origin.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible



## Appendix C Vascular Plant Species List



Common Name	Scientific Name	ELC Unit	Notes
<b>Trees</b>			
Green Ash	<i>Fraxinus pennsylvanica</i>	CUM1-1	
White Willow	<i>Salix alba</i>	CUM1-1	
<b>Groundcover</b>			
Aromatic Aster	<i>Symphyotrichum oblongifolium</i>	CUM1-1	
Birds'-foot Trefoil	<i>Lotus corniculatus</i>	CUM1-1, Disturbed Area	
Canada Goldenrod	<i>Solidago canadensis</i>	CUM1-1	
Canada Thistle	<i>Cirsium arvense</i>	CUM1-1	Listed as Noxious under the Weed Control Act
Coltsfoot	<i>Tussilago farfara</i>	CUM1-1	Listed as Noxious under the Weed Control Act
Common Dandelion	<i>Taraxacum officinale</i>	CUM1-1, Disturbed Area	
Common Milkweed	<i>Asclepias syriaca</i>	CUM1-1	
Common Mullein	<i>Verbascum thapsus</i>	Disturbed Area	
Common Reed	<i>Phragmites australis</i>	CUM1-1	Listed as Restricted under the Invasive Species Act; Listed as Invasive by the Ontario Invasive Plant Council
Common Toadflax	<i>Linaria vulgaris</i>	Disturbed Area	
Lesser Burdock	<i>Arctium minus</i>	CUM1-1	Listed as Invasive by the Ontario Invasive Plant Council
New England Aster	<i>Symphyotrichum novae-angliae</i>	CUM1-1	
Prostrate Knotweed	<i>Polygonum aviculare</i>	Disturbed Area	
Purple Loosestrife	<i>Lythrum salicaria</i>	CUM1-1	Listed as Invasive by the Ontario Invasive Plant Council
Queen Anne's Lace	<i>Daucus carota</i>	CUM1-1, Disturbed Area	
Reed Canary Grass	<i>Phalaris arundinacea</i>	CUM1-1	Listed as Invasive by the Ontario Invasive Plant Council
Ribwort Plantain	<i>Plantago lanceolata</i>	Disturbed Area	



Common Name	Scientific Name	ELC Unit	Notes
White Cockle	<i>Silene latifolia</i>	Disturbed Area	
Yellow Rocket	<i>Barbarea vulgaris</i>	CUM1-1	

