

912 David Manchester Road – Environmental Impact Study

Final Report

December 2, 2025

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Abbreviations

ANSI	Area of Natural and Scientific Interest
CA	Conservation Authorities
CAA	Conservation Authorities Act
City	City of Ottawa
cm	centimetre
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
COSSARO	Committee on the Status of Species at Risk in Ontario
CRZ	critical root zone
CVI_1	Transportation
CVR_4	Rural Residential
DBH	diameter at breast height
DFO	Fisheries and Oceans Canada
EAB	Emerald Ash Borer
ECCC	Environment and Climate Change Canada
EIS	Environmental Impact Statement
ELC	Ecological Land Classification
ESA	Endangered Species Act, 2007
ESC	erosion and sediment control
FOCM4-4	Fresh - Moist White Cedar - White Pine Coniferous Forest
FODM3-1	Fresh – Moist Poplar Deciduous Forest
FWCA	Fish and Wildlife Conservation Act, 1997
HADD	harmful alteration, disruption or destruction (of fish habitat)
km	kilometre
m	metre
MBA	Migratory Birds Regulation



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MBCA	Migratory Birds Convention Act, 1994
MBR	Migratory Birds Regulations, 2022
MECP	Ministry of Environment, Conservation and Parks
MEGM3-8	Reed Canary Grass Graminoid Meadow
MMAH	Ministry of Municipal Affairs and Housing
MNR	Ministry of Natural Resources
MVC	Mississippi Valley Conservation Authority
NHFA	Natural Heritage Features and Areas
NHIC	Natural Heritage Information Centre
NHRM	Natural Heritage Reference Manual
OBBA	Ontario Breeding Bird Atlas
OP	City of Ottawa Official Plan
PPS	Provincial Policy Statement
PSW	Provincially Significant Wetland(s)
SAR	species at risk
SARA	Species at Risk Act
SARO	Species at Risk in Ontario
SCA	Species Conservation Act, 2025
SOCC	species of conservation concern
sq.ft.	square feet
Stantec	Stantec Consulting Ltd.
SWH	significant wildlife habitat
SWHTG	Significant Wildlife Habitat Technical Guide
ToR	Terms of Reference



1 Introduction

Stantec Consulting Ltd. (Stantec) was retained by the Chapel of Grace (the Proponent) to prepare an Environmental Impact Statement (EIS) for the development of a chapel, sports field, and surface parking located at 912 David Manchester Road, Ottawa, Ontario (the Subject Property; Figure 1, Appendix A). This EIS is in support of the Proponent's application for a Zoning By-law Amendment and Site Plan application from the City of Ottawa (the City) for their proposed development (the Project). The Project is subject to federal and provincial legislation.

This EIS documents the Natural Heritage Features and Areas (NHFA) that are present in the direct footprint and work areas of the proposed Project (hereafter the Project Footprint) and within 120 metres (m) of the Project Footprint boundaries (hereafter Adjacent Lands. The Study Area includes the Project Footprint and Adjacent Lands (Figure 1, Appendix A). This EIS provides an objective technical assessment of anticipated impacts to the present NHFA within the Study Area and provides mitigation recommendations to address the potential impacts.

This EIS was scoped to satisfy the requirements of the City's *Environmental Impact Study Guidelines* (City of Ottawa 2023). A Terms of Reference (ToR) for the EIS was prepared and submitted to the City for review and comment. The final ToR that incorporates comments from these agencies is provided in Appendix B.

1.1 Location Description

1.1.1 Subject Property

The Subject Property is approximately 2.2 hectares (ha). The Subject Property is currently undeveloped and consists of treed/forested areas and an old regenerating field bound to the west by David Manchester Road and to the east by Highway 417 (Figure 1, Appendix A).

1.1.2 Adjacent Lands

Adjacent Lands are lands outside of the Subject Property but within 120 m of the Project Footprint (Figure 1, Appendix A). Adjacent Lands are approximately 11.9 ha and generally include treed/forested areas and an old regenerating field, with mapped wetlands to the west and south, and a built area in the southwest portion (residential) and the east portion (transportation) of the Study Area.

1.1.3 Study Area

The Study Area is approximately 14.1 ha and consists of the Project Footprint and Adjacent Lands. Potential direct and indirect impacts from the proposed Project will be evaluated within the Study Area (Figure 1, Appendix A).



2 Relevant Natural Heritage Legislation and Policy

The following sections discuss the legislation and policy documents that establish the natural heritage context for the Subject Property. Legislation and policy are presented under separate headers for the federal, provincial, and municipal planning context.

2.1 Federal Context

2.1.1 Species at Risk Act

The *Species at Risk Act* (SARA) provides a framework across Canada to prevent the extinction of wildlife species and to support actions for their recovery. Federal departments are responsible for preventing the disappearance of endangered or threatened species on their properties and to implement management plans to comply with the Act.

General SARA prohibitions include Section 32(1), which states that “*no person shall kill, harm, harass, capture, or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species*”, and Section 33, which states that “*no person shall damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada.*” In addition, critical habitat, defined as the habitat that is necessary for the survival or recovery of a listed wildlife species, may be defined and protected under Section 58. Only those species currently listed in Schedule 1 of SARA (i.e., those listed as extirpated, endangered, or threatened) are protected by the prohibitions of Sections 32 to 36 and 58 of SARA, and then only on federal lands, except for aquatic species and migratory birds which are protected throughout Canada by other acts and regulations.

Under SARA, a Recovery Strategy must be developed by Environment and Climate Change Canada (ECCC) for species listed as threatened or endangered under Schedule 1 and a Management Plan must be developed for species listed as special concern under Schedule 1. The Recovery Strategy should include the identification of critical habitat and list examples of activities that are likely to result in its destruction.

2.1.2 Migratory Birds Convention Act

The federal *Migratory Birds Convention Act, 1994* (MBCA) affords protection and conservation to migratory bird populations, individuals, and their nests within all of Canada for bird species listed under Article I of the Migratory Birds Convention. Most bird species in Canada are afforded protection, except for a few families (e.g., cormorants, pelicans, grouse, quail, pheasants, ptarmigan, hawks, owls, eagles, falcons, kingfishers, and corvids). The MBCA is the enabling statute for the Migratory Birds Regulations, which were updated in May 2022 (*Migratory Birds Regulations, 2022*; MBR). S.5(1) of this regulation states that “*without the authorization of a permit, the disturbance, destruction, or taking of a nest, egg,*



nest shelter, eider duck shelter, or duck box of a migratory bird, or possession of a migratory bird, carcass, skin, nest, or egg of a migratory bird are prohibited with the exception of the following (S.5(2)):

- (a) a nest shelter, eider duck shelter or duck box that does not contain a live bird or a viable egg;*
- (b) a nest that was built by a species that is not listed 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 is listed in a Table to Schedule 1 if the following conditions are met:*
 - (i) the person who damages, destroys, removes or disturbs that nest provided a written notice to the Minister a number of months beforehand that corresponds to the number of months set out in column 3 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”.*

Under the MBR, nests for 18 bird species receive year-round protection for a prescribed length of time ranging from 12-36 months (Schedule 1), and all other nests of migratory birds are protected when they contain a live bird or viable egg (S. 5(2)(b)). If a nest of a species identified on Schedule 1 of the MBR is identified, then the nest should be registered under ECCC’s Abandoned Nest Registry and monitored to determine if it is empty of live birds or viable eggs, at which point the prescribed period of inactivity can begin to be counted.

2.1.3 Fisheries Act

The *Fisheries Act* protects fish and fish habitats (s34) within Canadian waters. Under the current fish and fish habitat protection provisions of the *Fisheries Act*, any works, undertaking or activity of a 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, Fisheries and Oceans Canada (DFO) has outlined measures to protect fish and fish habitat (DFO 2024a) as well as several standards and codes of practices (DFO 2024b). If a project cannot completely implement the measures to protect fish and fish habitat and if the standards and codes of practice are not applicable to the project, DFO recommends that the proponent request a review of the project by DFO. If a project cannot avoid and/or mitigate impacts that will cause death of fish or the HADD of fish habitat, an Authorization under the *Fisheries Act* may be required (DFO 2024c).



2.2 Provincial Context

2.2.1 Protect Ontario by Unleashing our Economy Act

The *Protect Ontario by Unleashing our Economy Act, 2025* received Royal Assent on June 5, 2025, and as a result, the ESA was amended and will be in effect until such time as the *Species Conservation Act, 2025* (SCA) is proclaimed. Recent amendments to the ESA include:

- Revised habitat definition replaced the previous definition in the ESA, focused on core elements of habitat such as breeding, rearing, staging, wintering, and hibernation areas.
- “*Harass*” was removed from the prohibitions.
- The government has discretion to add species to, or remove from, the SARO List.
- The Species at Risk Conservation Fund will no longer accept funds and there will no longer be an option to pay a charge in lieu of overall benefit.
- Registration for activities authorized under current conditional exemptions will continue using the current registry system.
- Permits, agreements and associated conditions, entered into before the legislation was amended, will continue to apply continuing to use the previous definition of “habitat”.
- Updated compliance and enforcement model to focus on collaborative resolution rather than legal action.

The SCA is anticipated to be enacting in the coming months and is proposed to use a “registration-first approach” with most activities covered by registration. Permits would still be required in some circumstances. Regulations under the SCA, which will provide details of the registration options, are currently under development.

2.2.2 Endangered Species Act

The Ontario *Endangered Species Act, 2007* (ESA) protects species designated as threatened, endangered, or extirpated on the Species at Risk in Ontario (SARO) list. The ESA prohibits the killing, harming, or possessing protected species, as well as prohibiting any damage or destruction to the habitat of the listed species. Listed species are referred to as SAR and are provided with habitat protection under the ESA. Some species are also protected by detailed habitat regulations that go beyond the general habitat protection to define the extent and character of protected habitats.

Activities that may impact a protected species or its habitat require the prior issuance of a permit or registration from the Ministry of the Environment, Conservation and Parks’ (MECP) Species at Risk Branch (SARB). Regulations allow for activities that would otherwise be prohibited under the species at risk legislation, but are subject to rigorous controls, including registration of the activity and preparation of a mitigation plan.



2.2.3 Fish and Wildlife Conservation Act

The *Fish and Wildlife Conservation Act, 1997* (FWCA) provides protection to many birds, mammals, reptiles, amphibians, fish, and invertebrates. FWCA legislation prohibits hunting (killing, capturing, injuring, and harassing) and trapping of ‘specially protected wildlife’ as defined in O. Reg. 699/98 of the Act. Birds that are not protected by the MBCA, SARA, or ESA (e.g., raptors including Peregrine Falcon) and bats (e.g., Big Brown Bat) that are not protected by SARA or ESA may be protected under the FWCA. The FWCA protects individuals and their habitat (e.g., nests, roosts).

For in-water work that involves isolation techniques that require the relocation of fish, mussels, turtles or other wildlife, a License to Collect Fish for Scientific Purposes and/or a Wildlife Scientific Collectors Authorization will be required from Ontario’s Ministry of Natural Resources (MNR) under the FWCA.

For species protected under the FWCA and the ESA, the provision that provides the listed species with the most protection shall prevail.

2.2.4 Conservation Authorities Act

The *Conservation Authorities Act* (CAA) grants each of Ontario’s 36 Conservation Authorities (CA) the authority to make regulations within the areas under their respective jurisdictions (S. 28). However, as a result of the implementation of the *More Homes Built Faster Act, 2022* and *Building Better Communities and Conserving Watersheds Act, 2017*, several amendments to the CAA came into effect on April 1, 2024, including a revocation of S.28 and implementation of the new regulation, *Prohibited Activities, Exemptions and Permits* (O. Reg. 41/24). Under the amended CAA, prohibited activities subject to a permit from a CA are now limited to:

- 1) *Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland.*
- 2) *Development activities in areas that are within the authority’s area of jurisdiction and are,*
 - i. *hazardous lands,*
 - ii. *wetlands,*
 - iii. *river or stream valleys the limits of which shall be determined in accordance with the regulations,*
 - iv. *areas that are adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to an inland lake and that may be affected by flooding, erosion or dynamic beach hazards, such areas to be further determined or specified in accordance with the regulations, or*
 - v. *other areas in which development should be prohibited or regulated, as may be determined by the regulations.*



2.2.5 Planning Act

The *Ontario Planning Act* sets out the ground rules for land use planning in Ontario. It describes how land uses may be controlled, and who may control them. The purpose of the Act is to:

- *“provide for planning processes that are fair by making them open, accessible, timely and efficient*
- *promote sustainable economic development in a healthy natural environment within a provincial policy framework*
- *provide for a land use planning system led by provincial policy*
- *integrate matters of provincial interest into provincial and municipal planning decisions by requiring that all decisions be consistent with the Provincial Policy Statement and conform/not conflict with provincial plans*
- *encourage co-operation and coordination among various interests*
- *recognize the decision-making authority and accountability of municipal councils in planning.”*

2.2.5.1 Provincial Planning Statement

The Provincial Policy Statement (PPS; MMAH 2024) was issued under Section 3 of the *Planning Act, 1990* and came into effect in 1996, with the most recent revision in October 2024. The *Planning Act* requires that decisions made by planning authorities are consistent with the policy statements, such as the PPS, which includes policies on development and land use patterns, resources and public health and safety. Municipal official plans are the most important vehicle for implementation of the PPS (MMAH 2024). Section 4.1 of the PPS deals with natural heritage and requires that natural heritage systems be identified in certain ecoregions. This includes Ecoregion 6E, where the Study Area is located.

Although the PPS provides direction on land use planning and development projects, the policies provide a useful framework for identifying and evaluating the significance of natural heritage features on other projects including Municipal Class EAs. According to Section 4.1.4 and 4.15 of the PPS, *“development and site alteration are not permitted in the following features unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions:*

Section 4.1.4

- a) significant wetlands in Ecoregions 5E, 6E, and 7E*
- b) significant coastal wetlands*

Section 4.1.5

- b) significant woodlands in Ecoregions 6E and 7E*
- c) significant valleylands in Ecoregions 6E and 7E*
- d) significant wildlife habitat (SWH)*



- e) *significant areas of natural and scientific interest (ANSI)*
- f) *coastal wetlands in Ecoregions 5E, 6E, and 7E that are not subject to policy 4.1.4.b*

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

1. *Significant portions of the habitat of endangered or threatened species*
2. *Fish Habitat*

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

The PPS defines hazardous forest types for wildland fire as *'forest types assessed as being associated with the risk of high to extreme wildland fire using risk assessment tools established by the Ontario Ministry of Natural Resources, as amended from time to time.'*

According to Section 5.2.9, development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire unless the wildland fire risk is mitigated in accordance with wildland fire assessment and mitigation standards.

2.3 City of Ottawa

2.3.1 City of Ottawa Official Plan

The City of Ottawa *Official Plan* (OP) was adopted by Council on November 2021. Schedule C11 designates the Natural Heritage System and Schedule C12 designates Urban Greenspace.

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 (SWH)
- 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 do not form part of parkland dedication. 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*”.

The City's *Environmental Impact Study Guidelines* (City of Ottawa 2023) defines Significant Woodlands in an urban area as “any treed area meeting the definition of woodlands in the *Forestry Act*, R.S.O.1990. c F.26 or forest in the Ecological Land Classification for Southern Ontario” that is 0.8 ha in size or larger, supporting woodland 60 years of age and older at the time of evaluation.

Section 10.1.5 of the OP states that ‘*development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted within hazardous forest types for wildland fire, if it is demonstrated that the proposed development conforms to provincial wildland fire assessment and mitigation standards.*’

2.3.2 City of Ottawa Tree By-Law

The City's Tree Protection By-law (No. 2020-340) (City of Ottawa 2020) was developed in a response to community feedback and recommendations provided in the City's *Urban Forest Management Plan* (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 with the urban area that over 1 hectare (ha) in size, and
- 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 outside the suburban area of the City of Ottawa, trees on the Subject Property measuring ≥ 50 cm DBH do not require a permit if they are proposed to be removed to facilitate development.



3 Methods

3.1 Background Desktop Review

The following documents and online databases were reviewed to identify physiographic setting, land cover, designated NHFA (Figure 2, Appendix A), and recent records (i.e., records from 2005 or later) of SAR/SOCC, and/or species within geographic ranges (for species that have few records such as bats) that overlap the Study Area to inform the 2025 field studies:

- Ontario's Natural Heritage Information Centre (NHIC) (MNR 2025a)
- SARO List (MECP 2025)
- Geospatial Ontario (MNR 2025b)
- Satellite Imagery (Google Earth 2025)
- Abandoned Mines information system (Ministry of Mines 2025)
- DFO Aquatic Species at Risk Map (DFO 2025a)
- ECCC Species at Risk Public Registry (ECCC 2025a)
- Migratory Bird Sanctuaries (ECCC 2025b)
- Ontario Breeding Bird Atlas (2021-2025): checklist data (Birds Canada 2025)
- Ontario Breeding Bird Atlas (Cadman et al. 2007)
- Ontario Butterfly Atlas (Macnaughton et al. 2024)
- Ontario Moth Atlas (Kaposi et al. 2025)
- Ontario Odonata Atlas (MNRF 2024)
- Ontario Reptile and Amphibian Atlas (Ontario Nature 2020)
- Atlas of the Mammals of Ontario (Dobbyn 1994)
- iNaturalist (iNaturalist 2025)
- eBird Canada (eBird 2025)
- Mississippi Valley Conservation Authority (MVC) Interactive Property Map (MVC 2025)
- City of Ottawa Official Plan (OP; City of Ottawa 2021)
- City of Ottawa's Species List (City of Ottawa 2025a)

City of Ottawa's GeoPortal (City of Ottawa 2025b)A list of SAR and SOCC with recent records within the Study Area was compiled based on the background desktop review. Some of the desktop sources provide data at a scale of 10 x 10 kilometer (km), and a recent species record is not confirmation that the species may be present within the Study Area as suitable habitat may not occur. Therefore, desktop results were screened to assess their relevance to the Study Area. Species were removed from consideration if there was no potential habitat observed within the Study Area (e.g., aquatic species).



SAR and SOCC that had the potential to occur within the Study Area (i.e., recent records and potential habitat) were carried forward to the SAR habitat assessment in Section 3.2.4.

Information regarding landscape ecology at the Subject Property was also collected during the background desktop review and summarized in Section 4.1.1.

For this report, SAR include the following:

- Species designated under the SARO list of the provincial ESA as threatened, endangered or extirpated
- Aquatic (fish and mussels) and migratory bird species designated under Schedule 1 of the federal SARA as threatened, endangered or extirpated

Species listed as threatened, endangered and/or extirpated on the SARO list receive both individual and habitat protection under the ESA. Aquatic species listed as threatened, endangered and/or extirpated on Schedule 1 of the SARA receive both individual and habitat protection under the SARA. Non-aquatic species and non-migratory birds listed on Schedule 1 of the SARA are excluded because protection under the SARA is generally not provided outside of federal lands.

Provincial ranks (S-Ranks) are status rankings assigned for the province by the MNR and are available in the Natural Heritage Information Centre database (MNR 2025a). 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. Provincially rare species are species with S-Ranks of S1, S2, or S3 (MNR 2025a). S-Ranks are defined as follows (MNR 2025a):

- S1 – Critically Imperiled, very high risk of extinction or extirpation; usually fewer than 5 occurrences
- S2 – Imperiled, high risk of extinction or extirpation; 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
- S? – An S-Rank followed by a “?” indicates the rank is still uncertain
- SNA – Introduced

The Natural Heritage Reference Manual (NHRM) was developed to provide technical guidance for implementing the natural heritage policies of the Provincial Plannign Statement (PPS; MNR 2010). Significant Wildlife Habitat (SWH) includes the habitat of SOCC.

For this report, SOCC includes the following:

- species designated under the SARO list as special concern
- species designated under Schedule 1 of the SARA as threatened, endangered or extirpated
- species assessed as SC by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) regardless of respective listings on Schedule 1 of SARA



- species with provincial ranks of S1 to S3

Although these SOCC do not receive legal protection under the ESA or SARA, their habitat is protected under the PPS (e.g., if it qualifies as SWH), and they may also be afforded protection under the MBCA or FWCA.

3.2 Field Investigations

Field investigations were conducted on May 27, 2025 to confirm and supplement results of the 2025 background desktop review (Section 3.1) within the Study Area. The 2025 field investigations included the following:

- Vegetation community survey using ELC
- Black Ash and Butternut survey
- NHFA assessment
- SAR habitat assessment
- SWH assessment

Incidental wildlife observations (non-SAR/SOCC) and evidence of wildlife (e.g., nests, dens, scat, tracks) were also recorded during all surveys. Weather conditions at the time (0900 hrs – 1600 hrs) of the field investigations were clear, between 19 °C and 25 °C, with no rainfall within 24 hrs. A photographic record of the Study Area is provided in Appendix C.

3.2.1 Vegetation Survey

Vegetation surveys were conducted on May 27, 2025, and included community delineation and classification using Ecological Land Classification for southern Ontario (ELC; Lee et al. (1998/2008).

The purpose of this survey was to document plant species in the Study Area and describe the ELC vegetation communities present. Targeted searches were conducted for SAR, SOCC, and rare vegetation community types known to occur in the vicinity of the Study Area.

Vegetation communities were delineated on aerial imagery and verified in the field. The Study Area was systematically covered on foot to ensure a comprehensive inventory of flora species potentially impacted by the proposed works.

The identification and provincial status of all plant species and flora nomenclature for scientific accepted species names is based on the vascular plant list available on the NHIC database (MNR 2025a) and VASCAN, the Database of Vascular Plants of Canada (Canadensys 2011), was used to verify synonyms of plant names where appropriate.

3.2.1.1 Black Ash and Butternut Survey

Black Ash (*Fraxinus nigra*) are a member of the olive (Oleaceae) family and are native to Ontario's mixed hardwood forest. In Ontario the range of Black Ash extends farther north than any other ash species.



Approximately 25% of the global range of Black Ash is in Ontario, and 51% of the species' global range is within Canada. Black Ash grows best in wetlands and is predominantly found in swamps, floodplains and fens. Populations of Black Ash are in decline because it is susceptible to Emerald Ash Borer (EAB; *Agrilus planipennis*). It is expected that EAB will cause declines in the total number of Black Ash trees by greater than 70% over the next two generations (100 years). EAB was introduced to the Detroit-Windsor area in the 1990s and has since become established in almost all counties in southern Ontario and southeastern Ontario (Catling et al. 2022, MECP 2022).

Butternut (*Juglans cinerea*) are a member of the Walnut (Juglandaceae) family and are native to southern and eastern Ontario in mixed hardwood forest. Butternut cannot hybridize with native Black Walnut (*Juglans nigra*) but are known to hybridize with introduced walnut species, especially Japanese Walnut (*Juglans ailantifolia*), which are cultivated in Canada. Butternuts grow best on well-drained, fertile soils of stable slopes and bottomlands in small groups or individually and are not typically abundant. Butternut is a shade intolerant species that is generally associated with mid-successional forests, forest edges and hedgerows. Populations of Butternut are in decline due to the Butternut Canker (*Ophiognomonia clavignenti-juglandacearum*), a fungus that is spreading throughout their range in Ontario (COSEWIC 2017, ECCC 2010).

Stantec completed a dedicated search for Black Ash and Butternut trees within the Study Area by meandering on foot through areas of potentially suitable habitat concurrently with the vegetation community survey. Where permission to enter lands not owned by the Proponent within the Study Area was not provided, the areas were searched from publicly accessible lands using binoculars.

3.2.2 Incidental Wildlife Observations

Observations of wildlife and signs of wildlife were recorded during field investigations, including species that were detected by sight and sound, dens, nests, burrows, browse, tracks, and scat. Surveyors searched areas where wildlife are likely to concentrate (e.g., in woodlands or thickets, and open foraging and basking habitat) to improve the likelihood of encountering wildlife and evidence of wildlife, and recorded species, their respective numbers/counts, and took notes on habitat and behavior.

3.2.3 Natural Heritage Features and Areas Assessment

Natural heritage feature and areas (NHFA), if present, were identified during the desktop review within the Study Area and characterized during the ELC surveys if within the Study Area. Natural heritage features include ANSIs, Provincially Significant Wetlands (PSWs), unevaluated wetlands, municipal drains, ditches, creeks, fish nurseries, linkages and wildlife corridors, significant woodlands, and significant valleylands.

3.2.4 Species at Risk Habitat Assessment

As described in Section 3.1, a list of SAR with potential to occur within the Study Area was developed using results of the background desktop review. Habitat assessments were completed during the ELC surveys in the field to determine the habitat potential for SAR in the Study Area.



Based on Stantec’s desktop review and field studies, a list of SAR and SOCC with the potential to occur within the Study Area was developed, along with the likelihood of occurrence and federal and provincial status for each species. The likelihood of occurrence of each species was ranked as ‘*nil*’, ‘*low*’, ‘*medium*’, ‘*high*’, or ‘*confirmed*’, based on field survey observations and presence of suitable habitat within the Study Area and were defined as follows:

- **Nil:** species with no suitable habitat observed in the Study Area.
- **Low:** species with no recent records within the Study Area and/or no to very limited suitable habitat in the Study Area were ranked as ‘low likelihood of occurrence’.
- **Medium:** species with a recent record within the Study Area and suitable breeding/roosting habitat in the Study Area were ranked as ‘medium likelihood of occurrence’.
- **High:** species with multiple recent records within the Study Area and/or an abundance of suitable habitat in the Study Area were ranked as ‘high likelihood of occurrence’.
- **Confirmed:** species were observed in the Study Area during field surveys.

Species with a ‘*nil*’ or ‘*low*’ probability to occur in the Study Area were not carried forward for further assessment in the study. Mitigation measures and potential permitting requirements are discussed in Section 7.4 and Section 8 for species with a ‘*medium*’ or ‘*high*’ probability to occur and species that were ‘*confirmed*’ (i.e., observed during field studies).

3.2.5 Significant Wildlife Habitat Assessment

The *Significant Wildlife Habitat Technical Guide* (SWHTG) (MNR 2000) and *Ecoregion Criteria Schedule for 6E* (MNRF 2015a) provide standard provincial guidance and were used to identify SWH and assess their significance and sensitivity.

Habitats within the Study Area were assessed during the ELC surveys for candidate SWH using the *Ecoregion Criteria Schedule for 6E* (MNRF 2015a). The presence of SWH was determined through desktop review (NHIC database) and, if present in the Subject Property, were characterized during field surveys.

Multi-year targeted species-use surveys are generally required to determine if candidate features qualify as confirmed SWH. Because multi-year targeted species-use surveys have not been conducted, SWH features identified during field investigations are considered candidate, unless they were confirmed through direct observations or background review.

The SWHTG defines four categories of SWH:

- Habitats of Seasonal Concentrations of Animals
- Rare Vegetation Communities or Specialized Habitats for Wildlife
- Habitats of Species of Conservation Concern
- Animal Movement Corridors



A SWH assessment was conducted within the Study Area concurrently with the vegetation community survey following the SWHTG (MNR 2000) and *Ecoregion Criteria Schedule for 6E* (MNR 2015a). Features such as candidate snake hibernacula, vernal pools, seeps and springs, candidate turtle overwintering and nesting habitat, raptor nests, and terrestrial crayfish chimneys were recorded if encountered, and a description of the attributes and location of each feature identified was recorded.

Results of the wildlife habitat assessment are provided below in Section 4.3.

3.3 Evaluation of Significance

The potential significance of NHFA and associated ecological functions was evaluated in accordance with the *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement* (MNR 2010) and the OP (City of Ottawa 2021) to determine Provincially Significant natural heritage features and associated ecological functions within the Study Area.

3.4 Wildland Fire Assessment

A wildland fire assessment was completed in accordance with the Province's *Wildland Fire Risk Assessment and Mitigation Reference Manual in support of the Provincial Policy Statement, 2014* (OMNRF 2017a), the OP (City of Ottawa 2021), and the City's *Environmental Impact Study Guidelines* (City of Ottawa 2023) to determine risks associated with wildland fire within the Study Area.



4 Results

The results of the background review and 2025 field investigations, as described in Section 3 are outlined below. The species described in-text herein use provincial common names (MNR 2025a).

4.1 Background Desktop Review

4.1.1 Landscape Ecology

The Study Area is situated within Ecoregion 6E in the Kemptville Ecodistrict (6E-12) within the Lake Simcoe-Rideau Ecoregion. This Ecodistrict is approximately 58% pasture/cropland, 26% deciduous forest (associated with the Eastern Temperate Deciduous Forest Vegetation Type and the Upper St. Lawrence Region of the Great Lakes-St. Lawrence Forest Region), 6% mixed forest, 6% other natural communities, and 4% other communities (Wester et al., 2018). Tree species associated with this Ecodistrict include Sugar Maple (*Acer saccharum*), American Beech (*Fagus grandifolia*), American Elm (*Ulmus americana*), Red Maple (*Acer rubrum*), Black Ash (*Fraxinus nigra*), Large-toothed Aspen (*Populus grandidentata*), Silver Maple (*Acer saccharinum*), Green Ash (*Fraxinus pennsylvanica*), and Bur Oak (*Quercus macrocarpa*) (Wester et al., 2018). The Study Area is located in a rural environment and the forest cover in rural environments may include native tree species associated with Ecodistrict 6E-12 as well as non-native trees.

4.1.2 Designated Natural Heritage Features and Areas

Based on the results of the background review, the following designated NHFA have been previously identified within the Study Area:

- Schedule B9 (Rural Transect) of the OP (City of Ottawa 2021) indicates the Study Area is located on lands designated as Rural Countryside.
- Schedule C11A [Natural Heritage System (West)] of the OP (City of Ottawa 2021) indicate the Study Area is located on lands designated as Natural Heritage System Linkage Area and Natural Heritage Features Overlay as part of the Natural Heritage System overlay.
- Schedule C15 (Environmental Constraints) of the OP (City of Ottawa 2021) and geoOttawa mapping (City of Ottawa 2025) indicate the Study Area is located on lands designated as Flood Plain associated with an unnamed watercourse located northwest of the Study Area.
- The NHIC database (MNR 2025) indicates woodlands are located on Adjacent Lands north and west of the Subject Property. The woodlands do not meet the City of Ottawa's criteria for Significant Woodlands as outlined in the *Environmental Impact Study Guidelines* (2023) (City of Ottawa 2023a) and Section 2.3.1.
- According the MVC Interactive Property Map (MVC 2025), the Study Area occurs within MVC's regulation limit, regulated areas, and flood lines (O. Reg. 41/24).



There are no mapped ANSI or SWH within the Study Area. Aquatic features are discussed further in Section 4.1.4 below.

4.1.3 Species at Risk and Species of Conservation Concern

A total of fifteen (15) SAR and seven SOCC were identified during the background review with the potential to occur within the Study Area. These species were carried forward to the field assessment. The final assessment of potential SAR and SOCC for the Study Area following field investigations is presented in Section 4.2.3 and Appendix D.

4.1.4 Aquatic Habitat

According to the Geospatial Ontario (MNR 2025b), there are two unevaluated wetland parcels located on Adjacent Lands (Figure 2, Appendix A).

No mapped watercourses, PSWs, or waterbodies occur within the Study Area.

4.2 Field Investigations

4.2.1 Vegetation Community Assessment

The vegetation community assessment was completed on May 27, 2025 for the Study Area. The vegetation assessment followed the ELC system for southern Ontario (Lee et al. 1998) and the update (2008) catalogue. The Subject Property consisted entirely of natural vegetation communities (2.2 ha) and represented deciduous and coniferous forests (FODM3-1, FOCM4-4) and graminoid meadow (MEGM3-8). Adjacent Lands consisted predominately of deciduous forests (FODM3-1) and rural residential (CVR_4) with pockets of graminoid meadow (MEGM3-8) and coniferous forest (FOCM4-4). Transportation (CVI) occupied areas to the east and west of the Subject Property.

Wetlands are defined in the Ontario Wetland Evaluation System (OWES) as “*Lands that are seasonally or permanently flooded by shallow water as well as lands where the water table is close to the surface; in either case the presence of abundant water has caused the formation of hydric soils and has favored the dominance of either hydrophytic or water tolerant plants*” (MNRF 2022).

No wetlands as defined in the OWES, Southern Manual, 4th Edition (MNRF 2022) were identified during vegetation community assessment within the Study Area; however, wetland delineation and a botanical inventory were not completed as part of the field program because the mapped unevaluated wetland parcels were located on Adjacent Lands where access was not permitted..

ELC vegetation community types within the Study Area are mapped on Figure 3, Appendix A. All vegetation communities observed are common and widespread throughout Ontario (MNR 2024c). Vegetation communities in the Study Area are described in Table 4.1 below.



Table 4.1 Vegetation Community Descriptions

ELC Type	Community Description	Area (ha)
FOREST COMMUNITIES		
FOCM4-4 Fresh - Moist White Cedar - White Pine Coniferous Forest	This forested community occurred in the west portions of the Subject Property and Study Area. The canopy was abundant with coniferous trees of Eastern White Cedar (<i>Thuja occidentalis</i>) and mature Eastern White Pine (<i>Pinus strobus</i>) with lesser associates of Scots Pine (<i>Pinus sylvestris</i>) and White Spruce (<i>Picea glauca</i> ; see photos 1 to 3, Appendix C).	1.6
FODM3-1 Fresh – Moist Poplar Deciduous Forest	This forested community occurred in the north and east portions of the Subject Property Boundary and Study Area and northwest portion of the Study Area. The canopy was abundant with deciduous trees of Balsam Poplar (<i>Populus balsamifera</i>) and Trembling Aspen (<i>Populus tremuloides</i>) with occasional associates of Eastern White Cedar, Eastern White Pine, Scots Pine, and White Spruce (see photos 4 to 7, Appendix C).	4.4
MEADOW COMMUNITIES		
MEGM3-8 Reed Canary Grass Graminoid Meadow	This vegetation community occurred through the middle of the Subject Property and adjacent to the CVI_1 community. This community was dominated by Reed Canarygrass (<i>Phalaris arundinacea</i>), Aster species (<i>Symphotrichum</i> spp.), and Goldenrod species (<i>Solidago</i> spp.). Lesser associates included Cattail species (<i>Typha</i> spp.), invasive Common Reed (<i>Phragmites australis</i>), Soft-stemmed Bulrush (<i>Schoenoplectus tabernaemontani</i>) and Northern Water-plantain (<i>Alisma triviale</i>). Individual and small groupings of relatively young trees occurred throughout this community, including Eastern White Pine, Scots Pine, White Spruce, Balsam Poplar, and Trembling Aspen (see photos 8 to 12, Appendix C).	1.4
CONSTRUCTED TYPES		
CVR_4 Rural Residential	This community is associated with rural residential properties located south and west of the Subject Property. This community represented areas with landscaped gardens and mowed lawn.	3.4
CVI_1 Transportation	This community is associated with David Manchester Road and Highway 417.	3.3

4.2.2 Incidental Wildlife Observations

Eight (8) incidental wildlife observations (not observed during targeted surveys) were recorded within the Study Area. All incidental observations have S-Ranks of S4 or S5 and are common and widespread in Ontario (see Table 4.2).



Table 4.2 Wildlife Observations Within the Study Area During 2025 Field Surveys

Family ¹	Scientific Name ¹	Common Name ¹	S-Rank ²	SARO Status ³	COSEWIC Status ⁴	SARA Status ⁵
AMPHIBIANS						
Ranidae	<i>Lithobates clamitans</i>	Green Frog	S5	Not Listed	No Status	Not Listed
BIRDS						
Corvidae	<i>Cyanocitta cristata</i>	Blue Jay	S5	Not Listed	No Status	Not Listed
Icteridae	<i>Agelaius phoeniceus</i>	Red-winged Blackbird	S5	Not Listed	No Status	Not Listed
Parulidae	<i>Geothlypis trichas</i>	Common Yellowthroat	S5B,S3N	Not Listed	No Status	Not Listed
Parulidae	<i>Setophaga ruticilla</i>	American Redstart	S5B	Not Listed	No Status	Not Listed
Passerellidae	<i>Melospiza melodia</i>	Song Sparrow	S5	Not Listed	No Status	Not Listed
Turdidae	<i>Turdus migratorius</i>	American Robin	S5	Not Listed	No Status	Not Listed
MAMMALS						
Cervidae	<i>Odocoileus virginianus</i>	White-tailed Deer	S5	Not Listed	No Status	Not Listed

4.2.3 Species at Risk and Species of Conservation Concern

Based on the desktop review and preliminary habitat assessment within the Study Area using satellite imagery, a total of fifteen (15) SAR and seven SOCC were carried forward to the SAR and SOCC habitat assessment (Appendix D). The SAR and SOCC habitat assessment used field survey results from vegetation community surveys and field surveys to assess the likelihood of occurrence for a SAR or SOCC that had the potential to occur. A brief description of the habitat requirements, suitable habitat observed within the Study Area, and the likelihood of occurrence are presented in Appendix D.

The fifteen (15) SAR included two plants, one reptile, five bird, and seven mammal species (Appendix D.1). No SAR were observed within the Study Area during the field investigations. The following SAR were assessed as having a medium or high likelihood of occurrence within the Study Area:

- Bird SAR: Barn Swallow (medium), Wood Thrush (high)
- Mammal SAR: Silver-haired Bat (medium), Eastern Red Bat (medium), Hoary Bat (medium), Eastern Small-footed Myotis (medium), Little Brown Myotis (medium), Northern Myotis (medium), Tri-colored Bat (medium)

The seven SOCC included one insect, four herptile, and two bird species (Appendix D.2). No SOCC were observed within the Study Area during the field investigations. The following SOCC were assessed as having a medium or high likelihood of occurrence within the Study Area:



- Insect SOCC: Monarch (medium)
- Bird SOCC: Evening Grosbeak (medium), Eastern Wood-pewee (medium)

Potential Project impacts, recommended mitigation measures, and potential permitting requirements are discussed in Section 7 and Section 8 for species with a medium or high likelihood to occur within the Study Area.

4.3 Significant Wildlife Habitat

The presence of the four categories of SWH described in Section 3.2.5 was assessed for the Study Area. A full SWH assessment is provided in Appendix E.

4.3.1 Habitats of Seasonal Concentrations of Animals

Habitats of seasonal concentrations of animals are those sites where large numbers of a species gather together at one time of the year, or where several species congregate. These areas include deer yards, turtle overwintering areas, snake and bat hibernacula, bat maternity colonies, waterfowl staging areas, raptor roosts, bird nesting colonies, shorebird staging areas, and passerine migration concentrations. Only the best examples of these concentration areas are usually designated as SWH.

Bat maternity colonies: forest (FO) communities within the Study Area may provide candidate habitat to support bat maternity colonies. Targeted bat surveys were not part of the field investigations (Figure 3, Appendix A).

4.3.2 Rare Vegetation Communities or Specialized Habitats for Wildlife

Rare vegetation communities and specialized habitats for wildlife are two separate components. Rare vegetation communities are those with vegetation communities that are considered rare in the province (e.g., S1-S3). The SWHTG (MNR 2000) identifies many habitats that could be considered specialized habitats, such as habitat for area-sensitive species, forests providing a high diversity of habitats, amphibian woodland breeding ponds, turtle nesting habitat, highly diverse sites, as well as seeps and springs. High quality habitat features generally occur within interior landscapes where habitat is not influenced by edge effects and wildlife mortality that are associated with major roadways.

No rare vegetation communities or specialized habitats for wildlife were observed within the Study Area.

4.3.3 Habitat for Species of Conservation Concern

Habitat for SOCC includes four types of species: (a) those that are rare, (b) those whose populations are significantly declining, (c) those that have been identified as being at risk to certain common activities, and (d) those with relatively large populations in Ontario compared to the remainder of the globe. This category also includes nesting habitats for marsh, open country, shrub/early successional birds as well as terrestrial crayfish.



Habitat for other species of conservation concern: No SOCC were recorded within the Study Area during the field investigations. Candidate habitat for Monarch (wildflowers) was observed throughout the Study Area. Forested communities (FO) within the Study Area may provide candidate habitat for Evening Grosbeak and Eastern Wood-pewee.

4.3.4 Animal Movement Corridors

Migration corridors are areas that are traditionally used by wildlife to move from one habitat to another, typically to access different seasonal habitat requirements. Corridors requiring consideration in Ecoregion 6E include Amphibian and Deer Movement Corridors and are identified once significant amphibian breeding or deer winter features are confirmed. Results of field assessments for SWH are summarized in Appendix G.

No animal movement corridors were observed within the Study Area.

4.4 Wildland Fire Assessment

There were two forest communities (FOCM4-4, FODM3-1) identified within the Study Area (see Section 4.2.1). The canopy in the coniferous forest (FOCM4-4) was abundant with Eastern White Cedar and mature Eastern White Pine with lesser associates of Scots Pine and White Spruce (see photos 1 to 3, Appendix C).

The canopy in the deciduous forest (FODM3-1) was abundant with Balsam Poplar and Trembling Aspen with occasional associates of Eastern White Cedar, Eastern White Pine, Scots Pine, and White Spruce (see photos 4 to 7, Appendix C).

Based on forest species compositions provided in the *Wildland Fire Risk Assessment and Mitigation Reference Manual in support of the Provincial Policy Statement, 2014* (OMNRF 2017a; see Figure 4.1 below), the wildland fire risk level for the FOCM4-4 and FODM3-1 communities was assessed as 'low' to 'moderate'. Additionally, White Pine trees within the Study Area were relatively mature, conifers were scattered and separated by deciduous trees, trees appeared to be relatively healthy and disease free, and no heavy build-up of debris or deadfall was observed within the forest communities within the Study Area.

According to the *Wildland Fire Risk Assessment and Mitigation Reference Manual in support of the Provincial Policy Statement, 2014* (OMNRF 2017a) and the City's *Environmental Impact Study Guidelines* (City of Ottawa 2023), any forest types associated with a high or extreme wildland fire hazard within 100 metres of the Subject Property must be identified, described and assessed in accordance with the *Wildland Fire Risk Assessment and Mitigation Reference Manual* (OMNRF 2017a).

Further assessment (e.g., hazard assessment) and mitigation (e.g., vegetation management) for forest communities (FOCM4-4, FODM3-1) within the Study Area was not required in accordance with the *Wildland Fire Risk Assessment and Mitigation Reference Manual* (OMNRF 2017a) and the City's *Environmental Impact Study Guidelines* (City of Ottawa 2023) because no hazardous forest types as defined by the PPS are present within the Study Area.



Table 4-1.

Characteristics of hazardous forest types: Forest species composition and forest condition attributes					
WILDLAND FIRE RISK LEVEL	FOREST SPECIES COMPOSITION	FOREST CONDITION: COMPOSITION AND ARRANGEMENT	FOREST CONDITION: HEALTH	FOREST CONDITION: DENSITY AND STRUCTURE	FOREST CONDITION: GROUND FUEL ACCUMULATION AND LADDER FUELS
EXTREME/HIGH	<p>Extreme: Immature jack pine; boreal spruce; black or white spruce; balsam fir; immature red, white pine</p> <p>High: Mature jack pine; mixed-wood with >50% conifer species (jack pine, spruce, balsam fir, immature red or white pine)</p> <p>In southern Ontario, red cedar and ground juniper are highly flammable</p>	<p>Large portion of immature conifer trees mixing into canopy</p> <p>Fine fuels such as leaves, needles, twigs from branches up to 5 cm in diameter mixed with larger fuels (branches of 5–10 cm)</p> <p>Natural conifer forests and unmanaged conifer plantations</p>	<p>Storm-damaged, insect-damaged or diseased fuels indicated by:</p> <ul style="list-style-type: none"> – forest fuels lying horizontally on the ground – full conifer trees lying on ground or tops of conifer trees broken off and lying on the ground – dead standing conifer trees with red or brown needles inter-mixed with immature conifer trees 	<p>Within immature conifer stands/ plantations, trees are close to one another with no crown (tree top) separation</p> <p>Within continuous conifer trees (standing timber and crowns): high stand density; trees not spaced; conifer tree crowns touch or overlap</p>	<p>Large amount of woody debris /slash build-up and branches on the ground</p> <p>Large build-up of flammable surface materials: cured grasses, needle litter or forest debris (i.e., branches, fallen trees, etc.)</p> <p>Forest fuels from thinning or logging operations lying horizontally on the ground with accumulation of fine fuels from conifer tree tops and branches</p> <p>Conifer trees have ladder branches (<2 m from ground)</p>
MODERATE TO LOW	<p>Mixedwood forests ranging from 25% (low) to 50% (moderate) conifer composition</p> <p>Mature red, white and Scots pine</p> <p>Hardwood/deciduous forests composed of maple, birch, oak, poplar, ash, etc.</p> <p>Typically standing cedar, hemlock and tamarack are low risk</p> <p>Mature red, white and Scots pine with clean or deciduous understory are low risk</p>	<p>Managed/maintained conifer plantations or stands, and managed red or white pine stands</p> <p>Small pockets of conifer trees separated by hardwood/deciduous trees</p> <p>Shrub layer</p> <p>Conifer trees scattered evenly with hardwood/deciduous trees</p> <p>Mature red/white pine stands</p>	<p>Small areas of insect- or diseased trees</p>	<p>Separated trees (standing timber and crowns)</p> <p>Moderate stand density with noticeable gaps</p> <p>Some overlapping conifer tree crowns mixed with hardwood/deciduous trees</p> <p>Conifer tree crowns mostly separated (up to 10% crown overlap)</p> <p>Up to 10% scattered branches (low)</p> <p>No immature conifer trees mixing with tree crowns (low)</p>	<p>Minimal understory such as light cured grass, light needle litter with scattered debris covering <50% of area; scattered branches, small immature conifer trees or shrubs; up to 10% immature conifer trees extending into mature crowns</p> <p>Range from no ladder fuels to scattered trees with ladder fuels</p> <p>No heavy build-up of debris/slash (low)</p> <p>Light needle litter (low)</p> <p>Conifer trees pruned up to 7 m from the ground (low)</p>

Figure 4.1 Table 4.1 (Characteristics of hazardous forest types: Forest species composition and forest condition attributes) of the *Wildland Fire Risk Assessment and Mitigation Reference Manual in support of the Provincial Policy Statement, 2014* (OMNRF 2017a)



5 Natural Feature and Areas Summary

A summary of NHFA identified during the background review that were confirmed or have the potential to be present within the Study Area is provided in Table 5.1.

Table 5.1 Summary of Natural Heritage Features and Areas Within the Study Area

Type	Species/Feature	Description
Designated Natural Features and Areas	Natural Heritage System Linkage Area	The Study Area occurs on lands designated as Natural Heritage System Linkage Area (Section 4.1.2; Figure 2, Appendix A).
	MVC's regulation limit, regulated areas, and flood lines	The Study Area occurs within MVC's regulation limit, regulated areas, and flood lines (see Section 4.1.2; Figure 2, Appendix A).
Wetlands	Unevaluated wetlands	Two (2) mapped unevaluated wetlands were identified within the Study Area (see Section 4.1.2; Figure 2, Appendix A).
Breeding and Migratory Birds	Migratory birds and their nests	Migratory birds and their nests are present within the Study Area (see Sections 4.2.2).
Suitable habitat for Species at Risk	<ul style="list-style-type: none"> • Barn Swallow • Wood Thrush • Eastern Red Bat • Eastern Small-footed Myotis • Hoary Bat • Little Brown Myotis • Northern Myotis • Silver-haired Bat • Tri-colored Bat 	<p>Buildings with vertical walls and overhanging ledges on Adjacent Lands may provide suitable nesting habitat for Barn Swallow within the Study Area.</p> <p>Forested communities (FO) within the Study Area may provide suitable nesting/ roosting habitat for Wood Thrush and bat SAR (Eastern Red Bat, Eastern Small-footed Myotis, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat) (see Section 4.2.3 and Appendix D.1)</p>
Candidate Significant Wildlife Habitat	Bat maternity colonies	The forest (FO) communities may provide candidate habitat for bat maternity colonies within the Subject Property (see Section 4.3.1 and Appendix E; Figure 3, Appendix A).
	Special Concern and Rare Wildlife Species (SOCC)	Wildflowers throughout the Study Area may provide candidate nectaring habitat for Monarch. Candidate habitat for Monarch, Evening Grosbeak, and Eastern Wood-pewee was identified in the Study Area (see Section 4.3.3, Appendix D.2 and Appendix E).



6 Project Description

According to the concept plan at the time of this report, the proposed development includes a driveway off David Manchester Road, parking lot with approximately 60 parking spaces and a chapel approximately 10,000 square feet (sq. ft.). To the east of chapel is a proposed volleyball court, to the north basketball courts, and to the northwest a soccer field and tennis courts. A septic tank and field area is proposed west of the chapel and a picnic space is proposed east of the chapel. A 5,000 sq. ft. area immediately east of the proposed chapel is identified as a space for potential future expansion. Natural vegetation along the perimeter of the Subject Property may be retained, where possible. The proposed concept plan for the Subject Property is provided in Appendix E and is shown in Figure 4, Appendix A.



7 Impact Assessment

The impact assessment assesses potential impacts that may reasonably result from Project activities and the proposed development.

The assessment is divided into potential direct, indirect, and long-term impacts. Direct impacts are those that are anticipated to happen within a short duration (i.e., during or directly following site preparation or construction) and distance from Project activities (i.e., within the Project Footprint) and the proposed development. Indirect impacts may be harder to define and detect but are anticipated to occur outside of the Project Footprint (i.e., in Adjacent Lands) and/or to have a delayed onset after the catalyzing factor is introduced.

Site-specific and standard recommendations are identified to mitigate potential impacts to natural features and enhance the natural heritage system where appropriate. Site-specific measures are recommended to address the specific natural heritage features and functions identified for the Subject Property and Adjacent Lands, while standard measures address strategies that are typically required for construction such as erosion and sediment control.

7.1 Direct Impacts

The extent of site clearing and development at the Subject Property is unknown at the time of this report. Although natural vegetation along the perimeter of the Subject Property may be retained, where possible; this assessment is based on the conservative assumption that the entire Subject Property could be cleared for development. As such, the proposed development could result in a total permanent direct loss of approximately 2.2 ha of natural vegetation (see Figure 3 and Figure 4, Appendix A for details), including:

- 0.78 ha of coniferous forest (FOCM4-4)
- 0.86 ha of deciduous forest (FODM3-1)
- 0.58 ha of meadow (MEGM3-8)

The results of the field surveys (Section 4.2) have determined that these features provide habitat for migratory birds and potential habitat for bird SAR (Wood Thrush), bat SAR, insect SOCC (Monarch), bird SOCC (Evening Grosbeak, Eastern Wood-pewee) (based on habitat suitability), and candidate SWH (e.g., bat maternity colonies, special concern and rare wildlife species).

Direct impacts are anticipated in the footprint of the proposed development, and in temporary construction and access locations (i.e., the Project Footprint). Impacts are anticipated to result from the following activities: vegetation removal, excavation, vehicle operation and maintenance, vegetation planting following completion of construction, and permanent constructed footprint including a chapel, driveway, parking lot, sports fields and courts, picnic areas, and potential future expansion.



Potential adverse impacts that will be addressed through mitigation or avoidance include soil contamination; loss of trees and vegetation; introduction of invasive species; and disturbance and loss of SWH, and wildlife and their habitat, including, migratory birds and SAR.

A summary of potential direct impacts due to the proposed development is provided in Table 7.1.

Table 7.1 Summary of Direct Impact Assessment

Natural Feature	Potential Impact	Mitigation, Avoidance, or Enhancement
Trees and vegetation	<p>Loss of trees and vegetation through clearing and grubbing for construction and development footprint.</p> <p>Potential invasive species introduction from all construction activities, carried in on equipment, vehicles, and workers.</p> <p>Change to flora diversity from vegetation removal and planting plan, post-construction vegetation monitoring.</p>	<p>Implementation of vegetation removal best practices and construction boundary fencing; revegetation in temporary work areas (see Sections 7.4.3 and 7.4.4).</p> <p>Implementation of strict invasive species management plan including proper cleaning and sanitizing of equipment entering or leaving the construction area (see Section 7.4.5).</p> <p>Revegetation plans will include only native species and implementation of post-construction planting success thresholds will ensure invasive species are managed in planted areas (see Section 7.4.6).</p>
Breeding and migratory birds and bird SAR/SOCC	<p>Habitat loss and disturbance to migratory bird nests, bird SAR (Wood Thrush), and bird SOCC (Evening Grosbeak, Eastern Wood-pewee) through vegetation clearing and during construction activities and development.</p>	<p>Conduct vegetation clearing activities outside of the primary nesting period for migratory birds where possible or conduct nest sweeps prior to vegetation removal; apply appropriate buffers to active bird nests (see Section 7.4.7.1).</p>
Bat SAR	<p>Habitat loss and disturbance to bat SAR through vegetation clearing and during construction activities and development.</p>	<p>Tree clearing should be restricted to timing windows for bats and avoided where possible (see Section 7.4.7.2).</p>
Insect SOCC	<p>Disturbance and loss of candidate SWH for insect SOCC (Monarch) through vegetation clearing and development.</p>	<p>When possible, limit vegetation clearing, especially in areas with flowering plants, to outside the active growing season (i.e., schedule clearing between October 1 and March 30), to maintain insect foraging and refuge habitat (see Section 7.4.7.3).</p> <p>Implement mitigation measures provided in Sections 7.4.3, 7.4.5, and 7.4.6.</p>
SWH: Candidate bat maternity colonies	<p>Disturbance and loss of candidate habitat for bat maternity colonies through tree removal and vegetation clearing and development in the deciduous forest community (FOD).</p>	<p>Implementation of mitigation measures for bats as provided in Section 7.4.7.2.</p>



7.2 Indirect Impacts

Inadvertent encroachment of heavy equipment, siltation and/or spills of deleterious substances, noise, and dust migration into natural features were identified as potential indirect impacts on wildlife and wildlife habitat from construction. These impacts may alter species composition by compacting and smothering vegetation and introducing substances that could be harmful to vegetation and wildlife, such as fuel used by construction vehicles and introducing new invasive species. Additional disturbance may be required to facilitate spill clean-up activities. Where they occur, these impacts are expected to be localized to the construction area and adjacent areas.

The potential indirect impacts anticipated for the Project are common to various types of construction and can be controlled using standard mitigation measures for erosion and sediment control (ESC), control of deleterious substances, and during- and post-construction monitoring for vegetation establishment and soil containment (see Sections 7.4.1 to 7.4.7).

Indirect habitat loss is primarily associated with sensory disturbance. Sensory disturbance associated with construction and maintenance activities (e.g., noise from heavy equipment, lights) and operation (e.g., increased noise and vibrations due to increased vehicle traffic) has the potential to reduce habitat effectiveness and suitability. Wildlife species that reside near the Project may be deterred from using nearby habitat and result in wildlife displacement due to noise, vibrations, and increased human activity. Responses will vary by species and individuals and may affect breeding and rearing success for some wildlife species (Francis and Barber 2013, Singh et al. 2023). Potentially affected species may return after a period of acclimatization. SAR and wildlife near the Project are currently exposed to elevated levels of habitat degradation and anthropogenic disturbance (e.g., traffic on existing roads, developed habitat) and expected to be acclimatized to high levels of disturbance in the area.

Project-related indirect impacts to SAR and wildlife species are expected to be relatively localized and temporary in nature and are considered low in magnitude.

7.3 Post-development Impacts

Post-development impacts to features associated with residential development and increased human activity include:

- Light trespass into natural areas and associated disturbance to wildlife
- Increased presence of urban predators of breeding birds and other small wildlife species such as domestic cats, Blue Jay, American Crow (*Corvus brachyrhynchos*), Common Grackle (*Quiscalus quiscula*), Virginia Opossum (*Didelphis virginiana*), Eastern Gray Squirrel (*Sciurus carolinensis*), Striped Skunk (*Mephitis mephitis*), and Northern Raccoon (*Procyon lotor*)
- Introduction of non-native invasive plant species
- Dumping garbage, garden waste, trampling of ground cover, and damage to trees



7.4 Mitigation and Avoidance

7.4.1 Erosion and Sediment Control

The primary principles associated with sedimentation and erosion protection measures are to:

- Reduce 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.

- Reduce disturbance of ground vegetation outside to the extent possible to limit destabilization of soils near the work area.
- Use silt fencing and/or barriers such as sediment logs along all work zones where there is potential for sedimentation of wetlands, if present, or inadvertent encroachment of construction vehicles into trees or natural areas.
- Do not permit equipment to enter natural areas beyond the barrier fencing.
- Avoid unnecessarily compacting soil by using soils or similar to distribute the weight of heavy equipment.
- Stockpiled materials will be isolated using silt fencing to contain the material and prevent it from entering natural areas.
- Stabilize all exposed soil areas (native seed mixes; sourced locally if possible) and revegetate through the placement of seed and mulching or seed and an erosion control blanket, promptly upon completion of construction activities.
- In addition to any specified requirements, extra silt fence and/or silt logs will be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency.
- Monitor sediment and erosion controls regularly and properly maintain them 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.
- Fence the limits of construction adjacent to natural features to be retained prior to construction and monitor during operations (along with sediment and erosion control measures) to maintain limits with respect to vehicular traffic and soil or equipment stockpiling.



7.4.2 Control of Deleterious Substances

The potential contamination impacts associated with the Project are in part from deleterious substances associated with vehicle leaks and refueling leading to soil contamination and degraded water quality. These impacts can be mitigated with regular vehicle maintenance and refueling management, including:

- Activities associated with vehicles, including maintenance procedures, will be controlled to prevent the entry of Petroleum products, debris, rubble, concrete, or other deleterious substances into the water.
- Vehicular refueling and maintenance will be conducted a minimum of 30 m from any aquatic resources to avoid potential impacts in the event that an accidental spill occurs.
- Fuel spill equipment will be available to manage emergency spill of deleterious substances.

7.4.3 Vegetation

Mitigation measures for vegetation communities within the Study Area include the following:

- Clearly mark the limits of vegetation removal to reduce the likelihood of disturbance beyond the proposed construction limits.
- Limit tree, shrub, and meadow vegetation clearing to the extent possible. Revegetate with native species as soon as possible upon completion of construction activities.
- Inspect vehicles and heavy equipment to check they are clean and free of weeds before entering and leaving the Study Area. Follow the Clean Equipment Protocol for Industry (Halloran et al. 2013) to prevent the spread of invasive species into the Study Area.
- Develop a project-specific invasive plant management plan once the Project design is complete and the limits of disturbance are known. Invasive species may require additional management measures to prevent their spread into newly disturbed areas following construction. The Ontario Invasive Plant Council provides best management practices including mechanical and chemical control options for several of the weeds observed (<https://www.ontarioinvasiveplants.ca/resources/best-management-practices/>).
- Develop a project-specific tree protection plan, general tree protection measures are provided in Section 7.4.4.
- Follow wildlife protection measures regarding vegetation clearing, including seasonal timing windows for vegetation removal, as outlined in Section 7.4.7.



7.4.4 Trees

Development of a project-specific tree protection plan for the Project is recommended once the design is final. Trees on the Subject Property measuring ≥ 50 cm DBH do not require a permit to facilitate the proposed development under the City's *Tree Protection By-law (No. 2020-340)* (City of Ottawa 2020). General tree protection and compensation measures are recommended below and are based on the City of Ottawa By-law (unless otherwise noted); final compensation requirements will be determined by the City:

- Where possible retain trees, especially healthy Distinctive trees, through adjustments to the project footprint during detailed site design.
- All trees 10 cm DBH or greater proposed for removal should be compensated at a 2:1 ratio (two trees planted for each tree removed). Trees 50 cm DBH or greater should be compensated at a 3:1 ratio. Ash trees and/or dead trees may be replaced at a 1:1 ratio.
- Replacement trees should be a minimum of 50 millimeters (mm) in caliper measured no less than 15 cm above ground level for deciduous trees, and no less than 200 cm in height as measured from ground level to midway between the tip of the leader and the uppermost whorl for coniferous trees.
- All compensation trees should be native (no hybrids or cultivars) and non-invasive species.
- Establish a buffer (i.e., 1.2 m high fencing) around the CRZ of trees to be retained that are adjacent to the construction area. The fence should be installed around the outer edge of the CRZ and remain in place until work is completed. The CRZ is defined as the area of land within a radius of 10 cm from the trunk of a tree for every 1 cm of trunk diameter. For trees with a DBH < 10 cm, the CRZ is established as 1.5 m from the trunk (Appendix G).
- Monitor the health of trees adjacent to the construction area both during and after construction. Take photographs of the trees to be retained adjacent to the construction area, when the trees are in full leaf, if possible, to record their condition. If tree health declines, take immediate action and contact a Certified Arborist to provide recommendations for care of the damaged trees. Damage to trees may include but is not limited to physical damage on tree bark, broken branches, compaction of the root systems due to equipment and materials, cutting of the roots, and root exposure.
- Do not attach signs, notices, or posters to any tree.
- Do not damage the root system, trunk, or branches of any tree.
- Do not place any material or equipment within the CRZ of the tree.
- Do not raise or lower the existing grade within the CRZ. If re-grading is required within the CRZ, it should be performed by hand under the supervision of a Certified Arborist.
- Do not direct exhaust fumes from equipment towards any tree's canopy.



- Tunnel or bore when digging within the CRZ of any tree. All excavation within the CRZ should be by hand or hydro excavation. Roots that are exposed by construction activities should be covered with native topsoil immediately to lessen the likelihood of roots drying out or being further damaged.
- If necessary, prune limbs that overhang into the construction area on trees to be retained in a manner that lessens physical damage and promotes quick wound closure and regeneration. No more than one-third of the total branches should be removed during a single operation. The services of a Certified Arborist should be retained for this work.
- If root pruning is required, the services of a Certified Arborist or a Qualified Tree Worker under the supervision of a Certified Arborist should be retained.
- Once construction is completed, Stantec suggests that the Proponent assess the trees that were close to the construction for damage. If damage is found contact a Certified Arborist to review the trees and identify next steps.

7.4.5 Invasive Species Management

Potential impacts associated with the Project include invasive species introduction and spread by construction activities through transfer by equipment and/or workers. To prevent the introductions and spread of invasive species to new areas, the following measures are recommended:

- Standard construction phase mitigation measures for ESC (Section 7.4.1) will reduce substrate disturbance to the extent possible and revegetate disturbed areas with desirable species as soon as possible following disturbance.
- Equipment, vehicles, and clothing (e.g., boots) coming on site will be inspected inside and out prior to entering the site for debris such as mud or accumulation of dirt, plant material or snow/ice. Vehicles will be inspected as close to the site entrance as possible.
- Equipment, vehicles clothing and boots with debris noted above will be cleaned in an area where risk of contamination is low, ideally on a mud free hard surface, at least 30 m away from drainage features, wetlands (if present), or other natural areas. Where risk of runoff is high, cleaning stations should be contained by sediment fence as per standard erosion and sediment control specifications.
- Large, accumulated debris may be removed using a compressed air device, high pressure hose or other device as necessary. Clean the top of equipment and vehicles first and work down, with particular attention to the undersides, wheels, wheel arches, guards, chassis, engine bays, grills, and other attachments. Clean inside vehicles by sweeping, vacuuming, or using a compressed air device, including the floor, foot wells, pedals, seats and under the seats.
- Cleaning is complete when no accumulations of dirt or snow/ice are visible on the vehicle exterior, radiators, and grills, and the vehicle interior is free of dirt, plant material and snow/ice.
- Avoid driving or walking through any wastewater when exiting the cleaning site.
- Implement post-restoration monitoring to track vegetation establishment and implement actions to remove new invasive species if present.



7.4.6 Revegetation and Monitoring

Disturbed areas will be restored as soon as possible following constructions using native species that are suited to the site conditions. Naturalization adjacent to existing natural features where possible is recommended. Plantings will incorporate a variety of native herbaceous and woody plants, including seed mixes and rooted material where appropriate. Plant material will be sourced locally if possible. Vegetation inspection will be completed during construction to document compliance with the planting plans (e.g., correct species and quantities were planted), and three-years of post-construction monitoring will occur to track vegetation establishment, including cover and species composition, and to recommend remedial actions. Remedial actions may be triggered by poor survival of planted material, insufficient vegetation cover, and presence of invasive species in planted areas. Actions may include supplemental plantings and/or control of unacceptable species.

7.4.7 Species at Risk and Wildlife

7.4.7.1 Migratory Birds

The General Nesting Period (i.e., breeding season) for migratory birds in the Study Area (zone C3) is between April 1 and August 31 (ECCC 2023c) and the following mitigation measures are recommended to reduce the likelihood of harm to nesting birds:

- Schedule vegetation removal and construction activities to occur outside the migratory bird breeding season (i.e., schedule vegetation clearing and construction activities between April 1 and August 31 (ECCC 2025c) when possible.
- Bird nest sweeps are not considered adequate mitigation in large and/or complex environments such as this Study Area. Therefore, nest sweeps conducted by a qualified biologist can only be used in cases of limited clearing (i.e., small area, small number of trees); otherwise clearing must be done outside of the breeding bird season.
 - A qualified biologist is a person with 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.
 - 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 2025c) when establishing the buffer.
 - Once the nest is found to be inactive (e.g., the young have fledged the nest), clearing and other activities in the area may proceed.



- The nest search should be completed within 48 hours of the start of the planned activities due to the potential for birds to quickly establish nests (i.e., a bird may establish a nest after the survey is completed if the survey occurs more than 48 hours prior to planned activities).

It is recommended that the City's *Bird-Safe Design Guidelines* (City of Ottawa 2022a) are consulted when creating building plans to reduce the likelihood of negative impacts to birds within the Study Area. The guidelines offer many suggestions for bird safe building designs including lighting and visual markers. The main recommendations that are applicable to the construction of the Subject Property are:

- When buildings are located close to natural areas, the building and windows should be oriented in a way as to limit reflection of habitat (trees, shrubs, hedges, water, and wetlands) on glass surfaces and to limit fly-through conditions, whereby birds can see the habitat on the other side of a building through two panes of glass.
- To reduce the likelihood of bird collisions, eliminate the use of large expanses of undistinguished glass, parallel or angled glass elements where birds can see through to the other side of the building, open-topped atriums, glass balustrades, transparent wind and sound barriers, and free-standing glass architectural elements.
- Visual markers must be applied to the first surface (outside) of the glass and must be at least 4 mm in diameter and spaced no further than 50 mm apart.
- All ventilation grates must have a porosity of no more than 20 mm × 20 mm or 40 mm × 10 mm, and vents and pipes with an opening greater than 400 mm² must be covered with a screen or cap.
- In cases where interior lighting is visible from the outside of buildings, it should be reduced from sunset to sunrise using motion detectors and/or timers to automatically extinguish lights in unoccupied spaces, installing blackout shades or blinds that can be drawn at night, and installing dimmer switches to reduce light intensity in occupied spaces.
- To reduce over-lighting and limit blue light transmissions, all outdoor lights should have a colour temperature of no more than 3,000 Kelvin and ideally, LED lighting should be amber, not white, and full cut-off fixtures should be used to limit spill light.

7.4.7.2 Bats

Project-related direct impacts to bats may include loss of summer and maternity roosting habitat through vegetation clearing. Indirect impacts may be associated with increased lighting and disturbance in the Project Footprint. Bats are vulnerable to disturbance during the summer roosting (March 15 through November 30) and maternity season (June 1 through July 31). The following mitigation measures are recommended to reduce the likelihood of harm to roosting bats during construction:

- Schedule tree removal/trimming and construction activities within or adjacent to potential roosting habitat may destroy or disturb summer/maternity roosting habitat (i.e., trees ≥10 cm DBH, buildings) outside of the summer/maternity roosting season (i.e., scheduled between December 1 and March 14).



- If limited tree clearing (individual trees) is needed during the summer/maternity roosting season, a search for active roosts is recommended following the methods outlined in the *Survey Protocol for Species at Risk Bats within Treed Habitats* (OMNRF 2017b) and MECP's *Species at Risk Bats Survey Note 2022* (MECP 2022).
 - The surveys should be completed immediately prior to planned activities as bats frequently change roosting locations. Bats are especially vulnerable between June 1 and July 31 when females have young and are lactating. Pups are immobile and are cared for in maternity roosts. Females may move their young to a different maternity roosting location every few days (MNR 2015b).
 - If a bat is observed to be using a tree or building as summer/maternity roosting habitat, tree removal should not be scheduled between March 15 through November 30 (summer/maternity roost season).
 - The Proponent should consult with MECP to determine if a permit or registration is required under species at risk legislation for bat SAR.

Suitable roosting and foraging habitat for bat SAR is present within the Study Area. If bat SAR are confirmed to be using a tree planned for removal as summer/maternity roosting, registration under ESA may be required.

7.4.7.3 Monarch

Monarch is vulnerable to direct disturbance during the active season (spring, summer, and fall) season. Project-related activities during the active season could result in direct mortality through the destruction of foraging habitat. Monarch are habitat generalists associated with open habitats such as meadows, fallow fields, roadside ditches, and wetlands where they forage on flowering plants (i.e., nectaring habitat). The Study Area contains suitable nectaring habitat for Monarch.

The following recommendations are provided for Monarch:

- Include nectar producing plants in restoration seed mix(es) to provide habitat for Monarch.
- Avoid pesticide use in the Study Area and limit application as much as possible.
- Monarchs are migratory and do not overwintering in the Study Area; therefore, no winter mitigation measures are required.
- Limit vegetation clearing, especially in areas with flowering plants that Monarch may forage on, to outside the active plant growing season when Monarch may be present (i.e., clear outside of April 1 to September 30), to maintain insect foraging and refuge habitat.

7.4.7.4 General Wildlife Protection

Construction activities should follow best management practices as outlined in the *City of Ottawa Protocol for Wildlife Protection during Construction* (2022b). Key mitigation measures to reduce potential impacts to wildlife during planned construction activities are listed below:



- Inform on-site personnel of the potential presence of wildlife, wildlife habitat, and SAR within the Study Area and obligations under ESA/SCA, recommended mitigation measures, and actions in the event of an encounter.
- If wildlife is observed within the work area, suspend activities within 30 m and allow it to leave on their own accord. If a SAR is observed and depending on the SAR (i.e., if the SAR is an ESA/SCO-listed species), the Proponent may have to contact MECP to determine if additional permits or mitigation measures are required. SAR may not be harassed, handled, or moved in any way unless they are in immediate danger.
- If a mammal den, burrow, or nest is observed, suspend construction activities within 30 m, the Proponent should contact a qualified biologist to assess the feature and provide additional mitigation measures. The dens, burrows, and nests of some mammals are protected in Ontario under the FWCA.
- The general wildlife breeding period occurs between March and August, and the general wildlife overwintering period occurs between mid-October and March (City of Ottawa 2022b). Schedule vegetation clearing and ground disturbance activities outside of the breeding and overwintering period for wildlife to the extent possible (i.e., schedule between September 15 and October 15). In general, wildlife young are reared and mobile and individuals have not started overwintering in the period between September and mid-October; therefore, most wildlife is able to leave the area (i.e., relocate) when vegetation clearing, or ground disturbance activities begin. If vegetation clearing and/or ground disturbance must occur during the breeding and overwintering period, refer to Sections 7.4.7.1 through 7.4.7.3 for additional recommendations for migratory birds, bats, and insects.
- Prior to vegetation clearing or other construction activities, pre-stress the area to encourage wildlife to move away. Pre-stressing can include having one or more person(s) walk through the area while talking loudly or playing music. Allow wildlife observed during pre-stressing to leave the area on their own accord.
- During the active wildlife period (March – November), contractors should conduct a visual search of the work area, vehicles, and heavy equipment before work commences each day. Visual searches should include inspection of machinery and equipment left in the work area overnight prior to starting equipment. Snakes and other small mammals may be attracted to equipment as a heat source, be sure to carefully inspect all equipment prior to starting the engines. Allow wildlife to leave the area on their own accord.
- Contractors should not feed, harass, or otherwise disturb wildlife.
- Food waste and other garbage should be disposed of in wildlife-proof containers.



8 Authorization Requirements

8.1 Federal

It is anticipated that the Project will avoid impacts to federally protected migratory bird species (i.e., Wood Thrush) under the SARA by implementing the measures provided in Section 7.4.7.1. Currently, Wood Thrush does not have a Residence Description under the SARA and Critical Habitat has not been identified within the Study Area. As such, consultation with the ECCC is recommended to determine further mitigation measures and permitting requirements.

Mitigation measures for SAR are presented in Section 7.4.

Per the MBCA, the damage, destruction, removal, or disturbance of migratory bird nests is prohibited along with the killing or capturing of migratory birds. Permitting is generally not available under the MBCA. As such, compliance with the MBCA is achieved through avoidance of impacts. Mitigation measures for potential impacts to migratory birds are provided in Section 7.4.7.1.

8.2 Provincial

Project-related activities will have direct and indirect impacts to provincial SAR and SAR habitat as discussed in Section 7. Authorization and/or registration under the ESA/SCA may be required for work that could affect the habitat of a threatened or endangered wildlife species as listed on the SARO list. It is recommended the Proponent consult with MECP to determine mitigation and permitting requirements under the ESA/SCA for the following SAR that are known to occur or have the potential to occur within the Study Area:

- Eastern Red Bat (listed as endangered under SARO)
- Eastern Small-footed Myotis (listed as endangered under SARO)
- Hoary Bat (listed as endangered under SARO)
- Little Brown Myotis (listed as endangered under SARO)
- Northern Myotis (listed as endangered under SARO)
- Silver-haired Bat (listed as endangered under SARO)
- Tri-colored Bat (listed as endangered under SARO)

It is expected the *Species Conservation Act, 2025* will be enacted in the coming months. Consultation with MECP is recommended to determine current requirements under the applicable species at risk legislation. Mitigation measures for SAR are presented in Section 7.4.



8.2.1 Conservation Authority Act

The Study Area is located within MVC Regulated Area (O. Reg. 41/24). Prior to any new development or site alteration, including the placement or removal of fill material, grading activities, and the erection of any structures within the regulated area, and/or the alteration of regulated features, the MVC should determine approval requirements under the CAA.

8.3 Municipal

A permit for tree removal is not required under the City's Tree Protection By-law (No. 2020-340) (City of Ottawa 2020).



9 Summary and Conclusion

This report was prepared to document natural features that require consideration through the development application process and may pose constraints to development, including features that are protected by the OP (City of Ottawa 2021) and other relevant legislation and policy.

The results of the background review and field investigations documented the following NHFA within the Study Area:

- Natural Heritage System Linkage Area
- MVC's regulation limit, regulated areas, and flood lines
- Suitable habitat for bird SAR (Wood Thrush)
- Suitable habitat for bat SAR (Eastern Red Bat, Eastern Small-footed Myotis, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat)
- SWH – candidate bat maternity colonies (Figure 3, Appendix A)
- SWH – candidate SOCC (Monarch, Evening Grosbeak, Eastern Wood-pewee)

Recommendations were provided to protect the NHFA including measures to mitigate and avoid potential impacts to NHFA where appropriate, detailed in Section 7.4. These measures include:

- Timing restrictions to avoid wildlife during sensitive periods, such as breeding birds and maternity roosting bats
- Standard measures for construction
- Enhancement plantings in the disturbed areas and naturalization in natural features, where possible
- Environmental monitoring

Consultation with the MECP and ECCC is recommended to determine mitigation and authorization requirements for SAR.

Consultation with MVC is recommended to determine approval requirements under the CAA.



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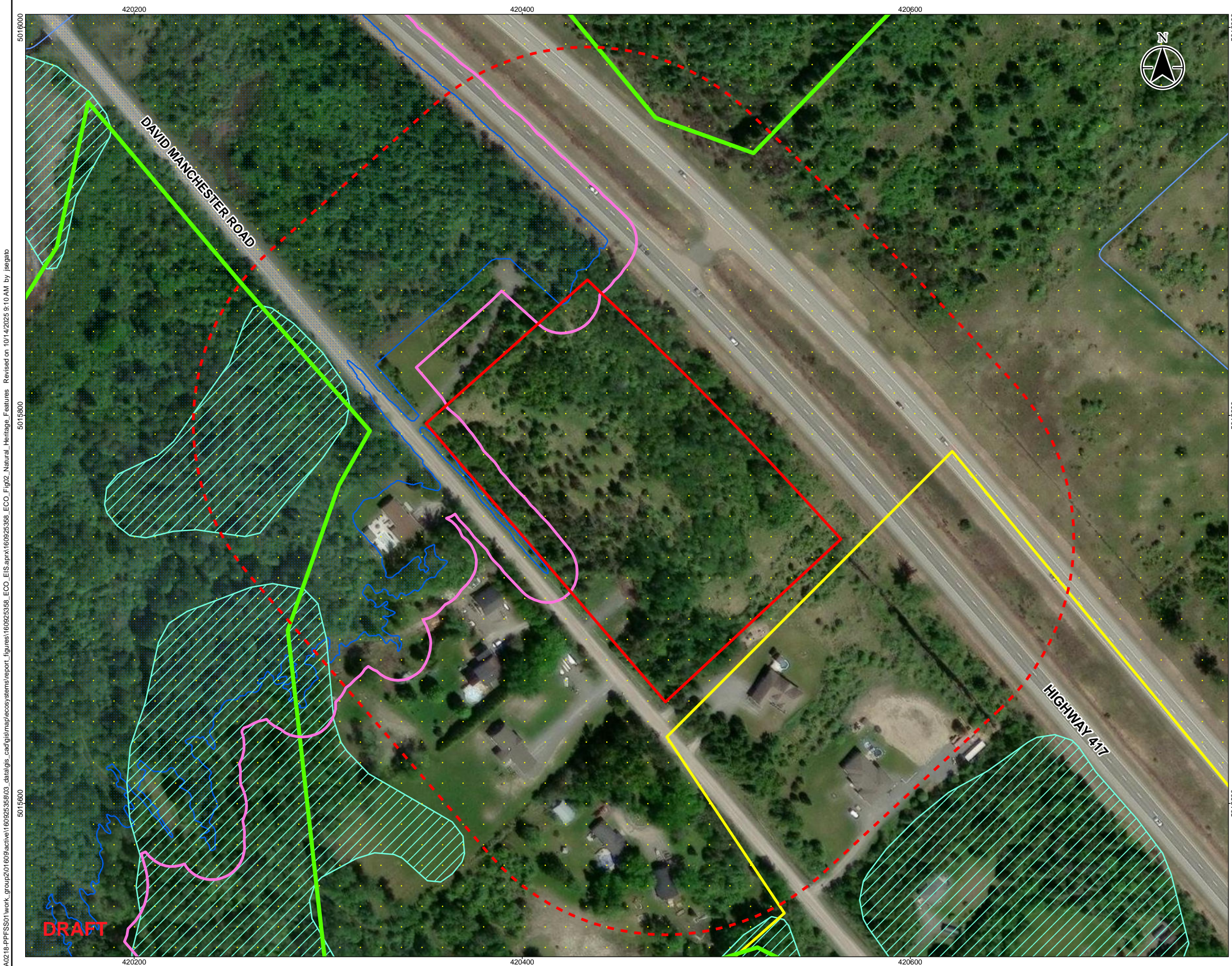


Appendices



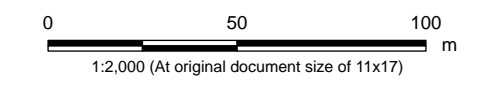
Appendix A Figures





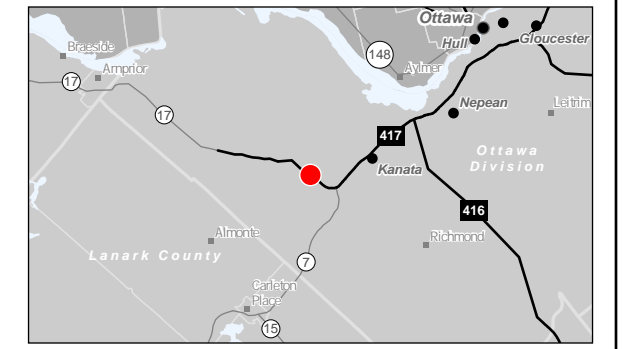
Legend

- Study Area (120 m)
- Subject Property
- Approximate MVCA Regulation Limit
- Watercourse (Permanent)
- Approximate Natural Heritage System Linkage Area
- Approximate Natural Heritage Features Overlay
- Floodplain
- Wetland, Not evaluated per OWES



Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Contains information licensed under the Open Government Licence – Ontario, and the Open Government Licence - Canada, accessed 2025.
3. Orthoimagery provided by Maxar, Microsoft.
4. Approximate Natural Heritage System Linkage Area and Natural Heritage Features Overlay as shown on Schedule C11A [Natural Heritage System (West)] of the City of Ottawa Official Plan (2021)
5. Mississauga Valley Conservation Authority (MVCA) Regulation Limits created from 15 m buffer of floodplain.



Project Location: Ottawa, ON
 Prepared by: jseगतo on 2025-10-14
 Technical Review by: CL on 2025-10-14

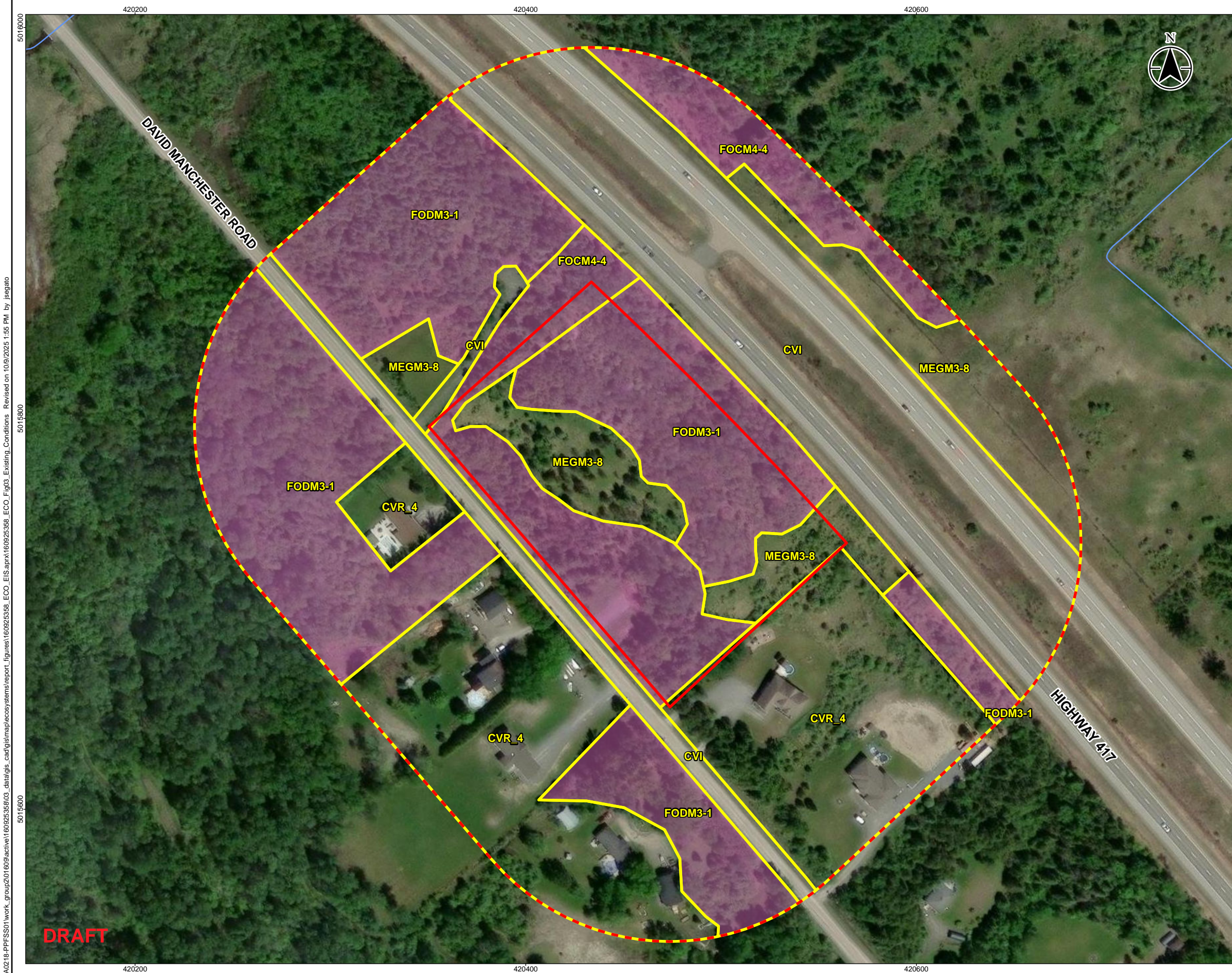
Client/Project: CHAPEL OF GRACE
 912 DAVID MANCHESTER ROAD
 ENVIRONMENTAL IMPACT STUDY

Figure No. **2** **DRAFT**

Title: **Designated Natural Heritage Features and Areas**

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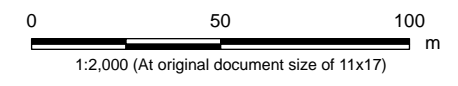


Legend

- Study Area (120 m)
- Subject Property
- Candidate Bat Maternity Colonies
- Ecological Land Classification (ELC)
- Watercourse (Permanent)

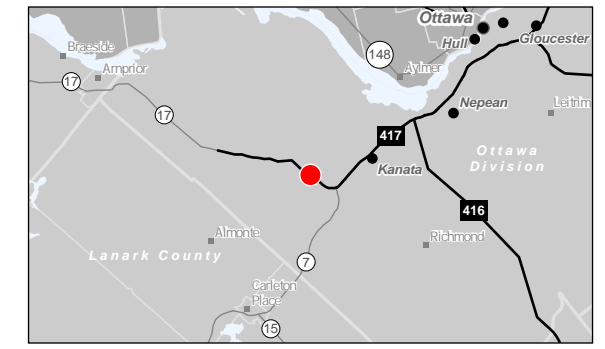
ELC Definitions

- CVI (Transportation and Utilities)
- CVR_4 (Rural Property)
- FOCM4-4 (Fresh - Moist White Cedar - White Pine Coniferous Forest Type)
- FODM3-1 (Dry - Fresh Poplar Deciduous Forest Type)
- MEGM3-8 (Reed Canary Grass Graminoid Meadow Type)



Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Contains information licensed under the Open Government Licence - Ontario, and the Open Government Licence - Canada, accessed 2025.
3. Orthoimagery provided by Maxar, Microsoft.



Project Location: Ottawa, ON
 Prepared by: jsegato on 2025-10-09
 Technical Review by: CL on 2025-10-14

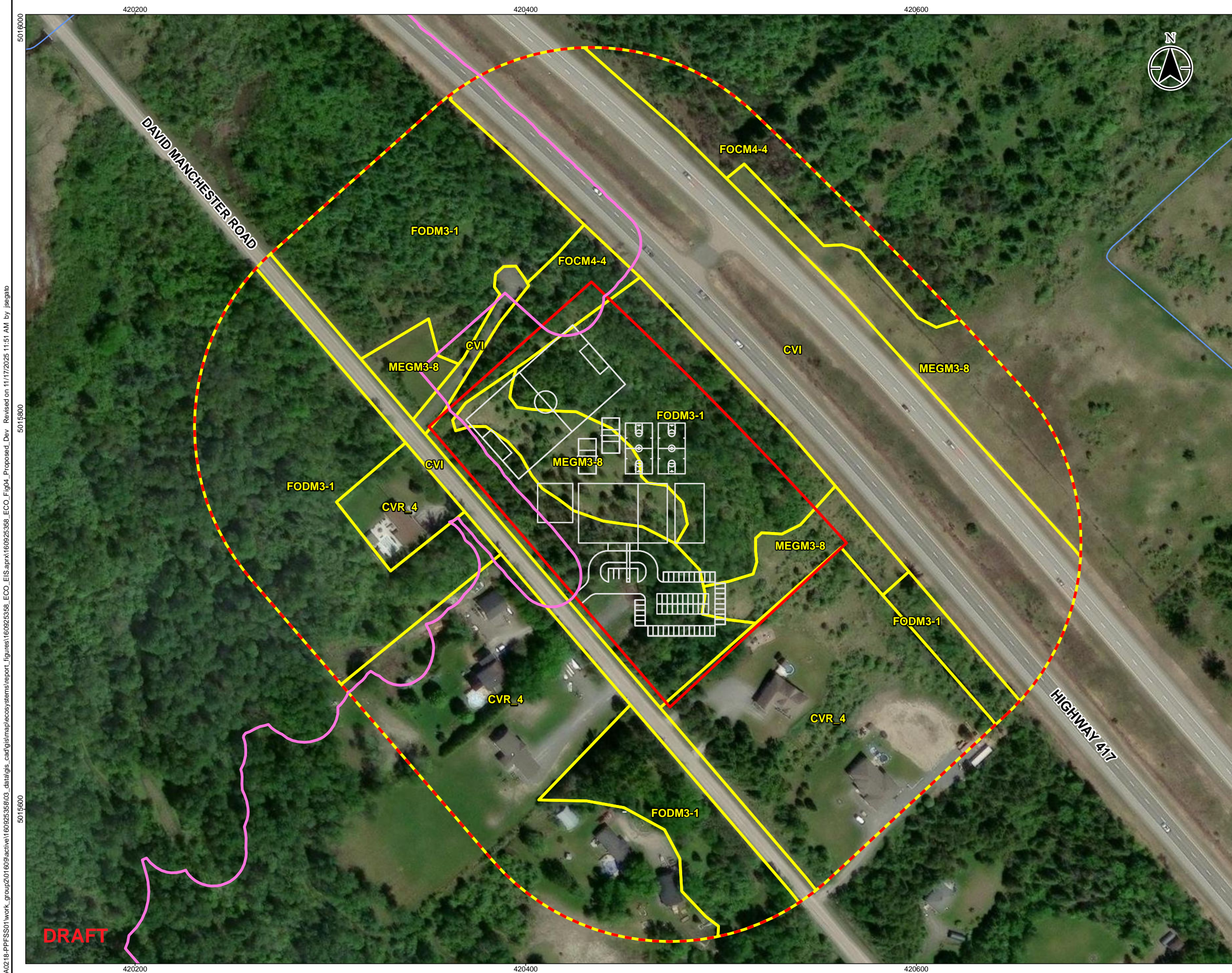
Client/Project:
 CHAPEL OF GRACE
 912 DAVID MANCHESTER ROAD
 ENVIRONMENTAL IMPACT STUDY

Figure No. **3** **DRAFT**

Title:
Existing Conditions and Significant Wildlife Habitat

DRAFT

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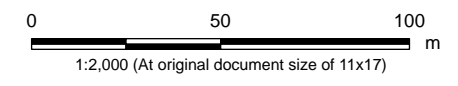


Legend

- - - Study Area (120 m)
- ▬ Subject Property
- ▬ Approximate MVCA Regulation Limit
- ▬ Preliminary Concept Plan
- ▬ Watercourse (Permanent)
- ▬ Ecological Land Classification (ELC)

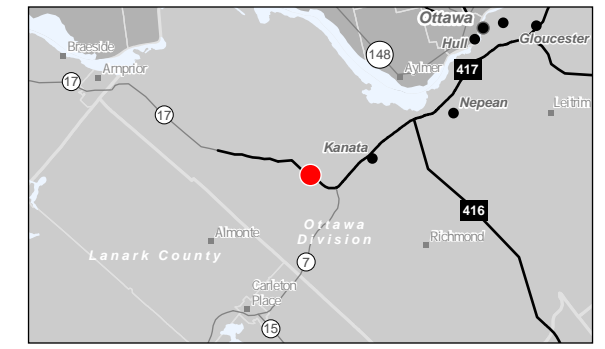
ELC Definitions

- CVI (Transportation and Utilities)
- CVR_4 (Rural Property)
- FOCM4-4 (Fresh - Moist White Cedar - White Pine Coniferous Forest Type)
- FODM3-1 (Dry - Fresh Poplar Deciduous Forest Type)
- MEGM3-8 (Reed Canary Grass Graminoid Meadow Type)



Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Contains information licensed under the Open Government Licence - Ontario, and the Open Government Licence - Canada, accessed 2025.
3. Orthoimagery provided by Microsoft, Vantor.
4. Mississauga Valley Conservation Authority (MVCA) Regulation Limits created from 15 m buffer of floodplain.



Project Location: Ottawa, ON
 Prepared by: jsegato on 2025-11-17
 Technical Review by: CL on 2025-10-14

Client/Project:
 CHAPEL OF GRACE
 912 DAVID MANCHESTER ROAD
 ENVIRONMENTAL IMPACT STUDY

Figure No. **4**
 Title **Proposed Development**

DRAFT

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Appendix B Terms of Reference



To: Pastor Olu Austin Ayeni
Chapel of Grace

From: Kim Wenborn
Environmental Scientist
Stantec Consulting Ltd.

Project/File: 160925358

Date: July 22, 2025

Reference: 912 David Manchester Road Ottawa, Ontario – Environmental Impact Study Terms of Reference

In support of the Chapel of Grace’s Zoning By-law Amendment and Site Plan application for the development of a chapel, sports field, and surface parking at 912 David Manchester Road, Ottawa (the Site), Stantec Consulting Ltd. (Stantec) has developed the following Terms of Reference (ToR) that outlines the scope of Stantec’s proposed Environmental Impact Study (EIS). Stantec’s EIS is being proposed to address potential impacts towards natural heritage features at the Site and on Adjacent Lands within 120 metres (m) of the Site (the Study Area) and to support anticipated municipal planning approvals.

The purpose of this ToR is to allow the City of Ottawa, and other applicable planning authorities, to review and comment on Stantec’s proposed scope of work to develop the EIS prior to implementation of the 2025 field program.

Based on aerial photography, the Site is currently undeveloped and has treed/forested areas and an old regenerating field. A review of background mapping (Geohub, MVCA) does not identify mapped wetlands, watercourses, or significant woodlands at the Site. However, an unevaluated wetland is mapped on Adjacent Lands and as such the Site occurs within the Mississippi Valley Conservation Authority (MVCA) regulation limit, regulated areas, and flood lines.

Additionally, the treed/forested areas and the old regenerating field at the Site may provide habitat for significant wildlife habitat (SWH) and/or species at risk (SAR).

Table 1 Proposed Work Plan and Schedule for the 912 David Manchester Road Environmental Impact Study

Task	Task Description	Proposed Dates
Background Review & Terms of Reference	<ol style="list-style-type: none"> Background Data Review – Compile and review available background information and records of natural heritage features and species. Sources will include Geospatial Ontario On-line Natural Heritage Mapping and Natural Heritage Information Database Natural Heritage Information Center, wildlife atlases, online data sources and public reports. Terms of Reference (ToR) – Submission of the EIS scope of work to the City of Ottawa, and other applicable planning authorities, to review and comment prior to the implementation of the 2025 field program. 	July 2025
Field Program	<ol style="list-style-type: none"> Vegetation Characterization/Wildlife Habitat Assessment – Complete vegetation community surveys using Ecological Land Classification (ELC) for southern Ontario, including documentation 	July 2025

Reference: 912 David Manchester Road Ottawa, Ontario – Environmental Impact Study Terms of Reference

Task	Task Description	Proposed Dates
	of plant SAR (Black Ash, Butternut) and dominant species by community type, identification of candidate Significant Wildlife Habitat, and suitable habitat for species (SAR) and other species of conservation concern (SOCC).	
Data Analysis & Reporting	<ol style="list-style-type: none">1. Evaluation of Significance – Significant natural heritage features will be identified using the Provincial Policy Statement, Municipal Official Plans, and relevant guidance documents such as the <i>Natural Heritage Reference Manual</i> (MNR 2010).2. Habitat Assessment for Potential Species at Risk – The likelihood for potential species at risk will be determined using field data, survey results, and information describing preferred habitat for each species.3. Significant Wildlife Habitat Assessment – Candidate and confirmed Significant Wildlife Habitat features will be identified using the <i>Significant Wildlife Habitat Technical Guide</i> (MNR 2000) and the <i>Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E</i> (MNR 2015).4. Wildland Fire Risk Assessment – A wildland fire risk assessment will be completed follow guidelines provided in the City of Ottawa's <i>Wildland Fire Risk Assessment and Mitigation Reference Manual</i> (2014).5. Mitigation Measures – recommendations to avoid and/or reduce potential impacts will include bird safe design elements as per the City of Ottawa's <i>Bird-Safe Design Guidelines</i> (2022).	August 2025

Please do not hesitate to contact the undersigned directly if you have any questions or concerns related to the above ToR prior to the implementation of Stantec's 2025 field program.

If required, the Chapel of Grace and Stantec will need adequate notice if additional survey requirements are identified by the City of Ottawa, or other applicable planning authority.

Sincerely,

STANTEC CONSULTING LTD.

Kim Wenborn BSc., EPT
Environmental Scientist
Phone: (613) 762-8451
kim.wenborn@stantec.com

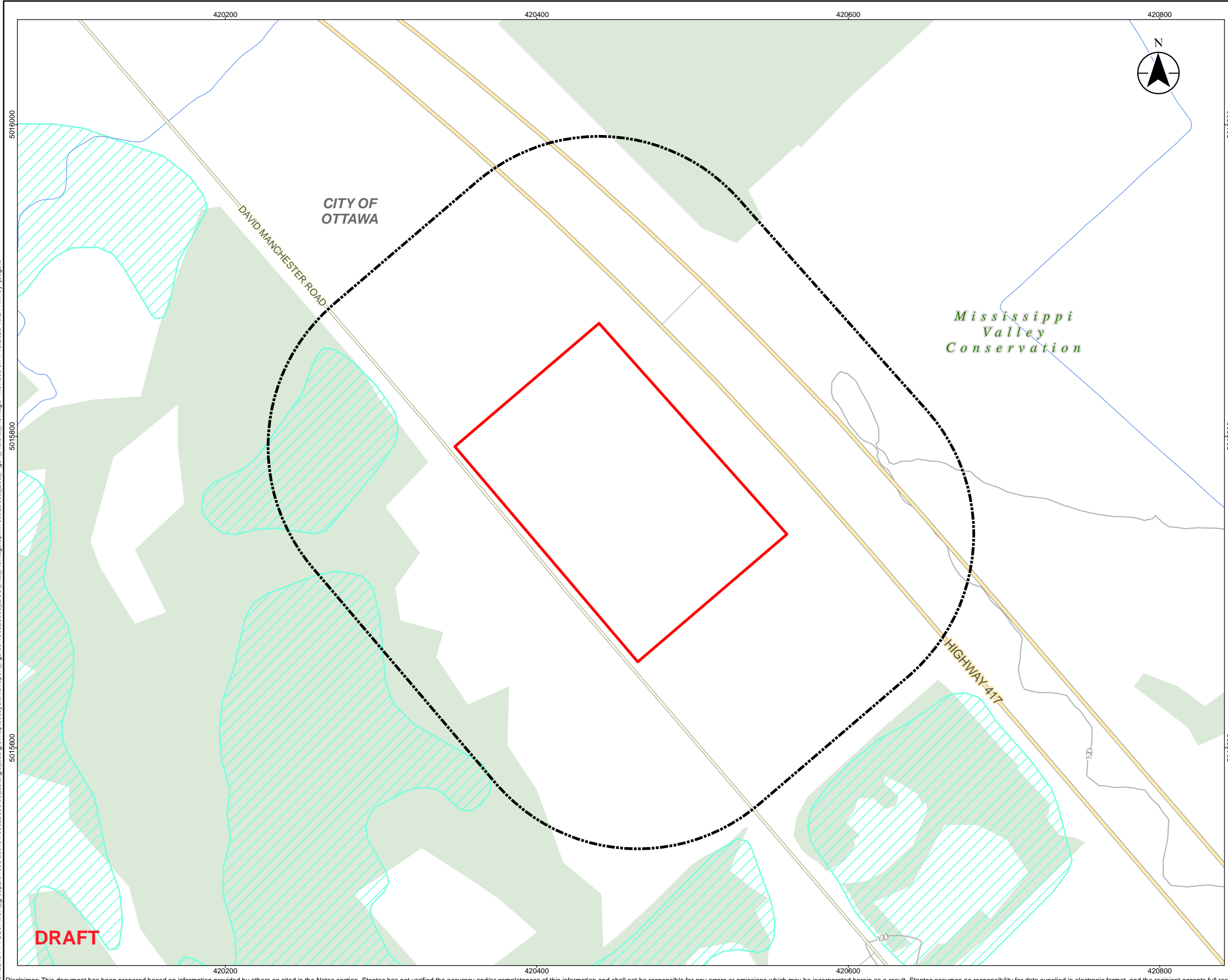
Attachment:
Attachment A Natural Heritage Screening Results

July 17, 2025
Pastor Olu Austin Ayeni

Reference: 912 David Manchester Road Ottawa, Ontario – Environmental Impact Study Terms of Reference

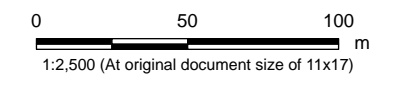
Attachment A Natural Heritage Screening Results

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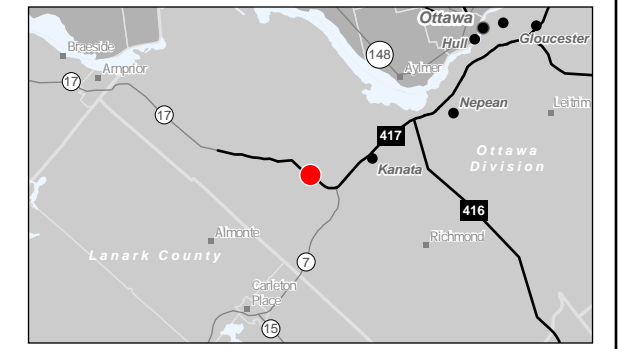
Legend

- Approximate Site Boundary
- Study Area (120 m)
- Watercourse (Permanent)
- Wetland, Unevaluated
- Wooded Area



Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Contains information licensed under the Open Government Licence – Ontario, and the Open Government Licence - Canada, accessed 2025.



Project Location: Ottawa, ON
 Prepared by: jsegato on 2025-07-18
 Technical Review by: BC on 2025-07-18

Client/Project: CHAPEL OF GRACE ENVIRONMENTAL IMPACT STUDY

Figure No. **1** **DRAFT**

Title: **Mapped Natural Heritage Features and Natural Heritage Screening Results**

DRAFT

In addition to the commentary the previous Environmental planner, Matthew Haley, provided to you and dated May 28, 2024, including the Appendix 1: Preliminary Environmental Data Collection Checklist dated May 23, 2024, your detailed EIS submission must meet the requirements of the City of Ottawa Environmental Impact Study Guidelines and the requirements of the Official Plan.

Based on the historical data, a Detailed Terms of Reference was not requested, but a detailed EIS was requested.

Environment

Comments:

32. The property is identified as a natural heritage system linkage area in Schedule C11A of the Official Plan and within 120 m of a natural feature. As per the Environmental Impact Study (EIS) guidelines, the proposed rezoning and future site plan will need to be supported by an EIS to demonstrate no negative impact and that Policy 5.6.4.1 (1b) is implemented.
33. Consider fencing options along Highway 417 for protecting wildlife and site occupants.
34. Species at risk – there are a number of species at risk that could be present in the vicinity of the property. This will need to be addressed in the EIS.
35. Environmental Impact Study – please review the attached checklist for a list of information that will be required for the study.
36. Bird-Safe Design Guidelines – should be considered. Please review and incorporate bird safe design elements. Some of the risk factors include glass and related design traps such as corner glass and fly-through conditions, ventilation grates and open pipes, landscaping, light pollution. More guidance and solutions are available in the guidelines which can be found here:
https://documents.ottawa.ca/sites/documents/files/birdsafedesign_guidelines_en.pdf
37. The EIS will need to include a Wildland fire risk Assessment, more information is available here [Wildland Fire Risk Assessment and Mitigation Reference Manual | ontario.ca](#) and within the EIS Guidelines.



Appendix 1: Preliminary Environmental Data Collection Checklist

Date Completed:	2024-May-23
Property ID (address):	912 David Manchester
Applicant or Agent:	Eric Bays
City Staff Representative(s):	Matthew Hayley

Type of EIS Required (Circle):

Minor

Detailed

Detailed Terms of Reference Required for Approval (Circle):

Yes

No

NOTE: for the following table, check (✓) all boxes that apply to this EIS. Cross out (X) boxes that do not apply. Note any specifications regarding field study timing or methods (either in box or as a numbered endnote following the table). Decisions made during pre-consultation may be revisited at any time during the EIS preparation or review process as new information becomes available.

Feature	Data Required	Background Information	Field Study (EIS or other)	Optimal Inventory Period	Detailed Field Study Specifications
Location of subject lands in relation to natural heritage feature(s)	X	Natural heritage mapping, other information from City or MNR staff	Confirm, map and describe all natural heritage features	Dependent on natural feature or function identified	
Inventory of existing man-made structures	Include on map	Survey or aerial photo		N/A	
Soil types by texture/grain size and drainage characteristics	X	Soils mapping, borehole data or other previous study			ELC methodology; may require hydraulic conductivity to assess infiltration
Overburden and bedrock geology	X	Borehole data	Borehole (usually other study)		
Locations and usage of any existing wells		MECP well records	Water sampling or pumping test (usually other study)		
Areas of high water table	X	Borehole data	Borehole (usually other study)		

Review

Feature	Data Required	Background Information	Field Study (EIS or other)	Optimal Inventory Period	Detailed Field Study Specifications
Areas of groundwater recharge and discharge	X	Subwatershed study/ Source Water Protection mapping			Please review Mud Creek SWS for detail regarding the esker
Drainage patterns, basin boundaries and watercourses	Include intermittent/ ephemeral features	Subwatershed study mapping			
Fish and fish habitat		Previous studies, CA or MNRF mapping		Late April to October	
Fish species at risk (specify):		DFO; NHIC; previous field studies	Search areas of suitable habitat	Will vary depending on species	
Benthic invertebrates		Previous studies		Spring or fall	Use Ontario Stream Assessment Protocol; Ontario Benthos Biomonitoring Network Protocol
Existing erosion sites		Previous studies			
Areas of shallow soil		Previous studies / borehole data			
Description of vegetation communities	√	Acceptable if completed within previous 5 years		Mid-May to mid-September	Use ELC methodology, classified to "vegetation type" level
Presence of hazardous forest types for wildland fire within 100 m	√	Provincial wildland fire risk mapping; ELC mapping	Confirm, describe and map any extreme or high hazardous forest types		Use provincial methodology
Assessment of vegetation condition: successional state, disturbance, extent of invasive species	x			May to September	

Feature	Data Required	Background Information	Field Study (EIS or other)	Optimal Inventory Period	Detailed Field Study Specifications
Vascular plant species	x	NESS or UNAEEES; previous field studies		Spring ephemerals: early to mid-May; Woodland sedges: mid-May to early July; Forbs: June to mid-Sept.	Detailed three-season botanical inventory
Plant species at risk (specify):	√	MECP; NHIC; NESS or UNAEEES; previous field studies	Search areas of suitable habitat	Will vary depending on species; during growing season	Butternut, black ash
Bird species		Ontario Breeding Bird Atlas; previous field studies		Raptor nests: April; Other breeding birds: twice between May 24 to July 10; Migrants and over-wintering birds: will vary	Follow Ontario Breeding Bird Atlas protocol
Amphibian species		Ontario Herpetofaunal Atlas; previous field studies		Salamanders: May to June; Frogs/toads: early spring to mid-summer	Marsh Monitoring Program protocol (Frogs/toads)
Reptile species		Ontario Herpetofaunal Atlas; previous field studies		April through September (species dependent)	Active searching
Mammal species		Atlas of the Mammals of Ontario; previous field studies		Species dependent	Sightings, tracks or other evidence
Insect species		Ontario Odonata Atlas		Odonates and lepidopterans: June and July	
Wildlife species at risk (specify):	√	MECP; NHIC; atlas records or previous field studies	Search areas of suitable habitat	Will vary depending on species	

City staff will make a copy of this form, once completed, and provide it to the applicant or agent for their files. City staff will retain the original form.

Please be sure to read the EIS Guidelines and also include the relevant OP section requirements, including relevant mapping with appropriate setbacks and buffers (including, but not limited to OP Section 4.9.3 (Restrict or Limit Development and Site

Alteration Near Surface Water Features), OP Section 4.8.1 (Protect the City's Natural Environment Through the Identification of a Natural Heritage System, Natural Heritage Features and Related Policies), OP Section 6.6.4.1 (Protect the natural Heritage System and Natural Heritage Features), OP Section 2.2.3 (Energy and Climate Change), OP Section 10.1 (Prevent Injury, Loss of Life, and Property Damage), etc.

You will also want to verify the City of Ottawa's Carp River Watershed/Subwatershed Study, for example, OP Section 4.9.3 (1) notes "*the minimum setback from surface water Features shall be the development limits as established by a Council approved watershed, subwatershed or environmental management plan.*"

With the Background Review & Terms of Reference

- A map with the relevant setbacks and vegetative buffers must be provided with the submission.
- Please verify the information sources as per the previously supplied checklist and the EIS Guidelines to ensure nothing is missing
- The proposed date will be dependent upon the appropriate field program and timing requirements.

Field Program

- Although August 2025 may be a starting point, more surveys may be required based on the initial site visit and observed and/or suspected species.
- For wildlife, the timing will depend on the observed and/or suspected species. Please refer to the EIS Guidelines
- For birds, the timing may vary:
 - Raptor nests –April
 - Breeding birds – need to be verified twice between May 24th to July 10th
 - Migrants and over-wintering birds – will vary depending on the species.
- For vegetation, the growing season would be appropriate
 - For butternut and Ash trees, leaf-on would be appropriate.

Data Analysis & Reporting

- **Evaluation of Significance**
 - Please also include the Carp River Watershed/Subwatershed Study
- **Habitat Assessment for Potential SAR**
 - Please also include the Carp River Watershed/Subwatershed Study; and
 - Please also verify the following link (s)

- <https://ottawa.ca/en/living-ottawa/environment-conservation-and-climate/wildlife-and-plants>
- **Significant Wildlife Habitat Assessment**
 - For that area, please include birds, bats, and turtles (not limited to).
 - Please also verify the following link (s)
 - <https://ottawa.ca/en/living-ottawa/environment-conservation-and-climate/wildlife-and-plants>
- **Wildland Fire Risk Assessment**
 - Please refer to the Provincial Wildland Fire Hazard mapping (geoOttawa/Land Information Ontario), Ontario Wildland Fire Assessment and Mitigation Reference Manual.
- **Mitigation Measures**
 - Please be sure to include a discussion on the Bird Safe Design Guidelines (it appears that has been included)
 - Please refer to the City of Ottawa EIS Guidelines
 - Section 3.5 - Mitigation
 - Please refer to the City of Ottawa Protocol for Wildlife Protection During Construction

Wenborn, Kimberly

From: Brar, Jasdeep <jasdeep.brar@ottawa.ca>
Sent: Monday, July 28, 2025 8:00 AM
To: Wenborn, Kimberly
Cc: MacDonald, Kim; Hayley, Matthew; McWilliams, Cheryl
Subject: Re: 912 David Manchester Road Ottawa, Ontario – Environmental Impact Study Terms of Reference
Attachments: KM ENV 912 David Manchester Road, EIS ToR July 2025 Review.pdf

Hi Kimberly,

Please see the attached information and feedback provided by the environmental planner.

The detailed EIS is particularly important for the Site Plan Control stage, and prior to any site alterations, grading, fill, staging on site or vegetation removal.

The TCR requested by the Forester can be combined with the EIS as well.

Please let me know if you have any additional questions.

Thank you,
Jasdeep

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Wenborn, Kimberly <Kim.Wenborn@stantec.com>
Sent: Wednesday, July 23, 2025 10:17 AM
To: Brar, Jasdeep <jasdeep.brar@ottawa.ca>
Subject: 912 David Manchester Road Ottawa, Ontario – Environmental Impact Study Terms of Reference

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

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Good Morning,

On behalf of our client, Chapel of Grace, Stantec is submitting the attached Terms of Reference (ToR) for the City's viewing in support of the Chapel of Grace's Zoning By-law Amendment and Site Plan application for the development of a chapel, sports field, and surface parking at 912 David Manchester Road, Ottawa (the Site). We understand this project has a relatively tight turnaround time but would appreciate the City's response as soon as possible.

Please reach out if you require any additional information regarding this ToR.

Kim Wenborn B.Sc.

Environmental Scientist, Environmental Services

Direct: 613-762-8451
kim.wenborn@stantec.com

Stantec
400 - 1331 Clyde Avenue
Ottawa ON K2C 3G4



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Appendix C Photolog





Photo 1: Existing conditions in White Cedar – White Pine coniferous forest (FOCM4-4) along west property boundary. Facing northwest.



Photo 2: Existing conditions in FOCM4-4 in west corner of Subject Property. Facing northwest.



Photo 3: Existing conditions in FOCM4-4 in north corner of Subject Property. Facing west.



Photo 4: Existing conditions in fresh – moist Poplar deciduous forest (FODM3-1) in northeast portion of Subject Property. Facing west.



Photo 5: Existing conditions in FODM3-1 in southeast portion of Subject Property. Facing north.



Photo 6: Existing conditions in FODM3-1 along the south Subject Property boundary. Facing northeast.

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Photo 7: Existing conditions in FODM3-1 understory in southeast corner of Subject Property. Facing west.



Photo 8: Existing conditions in Reed Canary Grass graminoid meadow (MEGM3-8) along northwest Subject Property boundary. Facing south.



Photo 9: Existing conditions in MEGM3-8 along northwest Subject Property boundary. Facing southeast.



Photo 10: Existing conditions in MEGM3-8 adjacent to FOCM4-4 community in west corner of Subject Property boundary. Facing east.



Photo 11: Entrance to Subject Property from David Manchester Road in MEGM3-8. Facing northeast.



Photo 12: Existing in MEGM3-8 adjacent to David Manchester Road. Facing southeast.

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Appendix D Habitat Assessment



D.1 Species at Risk



Appendix D.1 Species at Risk Habitat Assessment

Common Name ¹	Scientific Name ¹	S-Rank ²	SARO ³	COSEWIC ⁴	SARA ⁵	Source(s)	Habitat Description	Likelihood of Occurrence (Nil, Low, Medium, High, or Confirmed)	
								Subject Property	Study Area
Plants									
Black Ash	<i>Fraxinus nigra</i>	S4	END	THR	UC	NHIC	Black Ash is predominantly a wetland species found in swamps, floodplains, and fens. Approximately 25% of the global range of Black Ash occurs in Ontario (COSEWIC 2018).	Nil – although suitable habitat for Black Ash was observed in the meadow community (MEGM3-8), no Black Ash trees were observed within the Subject Property.	Low – suitable habitat for Black Ash was observed in the meadow community (MEGM3-8). No Black Ash trees were observed within the Study Area, but targeted surveys for Black Ash were limited to the Subject Property.
Butternut	<i>Juglans cinerea</i>	S2?	END	END	END	NHIC	Butternut are a member of the walnut (Juglandaceae) family and are native to southern and eastern Ontario in mixed hardwood forest. They grow best on well-drained, fertile soils of steady slopes and bottomlands in small groups or individually and are not typically abundant. Butternut are a shade intolerant species that are generally associated with mid-successional forests, forest edges and hedgerows. Populations of Butternut trees are in decline due to the Butternut Canker (<i>Ophiognomonia clavignenti-juglandacearum</i>), a fungus that is spreading throughout their range in Ontario (COSEWIC 2017).	Nil – although suitable habitat for Butternut was observed in forest communities within the Subject Property, no Butternut trees were observed within the Subject Property.	Low – suitable habitat for Butternut was observed in forest communities within the Study Area. No Butternut trees were observed within the Study Area, but targeted surveys for Butternut were limited to the Subject Property.
Herptiles									
Blanding's Turtle	<i>Emydoidea blandingii</i>	S3	THR	END	Not Listed	NHIC, ORRA	Blanding's Turtles are largely aquatic and inhabit shallow lakes, ponds, slow moving creek, and wetlands with soft organic substrates with abundant submergent vegetation. Upland habitats are used as travel corridors between summer, winter, breeding, and nesting habitats, and adults regularly travel several km between habitats. Blanding's Turtles nest in open habitat with low vegetation cover and loose, sandy and/or gravelly soil above the waterline in natural and developed habitats (COSEWIC 2016).	Low – no suitable nesting, basking, or overwintering habitat for Blanding's Turtles is absent within the Subject Property. Turtles are not expected to use the Subject Property; however, transient adults may pass through the area.	Low – no suitable nesting, basking, or overwintering habitat for Blanding's Turtle is absent within the Study Area. Turtles are not expected to use the Study Area; however, transient adults may pass through the area.
Birds									
Bank Swallow	<i>Riparia riparia</i>	S4B	THR	THR	THR	NHIC, OBBA	Bank Swallows nest in natural and artificial banks including riverbanks, gravel pits, roadcuts, and soil stockpiles. Nest burrows are usually in vertical or near-vertical banks and the availability of suitable vertical banks is generally a limiting factor. Adults tend to forage within 200-500 m of the colony and are aerial insectivores (COSEWIC 2013).	Low – no Bank Swallow or suitable nesting habitat (vertical banks) for this species was observed within the Subject Property. Targeted breeding bird surveys were not part of the field program.	Low – no Bank Swallow or suitable nesting habitat (vertical banks) for this species was observed within the Study Area. Targeted breeding bird surveys were not part of the field program.
Barn Swallow	<i>Hirundo rustica</i>	S4B	SC	SC	THR	OBBA	Barn Swallows are aerial insectivorous birds that have adapted to human altered landscapes and preferentially nest on/in anthropogenic structures. Before European settlement, Barn Swallows used caves, holes, crevices, and rocky cliff faces for nesting. Now, Barn Swallow nest in barns, garages, sheds, buildings with overhanging ledges, and under bridges and culverts (COSEWIC 2011).	Low – no Barn Swallow or suitable nesting habitat (bridges, buildings with vertical walls and overhanging ledges) for this species was observed within the Subject Property. Targeted breeding bird surveys were not part of the field program.	Medium – suitable nesting habitat (buildings with vertical walls and overhanging ledges) for this species was observed within the Study Area. Targeted breeding bird surveys were not part of the field program.



Common Name ¹	Scientific Name ¹	S-Rank ²	SARO ³	COSEWIC ⁴	SARA ⁵	Source(s)	Habitat Description	Likelihood of Occurrence (Nil, Low, Medium, High, or Confirmed)	
								Subject Property	Study Area
Bobolink	<i>Dolichonyx oryzivorus</i>	S4B	THR	THR	THR	OBBA	Bobolink is a grassland obligate species that nests in a variety of open grassland habitats in Ontario including pastures, savannahs, alvar grasslands, and hayfields. They are mostly found in agricultural habitats (i.e., hayfields, pastures, fallow cropfields) in Ontario due to the loss of native grassland habitats. Sites with a higher ratio of grasses to forbs, abundant litter cover, and moderately dense vegetation cover with a low proportion of woody vegetation (e.g., shrubs, trees) are preferred for breeding (COSEWIC 2010).	Low – no Bobolink or suitable nesting habitat for this species was observed within the Subject Property. Targeted breeding bird surveys were not part of the field program.	Low – suitable nesting habitat (meadow) for Bobolink is present north of Hwy 417 within the Study Area; however, this area is immediately adjacent to Hwy 417 and likely not being used for nesting by Bobolink. No Bobolink were observed within the Study Area. Targeted breeding bird surveys were not part of the field program.
Eastern Meadowlark	<i>Sturnella magna</i>	S4B,S3N	THR	THR	THR	OBBA	Eastern Meadowlark is a grassland obligate species that nests in a variety of open grassland habitats in Ontario including pastures, savannahs, alvar grasslands, and hayfields. They are mostly found in agricultural habitats (i.e., hayfields, pastures, fallow cropfields) in Ontario due to the loss of native grassland habitats. Sites with a higher ratio of grasses to forbs, abundant litter cover, and moderately dense vegetation cover with a low proportion of woody vegetation (e.g., shrubs, trees) are preferred for breeding (ECCC 2022).	Low – no Eastern Meadowlark or suitable nesting habitat for this species was observed within the Subject Property. Targeted breeding bird surveys were not part of the field program.	Low – suitable nesting habitat (meadow) for Eastern Meadowlark is present north of Hwy 417 within the Study Area; however, this area is immediately adjacent to Hwy 417 and likely not being used for nesting by Eastern Meadowlark. No Eastern Meadowlark were observed within the Study Area. Targeted breeding bird surveys were not part of the field program.
Wood Thrush	<i>Hylocichla mustelina</i>	S4B	SC	THR	THR	NHIC, OBBA	Wood Thrush breeds in deciduous or mixed upland forest habitat with a moderate subcanopy and open forest floor. Wood Thrush are sensitive to habitat fragmentation but will nest in forest patches as small as 3 ha. Nests are constructed in young trees or shrubs and adults primarily forage for invertebrates on the ground (COSEWIC 2012).	High – suitable nesting habitat (forests) for Wood Thrush was observed within the Subject Property. No Wood Thrush were observed within the Subject Property. Targeted breeding bird surveys were not part of the field program.	High – suitable nesting habitat (forests) for Wood Thrush was observed within the Study Area. No Wood Thrush were observed within the Study Area. Targeted breeding bird surveys were not part of the field program.
Mammals									
Eastern Red Bat	<i>Lasiurus borealis</i>	S4	END	END	UC	AMO	Eastern Red Bats are aerial insectivores that roost in the foliage of deciduous or sometimes evergreen trees. They are migratory and fly south for the winter to avoid sub-zero temperatures (COSEWIC 2023).	Medium – suitable summer / maternity roosting habitat (tree foliage) is present within the Subject Property. Bats may use the Subject Property for foraging.	Medium – suitable summer / maternity roosting habitat (tree foliage) is present within the Study Area. Bats may use the Study Area for foraging.
Eastern Small-footed Myotis	<i>Myotis leibii</i>	S2S3	END	No Status	No Status	AMO	Eastern Small-footed Myotis are aerial insectivores that can be found in a variety of habitats including forests, in rocky habitats, near waterbodies and wetlands, and in urban areas. Maternity roost sites occur in cracks and crevices in rock faces, cliffs, and rock barrens, and less commonly in buildings (attics, abandoned buildings, barns). Overwintering habitat includes caves and abandoned mines (Humphrey 2017).	Medium – trees within the Subject Property were young to moderate aged with little to no decay/damage. Suitable summer / maternity roosting habitat (cracks and crevices in rock faces, buildings, trees) is absent from the Subject Property. Bats may use the Subject Property for foraging.	Medium – trees within the Study Area were young to moderate aged Poplar species with little to no decay/damage. Suitable summer / maternity roosting habitat (cracks and crevices in rock faces, buildings, trees) is absent from the Study Area. Bats may use the Study Area for foraging.
Hoary Bat	<i>Lasiurus cinereus</i>	S4	END	END	UC	AMO	Hoary Bats are aerial insectivores that roost solitarily in tree foliage and prefer maple, oak, ash, elder, and hemlock. They are migratory and fly south for the winter to avoid sub-zero temperatures (COSEWIC 2023).	Medium – suitable summer / maternity roosting habitat (tree foliage) is present within the Subject Property. Bats may use the Subject Property for foraging.	Medium – suitable summer / maternity roosting habitat (tree foliage) is present within the Study Area. Bats may use the Study Area for foraging.



Common Name ¹	Scientific Name ¹	S-Rank ²	SARO ³	COSEWIC ⁴	SARA ⁵	Source(s)	Habitat Description	Likelihood of Occurrence (Nil, Low, Medium, High, or Confirmed)	
								Subject Property	Study Area
Little Brown Myotis	<i>Myotis lucifugus</i>	S3	END	END	END	AMO	Little Brown Myotis is an aerial insectivore that can be found in a variety of habitats including forests, hay fields, pastures, near waterbodies, and in urban areas. Maternity roost sites occur in buildings (attics, abandoned buildings, barns), rock crevices, exfoliating tree bark, and cavities and crevices in trees. Overwintering habitat includes caves and abandoned mines (Humphrey 2019).	Medium – trees within the Subject Property were young to moderate aged Poplar species with little to no decay/damage. Suitable summer / maternity roosting habitat (buildings, trees) is absent from the Subject Property. Bats may use the Subject Property for foraging.	Medium – trees within the Study Area were young to moderate aged Poplar species with little to no decay/damage. Suitable summer / maternity roosting habitat (buildings, trees) is absent from the Study Area. Bats may use the Study Area for foraging.
Northern Myotis	<i>Myotis septentrionalis</i>	S3	END	END	END	AMO	Northern Myotis are aerial insectivores that will also glean prey. Northern Myotis are commonly found in forests and adjacent fields. Maternity roost sites occur in mature trees with loose bark or cavities, and rarely in buildings. Overwinter in caves and mines (Humphrey 2019).	Medium – trees within the Subject Property were young to moderate aged Poplar species with little to no decay/damage. Suitable summer / maternity roosting habitat (trees) is absent from the Subject Property. Bats may use the Subject Property for foraging.	Medium – trees within the Study Area were young to moderate aged Poplar species with little to no decay/damage. Suitable summer / maternity roosting habitat (trees) is absent from the Study Area. Bats may use the Study Area for foraging.
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	S4	END	END	UC	AMO	Silver-haired Bats are aerial insectivores that are most closely associated with coniferous, mixed coniferous and deciduous forests, especially in old growth forests. They form maternity colonies almost exclusively in tree cavities or small hollows. Silver-haired bats are migratory and fly south for the winter to avoid sub-zero temperatures (COSEWIC 2023).	Medium – trees within the Subject Property were young to moderate aged Poplar species with little to no decay/damage. Suitable summer / maternity roosting habitat (trees) is absent from the Subject Property. Bats may use the Subject Property for foraging.	Medium – trees within the Study Area were young to moderate aged Poplar species with little to no decay/damage. Suitable summer / maternity roosting habitat (trees) is absent from the Study Area. Bats may use the Study Area for foraging.
Tri-colored Bat	<i>Perimyotis subflavus</i>	S3?	END	END	END	AMO	Tri-colored Bats are aerial insectivores that can be found in a variety of forested habitats. Maternity roost sites occur in older forests with live or dead leaf clusters and occasionally in buildings. This species is strongly associated with forest watercourses and streamside vegetation. Overwinter in caves and mines (Humphrey 2019).	Medium – suitable summer / maternity roosting habitat (tree foliage) is present within the Subject Property. Bats may use the Subject Property for foraging.	Medium – suitable summer / maternity roosting habitat (tree foliage) is present within the Study Area. Bats may use the Study Area for foraging.

Notes:

¹**Scientific Name** and **Common Name:** The scientific name, and English common name of a species as published by the Natural Heritage Information Centre hosted by the Ministry of Natural Resources.

²**S-Rank:** Subnational Rank is the conservation status of a species within a particular province, territory, or state. In this scenario, it is the provincial level ranking system as published by the Natural Heritage Information Centre hosted by the Ministry of Natural Resources / Land Information Ontario.

³**SARO Status:** Species at Risk in Ontario (Provincial Status as defined by the *Endangered Species Act, 2007* as amended).

⁴**COSEWIC Status:** Status as defined by the Committee on the Status of Endangered Wildlife in Canada.

⁵**SARA Status:** Federal status as defined by the *Species at Risk Act*.

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COSEWIC. 2010. COSEWIC assessment and status report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 43 pp.

COSEWIC. 2011. COSEWIC assessment and status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.

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COSEWIC. 2018. COSEWIC assessment and status report on the Black Ash *Fraxinus nigra* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 95 pp.

COSEWIC. 2023. COSEWIC assessment and status report on the Hoary Bat *Lasiurus cinereus*, Eastern Red Bat *Lasiurus borealis* and Silver-haired Bat, *Lasionycteris noctivagans*, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxi + 100 pp.

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Humphrey, C. 2017. Recovery Strategy for the Eastern Small-footed Myotis (*Myotis leibii*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario. vii + 76 pp.

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Endangered Species Act and Species at Risk Act Acronyms

END: Endangered

THR: Threatened

SC: Special Concern

NAR: Not at Risk

UC: Under Consideration for Addition and/or Status Change under Schedule 1 of SARA

Subnational Rankings (S RANK)

S##: Range Rank – A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species

?: Indicates uncertainty in the assigned rank

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

B: Breeding: Conservation status refers to the breeding population of the species in the nation or state/province

N: Non-breeding: Conservation status refers to the non-breeding population of the species in the nation or state/province

M: Migrant: Migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the nation or state/province



D.2 Species of Conservation Concern



Appendix D.2 Species of Conservation Concern Habitat Assessment

Common Name ¹	Scientific Name ¹	S-Rank ²	SARO ³	COSEWIC ⁴	SARA ⁵	Source(s)	Habitat Description	Likelihood of Occurrence (Nil, Low, Medium, High, or Confirmed)	
								Subject Property	Study Area
Insects									
Monarch	<i>Danaus plexippus</i>	S2N,S4B	SC	END	END	OBA	Adult Monarchs feed on nectar from wildflowers in a variety of habitats, while larvae are confined to meadows and open areas with Milkweed (<i>Asclepiadaceae</i> sp.) plants (COSEWIC 2016a).	Medium – nectaring (wildflowers) habitat for Monarch is available throughout the Subject Property. Transient adults may use patches of wildflowers within the Subject Property as nectaring habitat. Targeted insect surveys were not part of the field program.	Medium – nectaring (wildflowers) and breeding (Milkweed) habitat for Monarch may be available within the Study Area. Transient adults may use patches of wildflowers within the Study Area as nectaring habitat.
Herptiles									
Western Chorus Frog - Great Lakes - St. Lawrence - Canadian Shield population	<i>Pseudacris maculata pop. 1</i>	S4	NAR	THR	THR	ORAA	Western Chorus Frogs are lowland terrestrial species that are found in marshes, meadows, and forest habitat near water. Breeding ponds are small, shallow wetlands that usually dry out in the late summer and contain no fish (e.g., predators). Adults forage in upland habitat generally within 250 to 300 m of the breeding pond and overwinter under rocks, leaf litter, loose soil, or old animal burrows (COSEWIC 2008a). Adults have limited movement capabilities and generally do not disperse more than 750 m to find new breeding ponds.	Low – suitable breeding habitat (watercourses, waterbodies, wetlands) is absent from the Subject Property. Targeted breeding amphibian surveys were not part of the field program.	Low – suitable breeding habitat (watercourses, waterbodies, wetlands) is absent from the Study Area. Targeted breeding amphibian surveys were not part of the field program.
Snapping Turtle	<i>Chelydra serpentina</i>	S4	SC	SC	SC	NHIC, ORAA	Snapping Turtles inhabit a wide range of wetland habitats including ponds, sloughs, streams, rivers, and shallow bays that are characterized by slow moving water, soft bottoms, and dense aquatic vegetation. Adults will use streams to move between waterbodies especially during the mating season. Nesting sites are in open habitat with sandy or gravelly substrate and are often found in road shoulders (COSEWIC 2008b).	Low – no suitable nesting, basking, or overwintering habitat for Snapping Turtle is absent within the Subject Property. Turtles are not expected to use the Subject Property; however, transient adults may pass through the area.	Low – no suitable nesting, basking, or overwintering habitat for Snapping Turtle is absent within the Study Area. Turtles are not expected to use the Study Area; however, transient adults may pass through the area.
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	S4	Not Listed	SC	SC	NHIC, ORAA	Midland Painted Turtles inhabit slow moving, relatively shallow and well-vegetated wetlands including swamps, marshes, ponds, fens, bogs, lakes, rivers, and creeks with abundant basking sites and organic substrate. Nesting habitat is usually within 1,200 m of aquatic habitat and in an open, south-facing area with sandy-loamy and/or gravelly substrate (COSEWIC 2018).	Low – no suitable nesting, basking, or overwintering habitat for Midland Painted Turtle is absent within the Subject Property. Turtles are not expected to use the Subject Property; however, transient adults may pass through the area.	Low – no suitable nesting, basking, or overwintering habitat for Midland Painted Turtle is absent within the Study Area. Turtles are not expected to use the Study Area; however, transient adults may pass through the area.



Common Name ¹	Scientific Name ¹	S-Rank ²	SARO ³	COSEWIC ⁴	SARA ⁵	Source(s)	Habitat Description	Likelihood of Occurrence (Nil, Low, Medium, High, or Confirmed)	
								Subject Property	Study Area
Eastern Milksnake	<i>Lampropeltis triangulum</i>	S4	NAR	SC	SC	ORAA	Eastern Milksnakes are habitat generalists, but prefer open areas such as pastures, meadows, prairies, rock outcrops, rights-of-way, and agricultural land near forest habitat. They commonly feed around old buildings and barns, where rodent populations are high. Milksnakes hibernate in mammal burrows, old building foundations, old wells, hollow logs, and rock crevices (COSEWIC 2014).	Low – suitable foraging and basking habitat for Eastern Milksnake is present within the Subject Property; however, suitable overwintering habitat (i.e., rock piles, building foundations, exposed bedrock) is absent.	Low – suitable foraging and basking habitat for Eastern Milksnake is present within the Study Area; however, suitable overwintering habitat (i.e., rock piles, building foundations, exposed bedrock) is absent.
Birds									
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	S4	SC	SC	SC	OBBA	Evening Grosbeak breeding habitat contains large mature tree with a high proportion of fir, spruce, and aspen and an open canopy. Numbers and breeding density are closely linked to availability of spruce budworm, a primary prey species during the breeding season (COSEWIC 2016b).	Medium –mixed forested communities may provide suitable nesting habitat for Evening Grosbeak within the Subject Property. Targeted breeding bird surveys were not part of the field program.	Medium –mixed forested communities may provide suitable nesting habitat for Evening Grosbeak within the Study Area. Targeted breeding bird surveys were not part of the field program.
Eastern Wood-pewee	<i>Contopus virens</i>	S4B	SC	SC	SC	NHIC, OBBA	Eastern Wood-pewee are found in the mid-canopy layer of deciduous and mixed wood forests with open understories and are commonly associated with edges and clearings. Forest size does not seem to be a critical factor in habitat selection; however, breeding numbers decrease with increasing development in surrounding habitat. (COSEWIC 2012).	Medium – forested communities may provide suitable nesting habitat for Eastern Wood-pewee within the Subject Property. Targeted breeding bird surveys were not part of the field program.	Medium –forested communities may provide suitable nesting habitat for Eastern Wood-pewee within the Study Area. Targeted breeding bird surveys were not part of the field program.

Notes:

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²**S-Rank**: Subnational Rank is the conservation status of a species within a particular province, territory, or state. In this scenario, it is the provincial level ranking system as published by the Natural Heritage Information Centre hosted by the Ministry of Natural Resources / Land Information Ontario.

³**SARO Status**: Species at Risk in Ontario (Provincial Status as defined by the *Endangered Species Act, 2007* as amended).

⁴**COSEWIC Status**: Status as defined by the Committee on the Status of Endangered Wildlife in Canada.

⁵**SARA Status**: Federal status as defined by the *Species at Risk Act*.

References:

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COSEWIC. 2008b. COSEWIC assessment and status report on the Snapping Turtle *Chelydra serpentina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.

COSEWIC. 2012. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.

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Endangered Species Act and Species at Risk Act Acronyms

END: Endangered

THR: Threatened

SC: Special Concern

NAR: Not at Risk

UC: Under Consideration for Addition and/or Status Change under Schedule 1 of SARA

Subnational Rankings (S RANK)

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



Appendix E Significant Wildlife Habitat



Appendix E 6E Significant Wildlife Habitat Assessment

Candidate Wildlife Habitat	Criteria	Methods	Confirmed or Candidate Habitat Present in the Study Area?
Habitats of Seasonal Concentrations of Animals			
Waterfowl Stopover and Staging Area (Terrestrial)	Fields with sheet water during spring (mid-March to May), or annual spring melt water flooding found in any of the following Community Types: Meadow (CUM1), Thicket (CUT1). Agricultural fields with waste grains are commonly used by waterfowl, and these are not considered SWH unless they have sheet water available.	ELC surveys were used to assess features within the Study Area that may support waterfowl stopover and staging areas (terrestrial).	ABSENT. There are no CUM1 or CUT1 communities within the Study Area.
Waterfowl Stopover and Staging Area (Aquatic)	The following community types: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1 to SWD7 Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. The combined area of the ELC ecosites and a 100 m radius area is the SWH. Sewage treatment ponds and storm water ponds do not qualify as a SWH; however, a reservoir managed as a large wetland or pond/lake does qualify.	ELC surveys were used to assess features within the Study Area that may support waterfowl stopover and staging areas (aquatic).	ABSENT. There are no MAS, SAS, SAM, SAF, SWD communities within the Study Area.
Shorebird Migratory Stopover Area	The following community types: BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5 Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a significant wildlife habitat.	ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support migratory shorebirds.	ABSENT. There are no shoreline communities suitable for candidate shorebird migratory stopover areas within the Study Area. Targeted shorebird surveys were not part of the field investigations.
Raptor Wintering Area	At least one of the following forest community types: Deciduous Forest (FOD), Mixed Forest (FOM) or Coniferous Forest (FOC), in combination with one of the following Upland Community Types: Meadow (CUM), Thicket (CUT), Savanna (CUS), Woodland (CUW) (<60% cover) that are >20 ha and provide roosting, foraging and resting habitats for wintering raptors. Upland habitat (CUM, CUT, CUS, CUW), must represent at least 15 ha of the 20-ha minimum size.	ELC surveys and GIS analysis were used to assess features within the Study Area that may support wintering raptors.	ABSENT. There are no CUM1, CUT1, CUS1, or CUW1 communities within the Study Area.
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and karsts. May be found in these Community Types: Crevice (CCR1, CCR2), Cave (CCA1, CCA2).	ELC surveys were used to assess features within the Study Area that may support bat hibernacula.	ABSENT. Suitable underground habitat is not known to occur in the Study Area.
Bat Maternity Colonies	Maternity colonies considered significant wildlife habitat are found in forested ecosites. Either of the following Community Types: Deciduous Forest (FOD), Mixed Forest (FOM), Deciduous Swamp (SWD), and Mixed Forest (SWM) that have wildlife trees >10 cm diameter at breast height (dbh). Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). Female Bats prefer wildlife tree (snags) in the early stages of decay, class 1-3 or class 1 or 2. Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.	ELC surveys and an acoustic bat survey were used to assess features within the Study Area that may support bat maternity colonies.	CANDIDATE. Forest (FO) communities within the Study Area may provide candidate habitat to support bat maternity colonies. Targeted bat surveys were not part of the field investigations.



Candidate Wildlife Habitat	Criteria	Methods	Confirmed or Candidate Habitat Present in the Study Area?
Turtle Wintering Areas	Snapping and Midland Painted turtles utilize ELC community classes: Swamp (SW), Marsh (MA) and Open Water (OA). Shallow water (SA), Open Fen (FEO) and Open Bog (BOO). Northern Map turtle- open water areas such as deeper rivers or streams and lakes can also be used as over-wintering habitat. Water has to be deep enough not to freeze and have soft mud substrate. Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate dissolved oxygen.	ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support areas of permanent standing water but not deep enough to freeze.	ABSENT: Wetlands within the Study Area are not deep enough to provide candidate turtle wintering areas.
Snake Hibernacula	Hibernation occurs in sites located below frost lines in burrows, rock crevices, broken and fissured rock, and other natural features. Wetlands can also be important over-wintering habitats in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. Any ecosite in southern Ontario other than very wet ones may provide habitat. The following Community Types may be directly related to snake hibernacula: Talus (TA), Rock Barren (RB), Crevice (CCR), Cave (CCA), and Alvar (RBOA1, RBSA1, RBTA1).	ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support snake hibernacula.	ABSENT. No candidate features were observed in the Study Area.
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, or barns found in any of the following community types: CUM1, CUS1, BLS1, CLO1, CLT1, CUT1, BLO1, BLT1, CLS1. Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. Does not include a licensed/permitted Mineral Aggregate Operation.	ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support colonial bird breeding habitat.	ABSENT. No candidate features were observed in the Study Area.
Colonially-Nesting Bird Breeding Habitat (Tree/Shrubs)	Identification of stick nests in any of the following community types: SWM2, SWM5, SWD1, SWD3, SWD5, SWD7, SWM3, SWM6, SWD2, SWD4, SWD6, FET1 The edge of the colony and a minimum 300 m area of habitat or extent of the Forest Ecosite containing the colony or any island <15.0 ha with a colony is the SWH. Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used.	ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support colonial bird breeding habitat (Trees/Shrubs).	ABSENT. Vegetation community types do not occur within the Study Area and stick nests were not observed during field investigations.
Colonially-Nesting Bird Breeding Habitat (Ground)	Any rocky island or peninsula within a lake or large river. For Brewer's Blackbird, close proximity to watercourses in open fields or pastures with scattered trees or shrubs found in any of the following Community Types: Meadow Marsh (MAM1-6), Shallow Marsh (MAS1-3), Meadow (CUM1), Thicket (CUT1), Savanna (CUS1).	ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support colonial bird breeding habitat (Ground).	ABSENT. No candidate features were observed in the Study Area.
Migratory Butterfly Stopover Areas	Located within 5 km of Lake Ontario. A combination of ELC communities, one from each land class is required: Field (CUM, CUS, CUT) and Forest (FOC, FOM, FOD, CUP). Minimum of 10 ha in size with a combination of field and forest habitat present.	ELC surveys and GIS analysis were used to assess features within the Study Area that may support migratory butterfly stopover areas.	ABSENT. The Study Area is greater than 5 km from Lake Ontario.
Landbird Migratory Stopover Areas	The following community types: Forest (FOD, FOM, FOC) or Swamp (SWC, SWM, SWD). Woodlots must be >10 ha in size and within 5 km of Lake Ontario – woodlands within 2 km of Lake Ontario are more significant.	ELC surveys and GIS analysis were used to assess features within the Study Area that may support land bird migratory stopover areas.	ABSENT. The Study Area is greater than 5 km from Lake Ontario.
Deer Yarding Areas	Delineated by the MNR as areas where deer move to in response to the onset of winter snow and cold. The following forested ecosites within Community Series: FOC, FOM, SWC, SWM. Deer yard may also occur in mixed and coniferous plantations (CUP2 and CUP3), and deciduous forest (FOD3) and thicket (CUT) communities.	No studies required as the MNR delineates this habitat.	ABSENT No candidate features were identified by the MNR in the Study Area.



Candidate Wildlife Habitat	Criteria	Methods	Confirmed or Candidate Habitat Present in the Study Area?
Deer Winter Congregation Areas	Woodlots typically >100 ha in size unless determined by the MNR as significant. (If large woodlots are rare in a planning area >50 ha). All forested ecosites within community series: FOC, FOM, FOD, SWC, SWM, SWD. Conifer plantations much smaller than 50 ha may also be used.	No studies required as the MNR delineates this habitat.	ABSENT. No features were identified in the background review
Rare Vegetation Communities			
Cliffs and Talus Slopes	A Cliff is vertical to near vertical bedrock >3 m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris. Any ELC Ecosite within Community Series: TAO, TAS, TAT, CLO, CLS, CLT. Most cliff and talus slopes occur along the Niagara Escarpment.	ELC surveys were used to assess features within the Study Area that would be considered cliffs or talus slopes.	ABSENT. There are no TAO, TAS, TAT, CLO, CLS, or CLT communities within the Study Area.
Sand Barrens	Sand barrens typically are exposed sand, generally sparsely vegetated and cause by lack of moisture, periodic fires and erosion. Vegetation can vary from patchy and barren to tree covered but less than 60%. Any of the following Community Types: SBO1 (Open Sand Barren Ecosite), SBS1 (Shrub Sand Barren Ecosite), SBT1 (Treed Sand Barren Ecosite).	ELC surveys were used to assess features within the Study Area that would be considered to be sand barrens.	ABSENT. There are no SBO1, SBS1, or SBT1 communities within the Study Area.
Alvars	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plant. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover. Any of the following Community Types: ALO1(Open Alvar Rock Barren Ecosite), ALS1 (Alvar Shrub Rock Barren Ecosite), ALT1 (Treed Alvar Rock Barren Ecosite), FOC1 (Dry-Fresh Pine Coniferous Forest), FOC2 (Dry-Fresh Cedar Coniferous Forest), CUM2 (Bedrock Cultural Meadow), CUS2 (Bedrock Cultural Savanna), CUT2-1 (Common Juniper Cultural Alvar Thicket), or CUW2 (Bedrock Cultural Woodland). An Alvar site >0.5 ha in size.	ELC surveys were used to assess features within the Study Area that would be considered to be alvar communities.	ABSENT. There are no ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, or CUW2 communities within the Study Area.
Old-growth Forest	Old-growth forests tend to be relatively undisturbed, structurally complex, and contain a wide variety of trees and shrubs in various age classes. These habitats usually support a high diversity of wildlife species. No minimum size criteria t in any of the following Community Types: FOD (Deciduous Forest), FOM (Mixed Forest), FOC (Coniferous Forest), SWD (Deciduous Swamp), SWC (Coniferous Swamp), SWM (Mixed Swamp) Forests greater than 120 years old and with no historical forestry management was the main criteria when surveying for old-growth forests.	ELC surveys were used to assess features within the Study Area that would be considered to be old-growth forest communities.	ABSENT. No features were identified by the MNR in the Study Area.
Savanna	A savanna is a tallgrass prairie habitat that has tree cover between 25 – 60%. Any of the following Community Types: TPS1 (Dry-Fresh Tallgrass Mixed Savanna Ecosite), TPS2 (Fresh-Moist Tallgrass Deciduous Savanna Ecosite), TPW1 (Dry-Fresh Black Oak Tallgrass Deciduous Woodland Ecosite), TPW2 (Fresh-Moist Tallgrass Deciduous Woodland Ecosite), CUS2 (Bedrock Cultural Savanna Ecosite).	ELC surveys were used to assess features within the Study Area that would be considered to be savanna communities.	ABSENT. There are no TPS1, TPS2, TPW1, TPW2, or CUS2 communities within the Study Area.
Tall-grass Prairies	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has <25% tree cover. Any of the following Community Types: TPO1 (Dry Tallgrass Prairie Ecosite), TPO2 (Fresh-Moist Tallgrass Prairie Ecosite).	ELC surveys were used to assess features within the Study Area that would be considered to be tall-grass communities.	ABSENT. There are no TPO1 or TPO2 communities within the Study Area.



Candidate Wildlife Habitat	Criteria	Methods	Confirmed or Candidate Habitat Present in the Study Area?
Other Rare Vegetation Communities	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG.	ELC surveys were used to assess features within the Study Area that would be considered to be other rare vegetation communities.	ABSENT. There are no S1, S2 or S3 vegetation communities within the Study Area.
Specialized Habitats for Wildlife			
Waterfowl Nesting Area	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, SWD4. Note: includes adjacency to Provincially Significant Wetlands.	ELC surveys were used to assess features within the Study Area that may support nesting waterfowl. Habitats adjacent to wetlands without standing water were not considered candidate SWH.	ABSENT. There are no SWH: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, or SWD4 communities within the Study Area.
Bald Eagle and Osprey nesting, Foraging, and Perching Habitat	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. Nests located on man-made objects are not to be included as SWH (e.g., telephone poles and constructed nesting platforms). ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands.	ELC surveys and wildlife habitat assessments were used to assess features within the Study Area that may support nesting, foraging and perching habitat for large raptors.	ABSENT. Nests were not observed during field surveys.
Woodland Raptor Nesting Habitat	All natural or conifer plantation woodland/forest stands combined >30 ha and with >4 ha of interior habitat. Interior habitat determined with a 200 m buffer. Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3.	ELC surveys, wildlife habitat assessments and GIS analysis were used to assess features within the Study Area that may support nesting habitat for woodland raptors.	ABSENT. Forested areas in the Study Area are fragmented and lack interior habitat.
Turtle Nesting Areas	Exposed mineral soil (sand or gravel) areas adjacent (<100 m) or within the following ELC Ecosites: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, BOO1, FEO1. Best nesting habitat for turtles is close to water, away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.	ELC surveys, wildlife habitat assessments and GIS analysis were used to assess features within the Study Area that may support turtle nesting areas.	ABSENT. There are no MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1, SAM1, SAF1, BOO1, or FEO1 communities within the Study Area.
Seeps and Springs	Seeps/Springs are areas where ground water comes to the surface. Often, they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs. Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system.	ELC surveys were used to assess features within the Study Area that may support seeps/springs.	ABSENT. No seepage areas were found in the Study Area during field investigations.
Amphibian Breeding Habitat (Woodland)	All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD. Presence of a wetland, lake, or pond within or adjacent (within 120 m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	ELC surveys were used to assess features within the Study Area that may support woodland breeding amphibians. Amphibian call count surveys were conducted to target the wetland features in the Study Area.	ABSENT. No breeding amphibians were recorded during the 2016 amphibian call count surveys.



Candidate Wildlife Habitat	Criteria	Methods	Confirmed or Candidate Habitat Present in the Study Area?
Amphibian Breeding Habitat (Wetland)	<p>ELC Community Classes SW, MA, FE, BO, OA and SA.</p> <p>Wetland areas >120 m from woodland habitats.</p> <p>Wetlands and pools (including vernal pools) >500 m² (about 25 m diameter) supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNR mapping and could be important amphibian breeding habitats.</p> <p>Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators.</p> <p>Bullfrogs require permanent water bodies with abundant emergent vegetation.</p>	<p>ELC surveys were used to assess features within the Study Area that may support wetland breeding amphibians. Amphibian call count surveys were conducted to target the wetland features in the Study Area.</p>	<p>ABSENT. No breeding amphibians were recorded during the 2016 amphibian call count surveys.</p>
Area-Sensitive Bird Breeding Habitat	<p>Large mature forest stands, woodlots >30ha with interior forest habitat (i.e. at least 200m from edge).</p> <p>All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD.</p>	<p>ELC surveys and GIS analysis were used to determine whether woodlots that occurred within the Study Area that were >30 ha with interior habitat present (>200 m from edge).</p>	<p>ABSENT. Forested areas in the Study Area are fragmented and lack interior habitat.</p>
Habitats of Species of Conservation Concern			
Marsh Breeding Bird Habitat	<p>All wetland habitats with shallow water and emergent aquatic vegetation.</p> <p>May include any of the following Community Types: MAM1 TO MAM6, SAS1, SAM1, SAF1, FEO1, BOO1, or for Green Heron: Swamp (SW), Marsh (MA) and Meadow (CUM1) sites.</p>	<p>ELC surveys were used to identify marshes with shallow water and emergent vegetation that may support marsh breeding birds.</p>	<p>ABSENT. There are no MAM, SA, BOO, FEO, or SW, MA, or CUM communities within the Study Area.</p>
Open Country Bird Breeding Habitat	<p>Grassland areas > 30 ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or hay or livestock pasturing in the last 5 years, in the following Community Type: Meadow (CUM1, CUM2).</p>	<p>ELC surveys and GIS analysis were used to identify grassland communities within the Study Area that may support area-sensitive breeding birds.</p>	<p>ABSENT. The meadow communities in the Study Area are < 30 ha.</p>
Shrub/Early Successional Bird Breeding Habitat	<p>Old field areas succeeding to shrub and thicket habitats >10 ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, in the following Community Types: Thickets (CUT1, CUT2), Savannas (CUS1, CUS2) or Woodlands (CUW1, CUW2).</p>	<p>ELC surveys and GIS analysis were used to identify large communities that may support shrub/early successional breeding birds.</p>	<p>ABSENT. There are no succession habitats in the Study Area.</p>
Terrestrial Crayfish	<p>Meadow marshes and edges of shallow marshes (no minimum size). Vegetation communities include MAM1 to MAM6, MAS1 to MAS3, SWD, SWT, SWM.</p> <p>Terrestrial Crayfish construct burrows in marshes, mudflats, meadows. Can be found far from water.</p>	<p>ELC surveys and wildlife habitat assessments were used to identify shallow marsh and meadow marsh communities that may support Terrestrial Crayfish within the Study Area.</p>	<p>ABSENT. Terrestrial crayfish burrows were not observed in the Study Area during field investigations</p>
Special Concern and Rare Wildlife Species	<p>All special concern and provincially rare (S1-S3, SH) plant and animal species (SOCC) within potential to occur in the Study Area.</p>	<p>ELC surveys were used to identify suitable habitat for each potential SOCC listed in Appendix C.2.</p>	<p>CANDIDATE: Candidate habitat for Monarch, Evening Grosbeak, and Eastern Wood-pewee was identified in the Study Area.</p> <p>See Appendix D.2 for the complete assessment and Section for a summary 4.4.3 of potential SOCC.</p>
Animal Movement Corridors			
Amphibian Movement Corridor	<p>Corridors may be found in all ecosites associated with water.</p> <p>Determined based on identifying significant amphibian breeding habitat (wetland).</p>	<p>Identified after Amphibian Breeding Habitat is confirmed.</p> <p>Movement corridors should be considered when amphibian breeding habitat is confirmed as SWH from Amphibian Breeding Habitat.</p>	<p>ABSENT. No candidate amphibian breeding habitat within the Study Areas.</p>
Deer movement corridors	<p>Associated with deer wintering habitat confirmed by MNR.</p>	<p>Identified after deer wintering habitat is confirmed by the MNR.</p>	<p>ABSENT. No deer wintering habitat was identified by the MNR; therefore, there is no candidate habitat for deer movement corridors in the Study Area.</p>



Appendix F Design Plan





Notes



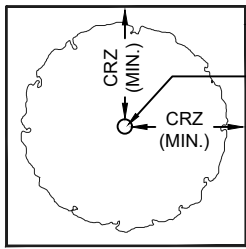
Client/Project
Chapel of Grace

Project No.
160401873

Title
912 Manchester Road
Preliminary Concept Plan

1	July 21, 2025
Revision	Date
Reference Sheet	Figure No.

Appendix G Tree Protection Specification



PLAN VIEW

TREE PROTECTION FENCING

TREE TRUNK

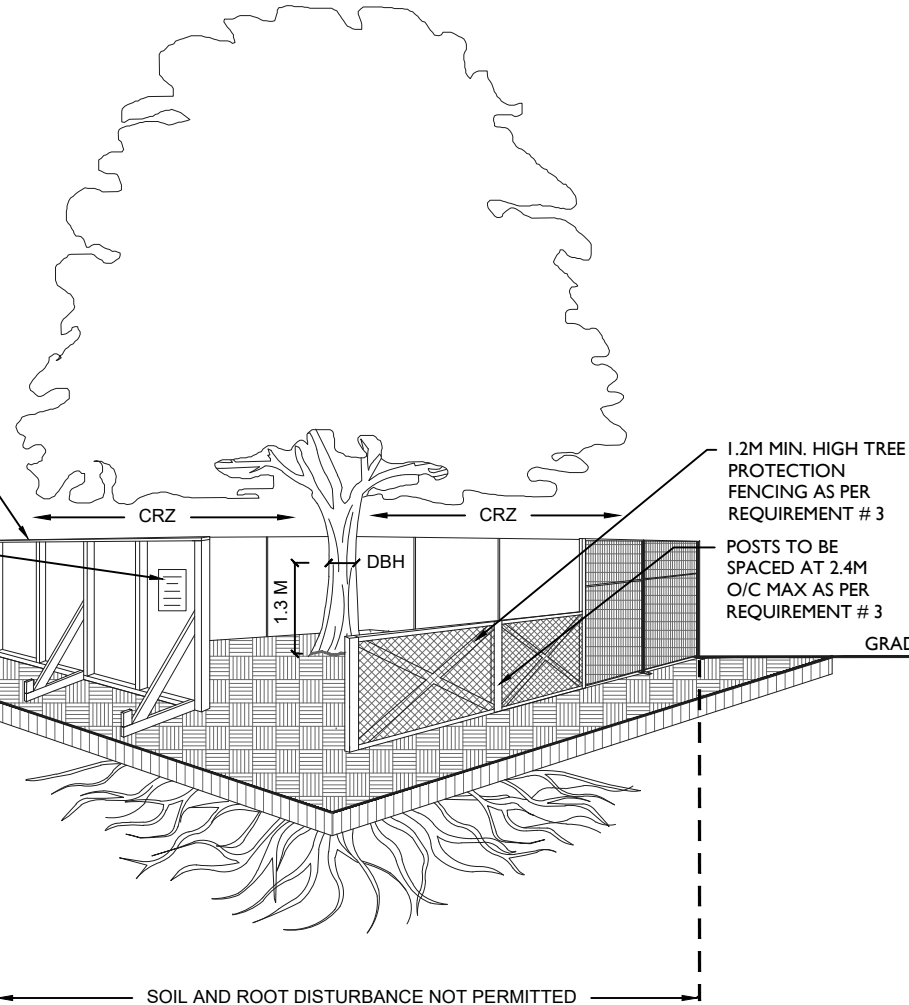
CRZ (MIN.)

CRZ (MIN.)

CRZ = DBH X 10CM.
CRZ IS TO BE MEASURED FROM THE OUTSIDE EDGE OF THE TREE BASE

TREE PROTECTION SIGNAGE AS PER CITY STANDARD

GRADE



1.2M MIN. HIGH TREE PROTECTION FENCING AS PER REQUIREMENT # 3

POSTS TO BE SPACED AT 2.4M O/C MAX AS PER REQUIREMENT # 3

SOIL AND ROOT DISTURBANCE NOT PERMITTED

ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST

TREE PROTECTION REQUIREMENTS:

1. PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
 - DO NOT PLACE ANY MATERIAL OR EQUIPMENT - INCLUDING OUTHOUSES;
 - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
 - DO NOT RAISE OR LOWER THE EXISTING GRADE;
 - TUNNEL OR BORE WHEN DIGGING;
 - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE;
 - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARD ANY TREE CANOPY.
 - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC - STEEL, PLYWOOD HOARDING, OR SNOW FENCE ON A 2"X4" WOOD FRAME) WITH POSTS 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE INFORMATION REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.

THE CITY'S TREE PROTECTION BY-LAW, 2020-340 PROTECTS BOTH CITY-OWNED TREES, CITY-WIDE, AND PRIVATELY-OWNED TREES WITHIN THE URBAN AREA. PLEASE REFER TO WWW.OTTAWA.CA/TREEBYLAW FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.



TREE PROTECTION SPECIFICATION

TO BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF WORK ACTIVITIES ON SITE.

SCALE: NTS

DATE: MARCH 2021

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