Environmental Impact Statement

126 Dundas Street East, Paris

Prepared for

L!V Communities

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1. Introduction

GeoProcess Research Associates Inc. (GeoProcess) has been retained by L!V Communities to complete an Environmental Impact Statement (EIS) for the lands located at 126 Dundas Street East, Paris, Ontario, and the adjacent included parcels between Dundas Street East and Paris Road. This is herein referred to as the "Subject Property" (**Map 1**). The "Study Area" is defined as the Subject Property plus an additional 120 meters (m) from the Property boundary. The Subject Property is the proposed site of a future residential development consisting of 312 townhouse units.

The Subject Property falls under the County of Brant Official Plan, which identified a wooded area within the Property as both a natural heritage system (NHS) and significant woodland. This EIS establishes the extent and function of the NHS within the Study Area based on field studies and policy conformity of the County of Brant, Grand River Conservation Authority (GRCA), and the Province of Ontario. This EIS has been prepared to assess potential negative impacts the proposed development may have on the NHS, recommend mitigation measures, and provide an analysis of the required buffers and developable limits of the Subject Property to protect existing natural heritage features and functions.

1.1. Site Description

The Subject Property is situated between Dundas Street East and Paris Road in the County of Brant. A railway line bounds the western border of the Property. Located within the Lower Grand River Subwatershed, the Property is roughly 550 m east of the Grand River. A tributary of the Grand River passes through the Study Area, running alongside the western side of the railway line until it meets the Grand River to the south. The Subject Property is approximately 7.5 hectares (ha), comprised predominantly of agricultural lands, containing a woodland approximately 1.5 ha in size along the western end of the Property.

2. Policy Context

Land use is regulated by various agencies with authority under acts, legislation, and regulations. These intergovernmental agencies establish and implement policy frameworks to govern their respective jurisdictions in relation to natural heritage, water, fisheries, urban/rural development, municipal infrastructure, and other environmental features. This section outlines the relevant statutes, regulations, policies, and plans that govern development within the Study Area to provide an understanding of regulated features, prohibited activities, and development opportunities.

2.1. Provincial Planning Statement (2024)

The Provincial Planning Statement (PPS), 2024, is administered under Section 3 of the *Planning Act*. It became effective October 20, 2024, and replaces the Provincial Policy Statement that came into effect May 1, 2020. The PPS applies to planning decisions made on or after that date. It provides policy direction for land use and development within the Province of Ontario and provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment. The policies of the PPS may be complemented by provincial and municipal plans and policies.

The PPS defines eight natural heritage features and provides planning policies for each, listed below. The function of Natural Heritage Features and Areas is further clarified by the definition of a Natural Heritage System, which is *"a system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems."*.

- Significant wetlands
- Coastal wetlands
- Fish habitat
- Significant woodlands
- Significant valleylands
- Habitat of endangered species and threatened species
- Significant Wildlife Habitat
- Significant Areas of Natural and Scientific Interest (ANSIs)

Sections 4.0 and 5.0 of the PPS deal with development and site alteration, and where these activities shall not be permitted. Section 4.0 policies surround the conservation of biodiversity, and protection of the health of the Great Lakes, natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental, and social benefits. Section 5.0 directs development away from areas of natural or human-made hazards to mitigate risks to public health or safety, and property damage from natural hazards, including the risks that may be associated with the impacts of a changing climate.

Policies in Section 4.1 are particularly relevant as they surround development and site alteration in and adjacent to natural heritage features. These policies and select others are outlined below, in Table 1.

Table 1. Applicable Policies of the Provincial Planning Statement

Policy Number	Policy
(4.1 - Natural Heritage) 4.1.2	The diversity and connectivity of natural features in an area and the long-term *ecological functi*on and biodiversity of *natural heritage systems* should be maintained, restored or where possible, improved, recognizing linkages between and among *natural heritage features and areas*, *surface water features* and *groundwater features*.
4.1.3	*Natural heritage systems* shall be identified in Ecoregions 6E & 7E, recognizing that *natural heritage systems* will vary in size and form in *settlement areas, rural areas*, and *prime agricultural areas*.
4.1.4	*Development* and site alteration shall not be permitted in: a) *significant wetlands* in Ecoregions 5E, 6E and 7E; and b) *significant coastal wetlands*.
4.1.5	Development and site alteration shall not be permitted in: a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E and 7E; b) *significant woodlan*ds in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); c) *significant valleylands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); d) *significant wildlife habitat*; e) *significant areas of natural and scientific interest*; and f) *coastal wetlands* in Ecoregions 5E, 6E and 7E that are not subject to policy 4.1.4(b) unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.
4.1.6	*Development* and *site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial and federal requirements*.

Policy Number	Policy
4.1.7	*Development and site alteration* shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*.
4.1.8	*Development* and *site alteration* shall not be permitted on *adjacent lands* to the *natural heritage features and areas* identified in policies 4.1.4, 4.1.5 and 4.1.6 unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated that there will be no *negative impacts* on the natural features or on their *ecological functions*.
(4.2 - Water) 4.2.2	*Development* and *site alteration* shall be restricted in or near *sensitive surface water features* and *sensitive ground water features* such that these features and their related *hydrologic functions* will be protected, improved or restored, which may require mitigative measures and/or alternative development approaches.
(5.2 - Natural Hazards) 5.2.1	Planning authorities shall, in collaboration with conservation authorities where they exist, identify *hazardous lands* and *hazardous sites* and manage development in these areas, in accordance with provincial guidance.
5.2.2	Development shall generally be directed to areas outside of: a) *hazardous lands* adjacent to the shorelines of the *Great Lakes - St. Lawrence River System* and *large inland lakes* which are impacted by *flooding hazards, erosion hazards* and/or *dynamic beach hazards*; b) *hazardous lands* adjacent to *river, stream* and *small inland lake systems* which are impacted by *flooding hazards* and/or *erosion hazards*; and c) *hazardous sites.*
5.2.4	Planning authorities shall prepare for the impacts of a changing climate that may increase the risk associated with natural hazards.

2.2. A Simply Grand Plan (2023)

A Simply Grand Plan, the County of Brant Official Plan (OP), was adopted by the County of Brant Council in May of 2023 and approved by the Ministry of Municipal Affairs and Housing on October 18, 2024. The OP contains policies about how land within the county may develop and be used in the future.

Part 5, Section 2.10 of the OP outlines the polices of the Natural Heritage System (NHS). The Plan recognizes that the natural heritage and water resource systems contribute to the quality of life in the community by providing environmental, social, cultural, and economic values. These features require identification, protection, and enhancement. This section of the OP outlines permitted uses as well as general policies regarding lands designated as part of the greater Natural Heritage System (NHS). Furthermore, the County values the knowledge of local Indigenous Communities in relation to the protection of air, land, water, and resources.

The Natural Heritage System for the Growth Plan is mapped in Schedule B, the NHS Designation is mapped on Schedule A, and the detailed mapping of the NHS components are mapped in the B-series Schedules (Policy 2.10.10 and 2.10.11). Other supporting features are illustrated in the annexes, including minimum protection zones, enhancement linkages, and adjacent lands (Policy 2.10.12).

Based on Schedule B-1 of the Official Plan, a significant woodland exists within the Subject Property limits at the southwest corner abutting the rail line. A Watercourse (linkage), Enhancement Woodland, Significant Woodland, unevaluated wetland, and Significant Wildlife Habitat are identified on the west side of the rail line, outside the Subject Property, but within 120 metres of the property considered adjacent lands.

Subsection 2.10.1 does not permit the placement, removal or re-grading of fill, wetlands interference, watercourse alteration, or the construction or alteration of any buildings or structures within areas regulated by a Conservation Authority (CA) without prior approval of the CA.

Policy 2.10.2 and 2.10.3 outline the provincial and federal statutes that must be complied with, including the Fisheries Act, Endangered Species Act, Species at Risk Act, and the Migratory Birds Convention Act (MBCA). According to the OP, 18 species are protected year-round under the MBCA for which the location of their nests are unknown and subject to change, but require buffers and setbacks.

Policy 2.10.16 (Part 5) of the 2023 OP identifies the following Natural Heritage, hydrologic, and supporting features as components of the Natural Heritage System:

- Habitat of endangered species and threatened species
- Migratory bird nests, protected under the Migratory Birds Convention Act
- Wetlands, seepage areas and springs
- Permanent streams and intermittent streams
- Inland lakes and their littoral zones
- Fish habitat and aquatic species at risk
- Areas of natural and scientific interest
- Significant valleylands and Significant woodlands
- Significant wildlife habitat, including habitat of special concern species
- Sand barrens, savannahs, tallgrass prairies, and alvars
- Enhancement woodlands determined to be a key natural heritage or key hydrologic feature
- Natural areas having any significant environmental, cultural, economic, or historical value to Indigenous communities
- Minimum vegetation protection zone and established vegetation protection zone
- Enhancement linkages
- Ponds within 30 metres of a key natural heritage or hydrologic feature that consist of ecological or hydrological features and functions
- Treed and naturally vegetated slopes and valleylands
- Lands that have been restored or have the potential to be restored to a natural state, working landscapes that enable ecological functions to continue
- Other natural heritage features and areas
- Areas that support hydrologic functions

In accordance with the OP, consultation with Indigenous Communities is required as part of development projects to determine if the lands proposed for development are of significant value, and where areas of significance are identified, collaboration with the County and Indigenous Communities is mandatory (Policy 2.10.18).

Pursuant to Policy 2.10.19, illegal unauthorized acts resulting in the reduction of area, form and/or function of the NHS features, including the injury or destruction of trees, will not be recognized as a legally existing use and the lands will not be removed from the Natural Heritage System. The policy requires the restoration of the NHS feature, prior to or as a condition of approval, if the unauthorized illegal act occurred before and/or in conjunction with the development application.

Policy 2.10.22 requires an environmental impact study (EIS) and/or environmental implementation plan (EIP) as a part of a development application where the area proposal is within adjacent lands to the Natural Heritage System. Where an EIS or an EIP is required, it must be prepared by qualified experts in accordance with the *County Environmental Impact Studies and Environmental Implementation Plans Terms of Reference Submission Guidelines,* following an approved Terms of Reference (Policy 2.10.25).

The following EIS requirements apply where development and/or site alteration is proposed within or on adjacent lands to the Natural Heritage System:

- Study is completed by qualified experts and in accordance with County EIS and EIP Terms of Reference Guidelines, and as per the final Terms of Reference approved by the County.
- Indigenous Communities have been consulted and collaborated with on the conservation of natural areas that have significant environmental, cultural, economic, or historical values to Indigenous Communities.
- Conformance with all applicable environmental policies in the OP, the PPS, Growth Plan, any agency having jurisdiction, and in accordance with provincial and federal requirements.
- Contributes to the provisions of the OP in relation to (sub)watershed planning and maintenance, restoration, and enhancement of the NHS and water resources system.
- Maintains, restores, or enhances the diversity and connectivity between features of the NHS within 240 m of each other and the long-term ecological function and biodiversity of the NHS. Recognizes linkages between NH, surface water, and groundwater features.
- EIS avoids the removal of non-key natural heritage or hydrologic feature where feasible and incorporates the features into the planning and design of the proposed development.
- EIS demonstrates that there will be no negative impacts on features of the NHS or their ecological and hydrological functions, and that a net gain will be achieved in the long-term.
- EIS complies with the Migratory Birds Convention Act and applicable guidelines where there is potential for disturbances to nests.

The OP requires the application of necessary restrictions and mitigation measures before, during, and after development and/or site alteration to protect and enhance the NHS and its associated hydrologic and ecological functions from negative impacts (Policy 2.10.33).

Development and site alteration shall maintain and improve the ecological and hydrological connectivity at the site-level, County level, subwatershed, and watershed scale to enhance linkages and Corridors (2.10.35). The width of the linkage is the greater of 50 metres or as recommended by an EIS (2.10.35).

Policy 2.10.38 to 2.10.43 of part 5 cover enhancement woodlands, which are treed areas that either do not meet the criteria for significant woodland or have not been evaluated for significance. Policy 2.10.38 requires that an EIS evaluate adjacent enhancement woodlands prior to any development or site alteration to determine the presence of key NH and/or hydrologic features which are to be considered a constraint to development. Where such enhancement woodlands are determined not to be key features, they should be

maintained, enhanced, and, where feasible, incorporated into the development design (2.10.39). Where replacement trees and vegetation are required, the OP requires the submission of a proposal for tree and vegetation replacement to be planted on: lands subject to the removal, alternate lands approved by the County, or as Cash-in-lieu based on the value determined by the County (2.10.41).

Subsections 2.10.46 to 2.10.53 outline the policies for adjacent lands and vegetation protection zones (VPZs). Development and site alteration are not permitted on adjacent lands to features in the NHS unless demonstrated through an EIS or similar study that there will be no negative impacts on the NHS and there will be a net gain in ecological and hydrologic functions (2.10.46). Minimum VPZs are mapped in the OP Annexes, but the final VPZs shall be determined by an EIS, which identifies a VPZ that is of sufficient width to protect Key Features and their functions from negative impacts (2.10.47; 2.10.48). Development and site alteration are prohibited within the minimum VPZ unless permitted by the OP (2.10.50).

The minimum VPZs and final VPZs are determined as follows:

Feature	Minimum VPZ	Final VPZ
Habitat of endangered species and threatened species	Provincial/Federal requirements and EIS	Provincial/Federal requirements and EIS
Significant woodlands	10 m from Dripline	EIS
Enhancement woodlands	EIS	EIS
Significant wildlife habitat	EIS	EIS
Migratory Bird Nests	Migratory Birds Convention Act and guidelines	Migratory Birds Convention Act and guidelines
Enhancement linkages	The greater of 50 m or as established by an EIS	
Surface water features	The greater of the following: a) Development limits of hazardous lands or hazardous sites as established by the Conservation Authority b) Development limits as established by an EIS or EIP c) Development limits in accordance with provincial and federal requirements d) 30 m from the boundary of the high water mark of fish habitat, wetlands, seepage areas and springs, permanent streams, and intermittent streams e) A 6 m emergency access allowance setback from the stable top of slope	EIS

Indigenous Engagement and Reconciliation

The land on which the County of Brant lies on the traditional territory of the Anishinabewaki, Attiwonderonk (Neutral), Haudenosaunee, and Mississauga Peoples. It is the County's aim to implement the policies of Official Plan through engagement with Indigenous communities. It is the policy of the County to acknowledge Indigenous treaty rights, including the ongoing stewardship of the lands, waters, and resources, and title to the waters, beds of water, and flood plains throughout lands known as the County of Brant (1.1.2).

It is the policy of the County to integrate and honour indigenous values and knowledge, including representation in planning, placemaking, and environmental stewardship, to recognize traditional knowledge and the significant role of land resources (1.1.4). The County of Brant, in partnership with Indigenous Communities and the Grand River Conservation authority work to conserve and protect the environmental aspects of the Grand River by implementing a robust Natural Heritage System that requires the permanent protection of forests, wetlands, watercourses, and wildlife and which are to be enhanced and protected with minimum vegetation protection zones.

2.3. Good Forestry Practices By-Law 70-21

The Good Forestry Practices By-Law is a by-law to prohibit or regulate the destruction or injuring of trees within and adjacent to natural heritage features and areas in the County of Brant. Under the by-law, *no person shall cause or permit the injuring or destruction of a tree in contravention of the Endangered Species Act, Species at Risk Act, Fisheries Act, Migratory Birds Convention Act and/or any other applicable provincial or federal legislation*. According to the by-law, *no person through their own actions or through the actions of others under the care and control of that person, shall injure, destroy, cause, or permit to be injured or destroyed, any tree located in natural heritage features and areas, unless*:

- The tree may be injured or destroyed under Highways By-Law 275-99 or Property Standards By-Law 205-02
- Exempted under the provisions of the By-Law
- In possession of a valid permit

Woodland: forested or treed areas and plantations of at least 1.0 hectares or more with at least:

a) 1,000 trees of any size per hectare
b) 750 trees, measuring over 5 cm at dbh, per hectare
c) 500 trees, measuring over 12 cm at dbh, per hectare
d) 250 trees, measuring over 20 cm at dbh, per hectare

A hedgerow or windbreak that meets the size and density criteria is considered a woodland.

Woodlot: forested or treed areas and plantations at least 0.2 hectares and less than 1.0 hectares in area, with at least:

a) 988 trees of any size per hectare
b) 741 trees, measuring over 5 cm at dbh, per hectare
c) 494 trees, measuring over 12.7 cm at dbh, per hectare
d) 247 trees, measuring over 20.3 cm at dbh, per hectare

A hedgerow or windbreak that meets the size and density criteria is considered a woodlot.

2.4. Endangered Species Act (2007)

The Endangered Species Act (ESA) (2007) was amended on June 5, 2025, through the passing of Bill 5 and is to be replaced with the Species Conservation Act, 2025, at a later date. The purpose of the ESA (2007) is to provide protection and conservation to species at risk while considering social and economic factors for

sustainable economic growth in Ontario. The protected species and their habitat are designated by the Committee on the Status of Species at Risk in Ontario (COSSARO) as endangered, threatened, extirpated, or of special concern, and the Government of Ontario adds species to the protection list based on COSSARO recommendations. These designations are defined as:

> **Endangered**: A species shall be classified as an endangered species if it lives in the wild in Ontario but is facing imminent extinction or extirpation.
>
> **Threatened**: A species shall be classified as a threatened species if it lives in the wild in Ontario, is not endangered, but is likely to become endangered if steps are not taken to address factors threatening to lead to its extinction or extirpation.
>
> **Extirpated**: A species shall be classified as an extirpated species if it lives somewhere in the world, lived at one time in the wild in Ontario, but no longer lives in the wild in Ontario.

Under the amended ESA, for the purposes of protection under the Act, habitat does not include places where the species formerly occurred or has the potential to be reintroduced unless existing members of the species depend on that area. The ESA defines habitat as the following:

> **For animal species:** habitat is a dwelling place that is occupied or habitually occupied for breeding, rearing, staging, wintering or hibernating, and the area immediately around a dwelling place.
>
> **For vascular plant species:** habitat is the surrounding critical root zone.
>
> **For all other species:** habitat is an area on which any member of a species directly depends in order to carry on its life processes.

The ESA (Subsection 9(1)) outlines the prohibitions regarding harm to species and states that:

"No person shall,

> *(a) kill, harm, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;*
>
> *(b) possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade,*
>
> > *(i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species,*
> >
> > *(ii) any part of a living or dead member of a species referred to in subclause (i),*
> >
> > *(iii) anything derived from a living or dead member of a species referred to in subclause (i); or*
>
> *(c) sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii)."*

Clause 10 (1)(a) of the ESA also states that:

"No person shall damage or destroy the habitat of

- a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species.
- a species that is listed on the Species at Risk in Ontario List as an extirpated species, if the species is prescribed by the regulations for the purpose of this clause. 2007, c. 6, s. 10 (1)."

There are three applicable regulations under the ESA, 2007; O. Reg. 230/08 - the Species at Risk in Ontario (SARO) List, O. Reg. 242/08 (General), and O. Reg 830/21 (Exemptions – Barn Swallow, Bobolink, Eastern Meadowlark and Butternut). These regulations identify which species and habitats receive protection and provide direction on their current implementation under the ESA.

Prior authorization or issuance of permit from the MECP and/or the Ministry of Natural Resources (MNR) is required to carry out activities that would otherwise be prohibited or regulated under the ESA unless exempt under Ontario Regulation 242/08.

2.5. Ontario Regulation 41/24: Prohibited Activities, Exemptions, and Permits

Under *Ontario Regulation 41/24*, Grand River Conservation Authority (GRCA) regulates the following areas and development activities/site alteration within and adjacent to these lands:

- Hazardous lands,
- Wetlands,
- River or stream valleys,
- Areas 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, and
- Other areas, including areas within 30 metres of a wetland.

Development activities within or adjacent to any of the CA regulated features within the Study Area are subject to the relevant regulations under the CA Act.

2.5.1. Grand River Conservation Authority Policies for the Administration of O. Reg. 41/24 (2024)

The Grand River Conservation Authority (GRCA) *Policies for the Administration of the Prohibited Activities, Exemptions and Permits Regulation* (2024) document outlines the policies governing GRCA-regulated areas. The Subject Property does not contain any features regulated by the Grand River Conservation Authority, but the development proposes a stormwater outlet into a GRCA-regulated watercourse outside the property limits within adjacent lands.

The CA Act and regulation give GRCA the mandate to prohibit or regulate development activities within regulated areas as defined by the Act. The Regulation also gives GRCA the authority to prohibit or regulate alterations that would result in the straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, watercourse or changing or interfering in any way with a wetland (Policy 5.0). GRCA policies interpret development activity to include works that, by their scale or scope, could have measurable impacts on flooding, erosion, dynamic beaches, or that could increase risks to public health and safety or result in the damage or destruction of property (Policy 5.0). It is the objective of GRCA's policies to prohibit development activity which, singularly or cumulatively, may restrict riverine channel capacities to

pass flood flows, reduce storage capacity in floodplains and wetlands, resulting in increased flood levels, and create potential danger to upstream and downstream landowners (Policy 2.0). It is the policy of the GRCA to prohibit alterations, including straightening, changing, diverting or interfering with an existing river, creek, stream or watercourse channel except as specified in Sections 8.9.2-8.9.17 (Policy 8.9.1).

The development does not propose any development activities or alterations within GRCA regulated areas associated with the receiving watercourse southwest of the Subject Property across the CN Rail. Pursuant to GRCA *Policies for the Administration of the Prohibited Activities, Exemptions and Permits Regulation* (2024), the activities proposed to facilitate the proposed development are not regulated by the GRCA and will not require a Conservation Authority permit.

2.6. Fisheries Act (1985)

The *Fisheries Act* is a federal legislation which aims to manage and protect Canada's aquatic ecosystem, including fish and fish habitat. The federal Department of Fisheries and Oceans Canada (DFO) is the enforcing agency regulating land use and related activities under the Fisheries Act (1985). Where aquatic species may be present, especially species of special concern, activities near or in water must be permitted by the DFO. The *Act* protects fish and fish habitat such that:

> "*No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat*" *(Section 35 (1))*.
>
> *Fish habitat is defined by the Act as "water frequented by fish and any other areas on which fish depend directly or indirectly to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas*".

The *Fisheries Act* requires that all development and related activities avoid Harmful Alteration, Disruption, or Destruction of fish habitat (HADD) unless authorized by Fisheries and Oceans Canada (DFO). If mitigation measures cannot be applied, and residual effects will cause a HADD, then provisions under the Act may apply (i.e., approval(s) may need to be secured through DFO, which can take up to a year or exceed one year if the initial submission is refused). Any waterbody or watercourse that contains fish or any other area on which fish depend directly or indirectly to carry out their life processes, as described in the *Fisheries Act*, is provided protection under the *Act*.

Per the DFO's Projects Near Water process to determine if a project requires a Request for Review (RFR), it is required to ensure that a project follows the measures to protect fish and fish habitat. These measures specify that placing fill or other temporary or permanent structures below the high-water mark is a non-compliant activity. Should this work be required, a DFO Request for Review should be prepared and submitted.

In addition, the DFO Standard and Codes of Practice are guidance documents that outline the best practices for avoiding harmful impacts on fish and their habitat. If the project is taking place in or near water, the proponent is responsible for:

- Understanding the impacts the project will likely have on fish and fish habitats.
- Taking measures to avoid and mitigate impacts on fish and fish habitats.

- Requesting authorization from the Minister and abiding by the conditions of the authorization when it is not possible to avoid and mitigate project impacts on fish and fish habitat.

2.7. Species At Risk Act (2002)

The Species at Risk Act (2002) is a federal statute passed to prevent the disappearance of wildlife species in Canada through the recovery of wildlife species that are extirpated, endangered, or threatened due to anthropogenic activity and to manage species of special concern to prevent them from becoming endangered or threatened. Activities in proximity to species protected under the Species at Risk Act (SARA) are subject to regulatory approval from the appropriate enforcing authority. SARA is administered by Environment and Climate Change Canada (ECCC).

More specifically, the Act will:

- Establish the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as an independent body of experts responsible for assessing and identifying species at risk
- Require that the best available knowledge be used to define long and short-term objectives in a recovery strategy and action plan
- Create prohibitions to protect listed threatened and endangered species and their critical habitat
- Recognize that compensation may be needed to ensure fairness following the imposition of the critical habitat prohibitions
- Create a public registry to assist in making documents under the Act more accessible to the public
- Be consistent with Aboriginal and treaty rights and respect the authority of other federal ministers and provincial governments

ECCC's approval is required under SARA if an activity affects a federally protected terrestrial species at risk. Although Environment Canada has the lead responsibility for protecting species at risk, aquatic species fall under the jurisdiction of Fisheries and Oceans Canada (DFO). DFO's approval under the Species at Risk Act is required if an activity affects an aquatic species at risk, any part of its critical habitat, or the residences of its individuals.

2.8. Migratory Bird Convention Act (1994)

The Migratory Birds Convention Act (1994) serves to protect and conserve migratory birds, their nests and eggs in Canada. It is prohibited under the MBCA to damage, destroy, disturb or remove the nest of a migratory bird that contains a live bird or viable egg. However, a permit may be issued under the MBCA for various activities with conditions for the husbandry, release, scaring, capture, killing or disposal of migratory birds.

The removal of existing trees on the Property will be subject to regulations under the Migratory Birds Convention Act (MBCA). This EIS will be completed in accordance with the MBCA and associated regulations in consultation with Environment and Climate Change Canada as required.

2.8.1. Migratory Bird Regulations (2022)

The Migratory Birds Regulations (2022) protects migratory birds, their eggs, and nests by prohibiting activities that cause them harm. Migratory birds, their nests or eggs can be harmed as a result of many activities, including those that do not primarily target a bird but may cause harm, such as:

- Clearing trees or other vegetation
- Draining or flooding land
- Using fish gear

Unless authorized under the regulation (MBR 2022), the following activities are prohibited:

- Capture, kill, take, injure, or harass a migratory bird or attempt to do so
- Destroy, take or disturb an egg
- Damage, destroy, remove or disturb a nest shelter, eider duck shelter or duck box unless the following exceptions apply
    1. Nest does not contain a live migratory bird or viable egg
    2. Nest was not built by a species that is listed under Schedule 1 of the regulation

Table 2: Schedule 1 Species and designated waiting period before nests can be disturbed, damaged, removed or destroyed.

Migratory Bird Species	Waiting Period (Months)
Pigeon Guillemot	12
Rhinoceros Auklet	12
Atlantic Puffin	12
Tufted Puffin	12
Horned Puffin	12
Manx Shearwater	12
Northern Gannet	12
Fork-tailed Storm Petrel	12
Leach's Storm Petrel	12
Cassin's Auklet	12
Ancient Murrelet	12
Great Egret	24
Great Blue Heron	24
Cattle Egret	24
Green Heron	24
Snowy Egret	24
Black-crowned Night Heron	24
Pileated Woodpecker	36

The following measures can be undertaken to prevent harming migratory birds, nests, and eggs:

- Understand how migratory birds and their nests are legally protected
- Consult the nesting calendar to plan potentially harmful activities outside of breeding season and migration periods
- Plan activities and determine what measures can be taken to avoid causing harm
- Develop and implement preventative and mitigation measures

3. Methodology

3.1. Background Studies

Literature and data pertaining to the Subject Property were reviewed and evaluated to obtain natural heritage data and background planning policy information. A list of documents and information sources consulted for the purpose of this study is provided below:

- County of Brant Official Plan (2024)
- Grand River Conservation Authority Regulation Mapping
- *Endangered Species Act (2007)* and Species at Risk in Ontario List (O. Reg. 230/08)
- Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits (April 2024)
- Natural Heritage Information Centre (NHIC) database information, 1 km x 1 km squares: 17PJ0052, 17PJ0152, 17PJ0153, 17PJ0053
- Ontario Breeding Bird Atlas (OBBA) and eBird
- Ontario Reptile and Amphibian Atlas
- Ontario Butterfly and Moth Atlases
- iNaturalist- NHIC Rare Species of Ontario
- Fisheries and Oceans Canada (DFO) Aquatic Species at Risk Map

3.2. Field Work

GeoProcess conducted field studies to characterize and inventory the natural heritage features and wildlife activity of the Subject Property and surrounding landscape. A summary of the field work details is provided below in Table 3.

Table 3. Completed Field Work

Activity	Timing	Date	Staff
Ecological Land Classification (ELC) and Vegetation Surveys	Summer	August 7, 2025	E. Veres
	Fall	October 9, 2025	
Breeding Bird Surveys	Round 1	June 13, 2025	L. Barnett
	Round 2	July 10, 2025	
Incidental Wildlife	All Visits	-	All staff

3.2.1. Floristic Studies

A two-season inventory of all floristic species was completed on August 7, 2025, and October 9, 2025. Species nomenclature and ranking were determined provincially by the Ministry of Natural Resources Natural Heritage Information Database (SRanks).

Vegetation communities were mapped and described according to the Ecological Land Classification (ELC) system for Southern Ontario (Lee et al., 2008). Vegetation community boundaries were determined using desktop analysis and further refined in the field. The results of this assessment are found in Section 4.4, Table 3, Appendix A, and Map 3.

3.2.2. Breeding Bird Surveys

Breeding bird surveys were undertaken on June 13, 2025, and July 10, 2025, by a breeding bird expert under appropriate weather conditions. Point count methodology was based on protocols set by the Ontario Breeding Bird Atlas (OBBA, 2001). Bird species were observed for 5 minutes at each breeding bird plot after a 5-minute period of silence upon arriving at the plot. Breeding bird plots were based on broad habitat characteristics, Subject Property size and a 100 m radius from plot centre. Only species observed within a 100 m radius were recorded; flyovers did not count towards the total but were noted. Additional incidental observations were also noted. The level of breeding evidence (using *Ontario Breeding Bird Atlas* [OBBA] protocols) was determined after both surveys. The results are found in Section 4.5 and Table 5.

3.2.3. Incidental Wildlife Surveys

Formal surveys for mammals, reptiles, and insects were not completed, but incidental observations were recorded during field surveys. The results are found in Section 4.6 and Table 8.

3.2.4. Species at Risk Screening and Assessment

An assessment and screening of potential Species at Risk was conducted for the Property based on Federal and Provincial status. Following the MECP (2019) Client's Guide to Preliminary SAR Screening, this screening was based on a review of the Natural Heritage Information Centre, the regional species list, atlases (breeding bird, butterfly and moth), citizen science databases (i.e. iNaturalist), and any additional lists provided by the MECP. The preliminary screening was submitted as a memo to sar@ontario.ca for assignment to a management biologist for review. The Species at Risk desktop screening and assessment results are found in Section 5.

3.2.5. Significant Wildlife Habitat Screening and Assessment

A screening for Significant Wildlife Habitat following the Ministry of Natural Resources and Forestry Significant Wildlife Habitat Technical Guide (2000) and Significant Wildlife Habitat Criteria Schedule for Ecoregion 7E (January 2015) was conducted for the Subject Property. Potential SWH identified was assessed during the complementary field studies. The results of this assessment are found in Section 6 and Appendix B.

4. Existing Conditions

4.1. General Landscape Position

The Subject Property is bound by Dundas Street East to the north and Paris Road to the east. A railway line borders the west boundary of the Property, while the southeastern boundary is bordered by neighbouring cropland and residential land. The Property is approximately 550 meters east of the Grand River. An unevaluated wetland mapped by the Ontario Natural Heritage Information Center sits approximately 100 meters south of the Property boundary. The Study Area is within the Grand River Watershed, the largest watershed in Southern Ontario, which falls under the jurisdiction of the Grand River Conservation Authority. Surrounding land use is largely agricultural, with denser urban land use west of the Grand River.

4.2. Physiography and Geology

The Study Area is within the Horseshoe Moraines physiographic region of Southern Ontario (Chapman and Putman, 1984). This region is characterized by its numerous horseshoe-shaped moraines, which are landforms composed of glacial till. Soils in the region are primarily sandy and gravelly, with moraines consisting of a mix of glacial deposits including sand, gravel, silt, and clay. Bedrock geology within the region consists of limestone, dolostone, shale, sandstone, gypsum, and salt dating back to the Paleozoic era.

4.3. Natural Heritage Systems

4.3.1. Significant Woodland

Under Schedule B-1, the County of Brant Official Plan, the Subject Property contains a significant woodland, part of the County of Brant Natural Heritage System. The woodland was removed from the property by the former landowner, which the County of Brant is aware of. On June 13, 2025, a GeoProcess staff member visited the site and confirmed that the woodland was no longer present on the site. Based on the OP Schedule, this woodland was situated in the southwestern edge of the property, adjacent to the railway line, and was approximately 1.0 ha in size. A portion of the OP Significant Woodland that remains along the rail line, while the portion interior to the property is now a cultural meadow.

4.4. Vegetation Communities

Two Ecological Land Classification (ELC) communities and one hedgerow were identified on and immediately adjacent to the site. The remaining portions of the property are agricultural farmland. Table 4 provides a description of the two ELC communities. The locations of these communities are shown on Map 3.

Table 4. Ecological land classification communities

ELC Code and Classification	Vegetation		Comments
CUM1-1a: Old Field Cultural Meadow	Understory	*White Ash (Fraxinus americana), Staghorn Sumac (Rhus typhina)*	Former location of woodland as shown on Schedule B-1. Now, a pioneer cultural meadow ecosite remains.
	Ground	Eastern Black Nightshade (*Solanum emulans*), Tall Goldenrod (*Solidago altissima*), Horseweed (*Erigeron canadensis*), Smooth Witchgrass (*Panicum dichotomiflorum*)	Soils with an effective texture of loam. Mottles and gley absent, indicating fresh soil moisture.
CUM1-1b: Old Field Cultural Meadow	Canopy	Manitoba Maple (*Acer negundo*), Norway Maple (*Acer platanoides*)	Pioneer cultural meadow community. Soil core attempts were impeded due to rocky fill material in the soil.
	Sub-canopy	Siberian Elm (*Ulmus pumila*), Manitoba Maple (*Acer negundo*), Black Locust (*Robinia pseudoacacia*)	
	Understory	Siberian Elm (*Ulmus pumila*), Manitoba Maple (*Acer negundo*)	
	Ground	Kentucky Bluegrass (*Poa pratensis*), Queen Anne's Lace (*Daucus carota*), Tall Goldenrod (*Solidago altissima*)	

Hedgerow 1

Hedgerow 1 spans the entire southeastern property boundary on a slope adjacent to the railroad tracks. The community is included in the Brant OP Natural Heritage System mapping on Schedule B-1 as a Significant Woodland. The trees in Hedgerow 1 are described as mid-age, with the canopy being predominantly Manitoba Maple (*Acer Negundo*), with Eastern Cottonwood (*Populus deltoides*) and Sugar Maple (*Acer saccharinum*) present in smaller quantities. A small pocket of Eastern Cottonwood taller than the rest of the canopy exists in the western corner of the Subject Property. The subcanopy was dominated by Manitoba Maple and had several White Ash (*Fraxinus americana*) snags in the eastern extent of the feature. The understory contained Manitoba Maple saplings, European Buckthorn (*Rhamnus catharticus*) in small quantities in highly disturbed areas, Virginia Creeper (*Parthenocissus quinquefolia*), and Riverbank Grape (*Vitis riparia*). The ground layer contained a high concentration of Manitoba Maple and White Ash seedlings as well as American Pokeweed (*Phytolacca decandra*), Velvetleaf (*Abutilon theophrasti*), Aster Species (*Symphyotrichum sp.*), Lesser Burdock (*Arctium minus*), Tall Goldenrod (*Solidago altissima*) and the seedlings of Poplar Species (*Populus sp.*) along its edges.

An estimated canopy count based on aerial imagery from Google Earth (2024) indicates that approximately 110 trees are present in the hedgerow. The Good Forestry Practices By-Law of the Brant OP states that a hedgerow that meets the size and density criteria can be considered a woodlot. A variety of trunk measurements between 5 cm and >25 cm DBH were observed within Hedgerow 1, but the size of the hedgerow (0.5 ha) and the total number of trees (~110 of any size) do not meet the minimum size and density requirements outlined in Section 2.3. A total of 494 trees would have been required for the feature to be identified as a woodlot, and 500 to be a woodland. Due to the previous tree removals, the hedgerow no longer meets the criteria to be classified as a Significant Woodland.

4.5. Breeding Bird Surveys

Breeding bird surveys were conducted on two separate dates within the Study Area under suitable conditions between 5 am and 10 am as per OBBA protocols (Table 5). Three breeding bird transects were established for the Study Area to cover all habitats present; refer to Map 3 for the locations. No species at risk were found within the Study Area.

Table 5. BBS Survey Conditions

Visit Date	Visit Time	Wind Speed [Beaufort scale]	Rain	Noise Code (1-5)
June 13, 2025	07:51-09:12	0-1	0-0	2-3
July 10, 2025	08:03-08:56	1-1	0-0	2-3

Species heard and or observed within the search area were recorded, and the highest level of breeding evidence (using Ontario Breeding Bird Atlas [OBBA] protocols) was determined after completion of both surveys (Table 6). Species at Risk in Ontario (SARO) and Committee on the Status of Endangered Wildlife in Canada (COSEWIC) rankings were attributed to each species.

Table 6. Breeding Bird Survey Results

Common Name	*Scientific Name*	T1		T4		T5		SRank*	SARO	COSEWIC
		Q	BE	Q	BE	Q	BE			
American Crow	*Corvus brachyrhynchos*	3	S			4	CF	S5		
American Goldfinch	*Spinus tristis*	15	A	10	CF	15	A	S5		
American Redstart	*Setophaga ruticilla*					1	S	S5B		
American Robin	*Turdus migratorius*	9	CF	3	S	3	S	S5		
Black-capped Chickadee	*Poecile atricapillus*	2	P					S5		
Blue Jay	*Cyanocitta cristata*	2	S	1	CF	2	S	S5		
Brown-headed Cowbird	*Molothrus ater*	2	S	1	S	2	S	S5		
Cedar Waxwing	*Bombycilla cedrorum*	3	T	6	T	5	A	S5		
Chipping Sparrow	*Spizella passerina*	10	N	2	S	2	S	S5B, S3N		
Common Grackle	*Quiscalus quiscula*					2	P	S5		
Downy woodpecker	*Dryobates pubescens*	1	S	1	S			S5		
European starling	*Sturnus vulgaris*	8	S	15	FY			SNA		
Gray Catbird	*Dumetella carolinensis*	3	A			3	T	S5B, S3N		
House Wren	*Troglodytes aedon*	7	T	1	S	1	S	S5B		
Indigo Bunting	*Passerina cyanea*	4	T			3	S	S5B		
Killdeer	*Charadrius vociferus*	3	DD	5	T	3	S	S4B		

Common Name	*Scientific Name*	T1		T4		T5		SRank*	SARO	COSEWIC
		Q	BE	Q	BE	Q	BE			
Mourning Dove	*Zenaida macroura*	1	H					S5		
Northern Cardinal	*Cardinalis cardinalis*	3	T			6	T	SNA		
Northern Flicker	*Colaptes auratus*	2	S					S5		
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*			10	DD			S4B		
Red-bellied Woodpecker	*Melanerpes carolinus*			1	S			S5		
Red-eyed Vireo	*Vireo olivaceus*	1	S	1	S	2	S	S5B		
Red-winged Blackbird	*Agelaius phoeniceus*					1	S	S5		
Ring-billed Gull	*Larus delawarensis*	2	F					S5		
Song Sparrow	*Melospiza melodia*	10	P	3	S	10	S	S5		
Tree Swallow	*Tachycineta bicolor*	3	S	3	A			S4S5B		
Turkey Vulture	*Cathartes aura*	1	H	1	H			S5B, S3N		
Yellow warbler	*Setphaga petechia*	3	S			1	S	S5B		

In the species columns, Breeding Evidence (BE) was identified for each species based on the highest level of BE observed. The number recorded represents the highest one-day total for that species with the associated breeding code.

**The S-rank is a subnational conservation status rank for species in Ontario. The S-rank system is used to describe how rare a species is in the province, with S1 species being extremely rare and S5 species being demonstrably secure.*

Table 7. Species Ranking System

Rank System	Code	Meaning
OBBA Breeding Level		
Possible	**H**	Species observed in breeding season in suitable nesting habitat
	S	Singing male present or breeding calls heard in breeding season in suitable habitat
Probable	**P**	Pair observed in their breeding season in suitable habitat
	T	Permanent territory presumed through registration of territorial song or presence of adult bird in breeding habitat on at least 2 days, one week or more apart at the same place
	D	Courtship or display between a male and female, or two males including courtship feeding and copulation
	V	Visiting probable nest site
	A	Agitated behaviour or anxiety calls of adults
	B	Brood patch on adult female or cloacal protuberance on adult male
	N	Nest building or excavation of nest hole
Confirmed	**DD**	Distraction display or injury feigning
	NU	Used nest or eggshell found (occupied/laid during atlas period)
	FY	Recently fledged young or downy young
	AE	Adults leaving or entering nest site in circumstances indicating occupied nest

Rank System	Code	Meaning
	FS	Adult carrying faecal sac
	CF	Adult carrying food for young
	NE	Nest containing eggs
	NY	Nest with young seen or heard
NHIC S-Rank		
SH		Possibly Extirpated (Historical); species occurred historically, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years.
S1		Critically Imperiled. Extremely rare in Ontario; usually 5 or fewer occurrences in the province.
S2		Imperiled. Very rare in Ontario; usually between 6 and 20 occurrences in the province.
S3		Vulnerable. Rare to uncommon in Ontario; usually between 21 and 60 occurrences in the province; may have fewer occurrences, but with some extensive examples remaining.
S4		Apparently secure. Considered to be common in Ontario. It denotes a species that is apparently secure, with over 80 occurrences in the province.
S5		Secure. Indicates that a species is widespread in Ontario. It is demonstrably secure in the province.
?		Indicates some uncertainty with the classification due to insufficient information.
SNR		Not Ranked.
SNA		Not Applicable, a conservation status rank is not applicable because the species is not a suitable target for conservation activities.
COSEWIC/ESA & SARA Rankings		
SC		Special Concern.
END		Endangered.
THR		Threatened.
EX		Extirpated.

Species status was evaluated using the following sources:

- The COSEWIC list for national status designations (current list at the time of report preparation)
- The Species At Risk Act (SARA) for federally listed species (current at the time of report preparation)
- The COSSARO list for provincial status designations (current list at the time of report preparation)
- The NHIC/Biodiversity Explorer website for provincial rarity ranks (e.g. S-Ranks)

Descriptions of OBBA breeding evidence codes, NHIC S-Ranks, COSEWIC, and COSSARO rankings can be found in Appendix C.

During the field surveys, 28 summer resident bird species were observed, 27 with some breeding evidence. No Species of conservation concern were observed. Species of conservation concern include those that are designated by COSEWIC and/or listed under SARA, species designated by COSSARO, including Endangered, Threatened, and Special Concern species listed and regulated under Ontario's ESA, and provincially rare species (NHIC S-Rank of S1 to S3). One non-native species, the European Starling (*Sturnus vulgaris*), was detected. Ring-billed Gulls and Turkey Vultures were observed flying over the study site.

The highest level of breeding evidence observed during surveys was the "confirmed" breeding of seven species, based on the observations of adults carrying food for young (CF), distraction displays (DD), and fledged young (FY). Ten species were observed exhibiting "probable" breeding behaviour as pairs observed in their breeding season in suitable habitat (P), on territory (T), doing a display (D), nest building or excavation

(N), and exhibiting agitated behaviour or anxiety calls (A). Ten residents were observed in suitable habitat (H) during the breeding season, or a singing male was present in the breeding season in suitable habitat (S), indicating "possible" breeding evidence (OBBA, 2001). One species was observed as a flyover (F).

Based on the breeding bird surveys, no suitable habitat for species of conservation concern is present on the Subject Property. Two Turkey Vultures were observed soaring above the Subject Property during both rounds of surveying and are listed as "vulnerable" (S3N). The hedgerow adjacent to the railroad could provide perching habitat for this species, but nesting habitat is not present. Otherwise, the Study Area provides habitat for species that are generally considered "apparently secure" (S4) and "secure" (S5). Rankings are provided by the Natural Heritage Information Centre (NHIC, 2019).

4.6. Incidental Wildlife

Incidental wildlife is recorded during each field visit and represents species observed outside specific wildlife surveys. Incidental wildlife observations can provide a broader context for how wildlife use a given area.

Table 8. Incidental Wildlife Summary

Common Name	Scientific Name	Date
Red Squirrel	*Tamiasciurus hudsonicus*	June 13, 2025
Eastern Gray Squirrel	*Sciurus carolinensis*	June 13, 2025
Rodent species	*Rodentia sp.*	June 13, 2025
Northern Raccoon	*Procyon lotor*	June 13, 2025
Coyote	*Canis latrans*	June 13, 2025
Eastern Cottontail	*Sylvilagus floridanus*	June 13, 2025
White-tailed Deer	*Odocoileus virginianus*	July 10, 2025
Eastern Gray Squirrel	*Sciurus carolinensis*	July 10, 2025
Eastern Chipmunk	*Tamias striatus*	July 10, 2025
Cabbage White	*Pieris rapae*	July 10, 2025
White-tailed Deer	*Odocoileus virginianus*	July 10, 2025
White-tailed Deer	*Odocoileus virginianus*	July 10, 2025
Northern Raccoon	*Procyon lotor*	July 10, 2025
Coyote	*Canis latrans*	July 10, 2025
Black-capped Chickadee	*Poecile atricapillus*	August 7, 2025
Song Sparrow	*Melospiza melodia*	August 7, 2025
Blue Jay	*Cyanocitta cristata*	August 7, 2025
Yellow Warbler	*Setophaga petechia*	August 7, 2025
Northern Cardinal	*Cardinalis cardinalis*	August 7, 2025
Chipping Sparrow	*Spizella passerina*	August 7, 2025
American Goldfinch	*Spinus tristis*	August 7, 2025
White-tailed Deer	*Odocoileus virginianus*	August 7, 2025
Eastern Coyote	*Not Found*	August 7, 2025
Indigo Bunting	*Passerina cyanea*	August 7, 2025
Downy Woodpecker	*Dryobates pubescens*	August 7, 2025

Common Name	Scientific Name	Date
Mourning Dove	*Zenaida macroura*	August 7, 2025
Eastern Kingbird	*Tyrannus tyrannus*	August 7, 2025
Common Grackle	*Quiscalus quiscula*	August 7, 2025
Carolina Wren	*Thryothorus ludovicianus*	August 7, 2025
Widow Skimmer	*Libellula luctuosa*	August 7, 2025
Killdeer	*Charadrius vociferous*	August 7, 2025
Gray Catbird	*Dumetella carolinensis*	August 7, 2025
Monarch	***Danaus plexippus***	**August 7, 2025**
American Goldfinch	*Spinus tristis*	August 7, 2025
Blue Jay	*Cyanocitta cristata*	August 7, 2025
Song Sparrow	*Melospiza melodia*	August 7, 2025
White-throated Sparrow	*Zonotrichia albicollis*	October 9, 2025
White-crowned Sparrow	*Zonotrichia leucophrys*	October 9, 2025
Turkey Vulture	*Cathartes aura*	October 9, 2025
Black-capped Chickadee	*Poecile atricapillus*	October 9, 2025

The incidental wildlife recorded at the site is reflective of the site's disturbed condition. Species observed are considered secure in the province, with the exception of the monarch butterfly, and are predominantly generalist habitat species.

5. Species at Risk Screening

The Endangered Species Act, 2007, S.O. 2007, was passed to protect Ontario's biodiversity by using the best available scientific, community, and Indigenous traditional knowledge, and the precautionary principle as its guiding principle. The purpose of the Act is to identify species at risk, protect species at risk and their habitats, and to promote the recovery of species at risk and stewardship activities which assist in these goals. The Committee on the Status of Species at Risk in Ontario (COSSARO) functions to maintain an up-to-date database of information pertaining to species in Ontario and their classification. COSSARO advises the Minister of Natural Resources and Forestry, who makes and files a regulation that lists all plant and animal species classified by COSSARO as extirpated, endangered, threatened, or of special concern. This regulation is the Species at Risk in Ontario List, O. Reg 230/08. Ontario Regulation 242/08 provides general policies concerning exemptions and habitat specifications for those listed species, Species at Risk (SAR).

5.1. Screening

The SAR screening (Table 9) considers SAR with potential to occur in the Study Area, in accordance with NHIC records and the additional resources listed in Section 3.1 and detailed in Appendix B. Following the MECP Client's Guide to Preliminary SAR Screening (2019), this screening was based on a review of the Natural Heritage Information Centre (NHIC) database (Atlas ID: 17NH5182,17NH5181,17NH5282,17NH5281), the regional species list, atlases (Ontario Breeding Bird, Butterfly, Moth, Reptile and Amphibian; Atlas Square: 17NH58), citizen science databases (i.e. iNaturalist and eBird), and any additional sources provided by the MECP. Observations of SAR within these squares do not necessarily represent observations within the

boundaries of the Study Area. The SAR Long List is provided in Table 9 below for data sources acquired on June 16, 2025, and June 18, 2025.

Table 9. Screening Results

Common Name	Scientific Name	SRank	SARO Status	SARA Status
Birds				
Bank Swallow[2,4]	*Hirundo rustica*	S4B	THR	THR
Barn Swallow[2,4]	*Riparia riparia*	S4B	THR	SC
Bobolink[1,2,4]	*Dolichonyx oryzivorous*	S4B	THR	SC
Canada Warbler[4]	*Cardellina canadensis*	S4B	SC	THR
Cerulean Warbler[4]	*Setophaga cerulea*	S2B	THR	END
Chimney Swift[2,4]	*Chaetura pelagica*	S3B	THR	THR
Common Nighthawk[4]	*Chordeiles minor*	S4B	SC	SC
Eastern Meadowlark[1,2,4]	*Sturnella magna*	S4B,S3N	THR	THR
Eastern Wood-Pewee[1,2,4]	*Contopus virens*	S4B	SC	SC
Evening Grosbeak[4]	*Coccothraustes vespertinus*	S4	SC	SC
Golden Eagle[4]	*Aquila chrysaetos*	S1B,S4N	END	-
Grasshopper Sparrow[1,4]	*Ammodramus savannarum*	S4B	SC	-
Lesser Yellowlegs[4]	*Tringa flavipes*	S3B,S5M	THR	-
Olive-sided Flycatcher[4]	*Contopus cooperi*	S4B	SC	SC
Peregrine Falcon[4]	*Falco peregrinus*	S4	SC	-
Rusty Blackbird[4,6]	*Euphagus carolinus*	S4B,S3N	SC	SC
Wood Thrush[1,2,4]	*Hylocichla mustelina*	S4B	SC	THR
Amphibians and Reptiles				
Blanding's Turtle[3]	*Emydoidea blandingii*	S3	THR	-
Eastern Milksnake[1,3]	*Lampropeltis triangulum*	S4	NAR	SC
Midland Painted Turtle[1,3]	*Chrysemys picta marginata*	S4	-	SC
Northern Map Turtle[1,3,6]	*Graptemys geographica*	S3	SC	SC
Eastern Ribbonsnake[3]	*Thamnophis saurita*	S4	SC	-
Queensnake[1,3]	*Regina septemvitata*	S2	END	END
Snapping Turtle[1,3]	*Chelydra serpentina*	S4	SC	SC
Insects				
Monarch[5]	*Danaus plexippus*	S4B.S2N	SC	END
Plants				
American Chestnut[1]	*Castanea dentata*	S1S2	END	END
Bird's Foot Violet[1]	*Viola pedata*	S1	END	END
Hairy Valerian[1]	*Valeriana edulis ssp. Ciliata*	S1	THR	END
Perfoliate Bellwort[1]	*Uvularia perfoliate*	S1	-	-
Prairie Violet[1]	*Viola pedatifida*	S1	-	-
Side-oats Grama[1]	*Bouteloua curtipendula*	S2	-	-
Fish and Molluscs				
Black Redhorse[1]	*Moxostoma duquesnei*	S2	THR	THR

Common Name	Scientific Name	SRank	SARO Status	SARA Status
Eastern Sand Darter Southwestern Ontario population[1]	*Ammocrypta pellucida pop. 4*	S2	THR	-
Silver Shiner[1]	*Notropis photogenis*	S2S3	THR	THR
Wavy-rayed Lampmussel[1]	*Lampsilis fasciola*	S2	THR	SC

Sources: [1]NHIC Database, [2] OBBA, [3] Ontario Reptile and Amphibian Atlas, [4] eBird Database, [5]Ontario Butterfly Atlas, [6] iNaturalist

5.2. Assessment

Based on the screening, in combination with vegetation communities and other natural heritage features observed during field work, the following species were identified for further assessment:

Possibly Occurring

- Rusty Blackbird (*Euphagus carolinus*)

Confirmed Presence

- Monarch (Danaus plexippus)

5.2.1. Possibly Occurring Species

Rusty Blackbird (*Euphagus carolinus*)

The Rusty Blackbird is ranked 'S4B, S3N' in Ontario, meaning that the breeding population is apparently secure while the nonbreeding population is imperilled within the province. This species is listed as Species Concern under both SARO and SARA. The Rusty Blackbird is a medium-sized bird with pale yellow eyes and a narrow black bill. This species displays sexual dimorphism during the breeding season, with males being dark black with an iridescent shine and females being brownish grey. In the winter, both male and female birds have a more rust-coloured plumage.

The major threat to this species is the loss of wintering habitat. The Rusty Blackbird winters in swamps, wet woodlands, and pond edges, and the conversion of wetland forests into residential development and agriculture has impacted the species greatly.

During the SAR Desktop Screening, it was found that at least six Rusty Blackbirds were photographed on the northeastern property border in October of 2016. While no Rusty Blackbirds were observed during the Breeding Bird Surveys performed by GeoProcess in 2025, it does not rule out the possibility that Rusty Blackbirds still inhabit the area, as agricultural lands are a common winter forage habitat for this species.

5.2.2. Species with Confirmed Presence

Monarch (*Danaus plexippus*)

The Monarch is ranked 'S4B, S2N' in Ontario, meaning that the breeding population is apparently secure while the nonbreeding population is imperiled within the province. This species is listed as Special Concern under SARO and endangered under SARA. The Monarch is a large butterfly with orange and black wings in

their adult form. Monarch caterpillars can be distinguished by their black, white, and yellow striping, and will only feed on milkweed species (*Asclepias spp*.).

The Ontario Species at Risk Evaluation Report for Monarch (COSSARO 2020) identified habitat degradation and pollution as the most significant risk to Monarch in Ontario. Specifically, they note that increased use of herbicide and conversion of agricultural lands to more intensive cropping are the most significant risks. They further note that low-risk threats include residential and commercial development on the presence of milkweed and road mortality.

A Monarch was observed in CUM1-1b, one of the cultural meadow communities onsite, during a summer vegetation survey on August 7, 2025. Based on the size, level of disturbance and species composition onsite, the meadows provide low-quality habitat and would not be considered Significant Habitat for the Monarch.

6. Significant Wildlife Habitat Screening

Significant Wildlife Habitat (SWH) is protected as per Section 2.1 of the Provincial Policy Statement, 2014. The Significant Wildlife Habitat Technical Guide (OMNRF, 2000) aids in land use planning by providing the identification, description, and prioritization of significant wildlife habitat in Ontario. The associated Ecoregion Criteria Schedules are used to further provide detailed criteria for assessing and confirming SWH within Ontario.

6.1. Screening

Significant (and/or sensitive) Wildlife Habitat features and functions as described within the OMNRF Significant Wildlife Habitat Ecoregion Criteria Schedule for Region 7E (OMNRF, 2015) were reviewed and evaluated for the Study Area. The document groups wildlife habitat into five main categories:

- Seasonal concentration areas of animals;
- Rare vegetation communities or specialized habitats for wildlife;
- Specialized Habitat for Wildlife
- Habitat for species of conservation concern; and,
- Animal movement corridors.

The full screening found in Appendix C consisted of a review of the ELC codes and habitat criteria for candidate SWH. The results of the assessment indicated no presence of candidate or confirmed SWH.

7. Incorporation of Indigenous Knowledge

The Six Nations of the Grand River were contacted regarding species of cultural importance known to occur in the local area. The species list provided has been referenced, and the considered species of importance identified by the Six Nations of the Grand River community have been identified and mitigated accordingly. Species of cultural importance and focused wildlife habitat structures have been incorporated into the naturalization plans for the block adjacent to the rail corridor.

8. Proposed Development

The proposed site plan will occupy an approximate area of 7.34 hectares to accommodate the construction of 318 townhome units and the associated roadway and parking infrastructure. The proposed development includes a 30-meter setback from the existing railway line, which will by default protect Hedgerow 1.

Stormwater management (SWM), servicing and grading for the development is outlined in the Functional Servicing & Preliminary Stormwater Management Report prepared by C.F. Crozier & Associates Inc.

8.1. Natural Heritage System Buffers

A GRCA-regulated watercourse sits approximately 43 meters from the Property boundary, running alongside the west side of the railway line until it meets the Grand River to the south. The GRCA regulation limit does not extend into the proposed development plan area.

Hedgerow 1, located within the rail corridor, will be retained and protected by the rail line setback. Additional protection measures, such as native plantings within the setback block, will be considered at the detailed design stage.

8.2. Stormwater Management

The stormwater management (SWM) plan includes the following SWM controls in accordance with the County of Brant Development and Engineering Standards (2018) and Grand River Conservation Authority pre-consultation notes:

- Quantity Control up to and including the 100-Year Storm Event
- Level 1 (Enhanced) Quality Control
- Erosion Control
- Maintenance or enhancement of existing infiltration/recharge rates

The Subject Property generally slopes from north to south towards the 700mm diameter culvert present below the CN Railway towards the north of the Property. Under pre-development conditions, there are three catchment areas on the Subject Property (101, 102, 103) and three catchment areas adjacent to the Property (EX1, EX2, EX3).

Proposed conditions will result in five catchment areas within the Subject Property: 201, 202, 203, 204, and 205 that will align generally with the pre-existing conditions. All catchments except for 203 will outlet to the existing culvert, while catchment 203 will outlet to the ditch along Dundas Street East.

Table 10 below provides the difference in peak flows entering the existing culvert in pre- and post-development conditions without stormwater management controls. Table 11 displays the difference in uncontrolled flows being conveyed to Dundas Street East in pre- and post- development conditions.

*Table 10. Peak Flow Summary (Discharge towards existing culvert) **

Storm Event (year)	Pre-Development (Catchments 101 + 102) (L/s)	Post-Development (Catchments 201 + 202 + 204 + 205)	Difference (%)
2	70	67	-4%
100	521	505	-3%

**Information retrieved from Functional Servicing & Preliminary Stormwater Management Report prepared by C.F. Crozier & Associates Inc.*

*Table 11. Peak Flow Summary (Discharge towards Dundas St. E) **

Storm Event (year)	Pre-Development (Catchment 103)	Post-Development (Catchments 203)	Difference (%)
2	27	18	-33%
100	80	81	1%

**Information retrieved from Functional Servicing & Preliminary Stormwater Management Report prepared by C.F. Crozier & Associates Inc.*

The analysis shows that the water discharging from the site to the downstream watercourse and wetland will match or be slightly less than the existing conditions peak flows. Matching peak flows is intended to mitigate downstream erosion risks in the receiving watercourse.

The level 1 stormwater quality control proposed will require an on-site system to store and convey runoff from all storms up to and including the 100-year storm event. The proposed development will follow a phased approach, with runoff from Phase 1 and 2 draining into the proposed storage tank located below the proposed northern parking lot. All Phase 3 construction will convey stormwater towards the proposed storage tank in the southern portion of the site, below the parking lot backing the stacked townhomes.

Additional details regarding stormwater management for the proposed development can be found in the Functional Servicing and Preliminary Stormwater Management Report prepared by C.F. Crozier & Associates Inc.

8.3. Grading and Servicing Requirements

Erosion and sediment controls will be installed prior to any construction activities being undertaken and maintained until the site is stabilized.

The following control measures will be undertaken to minimize erosion during the grading and site servicing period:

- The installation of silt fencing on the site perimeter and along development limits.
- The installation of mud mats at the construction zone entrance.
- The installation of silt sacks in existing catch basins within public right-of-ways.

Sanitary servicing exists in the form of existing sanitary sewers, a 375-diameter sewer along Dundas Street East and a 300mm-diameter sewer along Paris Road. Six sanitary service locations front the site. The proposed development will connect to the existing 375mm-diameter sewer along Dundas Street East. The

proposed development will tie into three of the available sanitary service locations through a 150mm-diameter sanitary sewer.

Additional details regarding grading and servicing requirements for the proposed development can be found in the Functional Servicing and Preliminary Stormwater Management Report prepared by C.F. Crozier & Associates Inc.

9. Environmental Impact Assessment

9.1. Impact Summary Table

Impacts to the various natural heritage features associated with and adjacent to the Subject Property were considered in the impact analysis. Table 12 presents the natural heritage components which were considered in this assessment, the proposed activity associated with that component, potential short-term and long-term impacts and recommended mitigation measures and whether any residual effects are anticipated. Potential impacts were assessed using field-collected data and secondary source information, including an overlay of the proposed site plan.

The impact assessment considers the components of the natural heritage system identified through background review and field assessments that are most likely to be impacted by the proposed development. Each valued component of the natural heritage system has been assessed for impacts and mitigation measures recommended. The valued components assessed for this EIS are:

- Hedgerow 1
- Watercourse to the south, receiving storm water from the site
- Neighbouring Woodland
- Neighbouring wetland
- Wildlife

Table 12. Impact Assessment Table

Feature/Function	Discussion	Proposed Activity	Identified Impact	Impact Importance	Mitigation measures	Impact Assessment	Residual Effects
Watercourse south of the Subject Property	A GRCA-regulated watercourse is present less than 50 meters southwest of the Property. This watercourse, which ultimately meets with the Grand River, and is proposed to receive stormwater from the site.	Grading, servicing, and development	Release of sediment into the watercourse	High	To prevent the release of sediment into the watercourse during active construction, erosion and sediment controls (ESC) are to be installed and inspected on a regular basis.	No impact on the watercourse is anticipated if ESC controls are installed and maintained in good working order.	No residual effects are expected if mitigation measures are followed.
		Grading, servicing, and development	Release of petroleum products or other contaminants into surrounding habitats.	Moderate	To prevent contaminant runoff into the nearby watercourse, equipment maintenance and refuelling need to be controlled to prevent any discharge of petroleum products. Construction material, excess material, construction debris, and empty containers should be stored in one location with proper containment and spill control measures in place.	No negative impact on the watercourse if the best practices are followed.	No residual effects are expected if mitigation measures are followed.
		Stormwater Management	Uncontrolled stormwater discharged into a watercourse can cause water quality, thermal, and channel stability concerns.	High	To mitigate stormwater impacts on the receiving watercourse, quality and quantity stormwater controls are proposed. Stormwater will be provided with a Level 1 quality treated, and quantity will be controlled to match existing peak flows.	• Water Quality treatment will address water quality concerns. It is recommended that all snow storage is stored to ensure that meltwater is directed to the SWM system to receive treatment prior to release into the environment. • Water Quantity treatment will match pre-development peak flows leaving the site. Matching of peak flows should mitigate downstream concerns related to both flooding and in-channel erosion.	No negative residual effects if mitigation measures are followed.

Feature/Function	Discussion	Proposed Activity	Identified Impact	Impact Importance	Mitigation measures	Impact Assessment	Residual Effects
						• It is understood that the downstream receiving system is a warm water system; therefore, there is less concern related to the temperature of the stormwater being released into the watercourse. That being said, stormwater is not being stored in a pond, which can allow for the heating of stormwater; rather, it will be stored in underground tanks. This approach should mitigate most thermal concerns related to thermal loading into the receiving watercourse.	
Neighbouring Woodlands	Hedgerow 1 is located along the rail line to the west, and woodlands are present approximately 120 meters southwest of the Property.	Grading, Servicing & Development	Release of dust as a result of construction activities.	Low	Implement dust suppression measures during site grading when conditions are dry or strong winds are anticipated.	Impacts from dust on the surrounding landscape should be minimal if dust suppression measures are taken.	No residual effects are expected if mitigation measures are followed.
			Potential spread of invasive species	Moderate	Machinery is a major vector for spreading terrestrial invasive species into new areas as they may spread seeds or plant parts to other properties. Contractors are to follow Clean Equipment Protocol for Industry (2013) as laid out by the Ontario Invasive Plants Council.	Numerous invasive plant species were found on-site during floristic surveys: Canada Thistle (*Cirsium arvense*), Tatarian Honeysuckle (*Lonicera tatarica*), White Sweet Clover (*Melilotus albus*), White Mulberry (*Morus alba*), and European Buckthorn (*Rhamnus cathartica*). Travel to and from the site following construction can cause the spread of these species. By following best practices, the spread of invasive species can be reduced and controlled.	Minimal residual effects are expected while adhering to the recommended mitigation measures.

Feature/Function	Discussion	Proposed Activity	Identified Impact	Impact Importance	Mitigation measures	Impact Assessment	Residual Effects
			Soil compaction outside of the construction zone	Low	Install fencing to clearly delineate the limits of construction. Fencing should be placed at dripline plus 1 m along Hedgerow 1.	Impacts should be minimal. If mitigation measures are undertaken, no compaction will occur outside of the fenced-off construction zone.	Minimal residual effects anticipated if mitigation measures are followed.
Neighbouring Wetlands	An NHIC-mapped wetland is present within 120 meters of the Property boundary and located along the watercourse receiving stormwater from the site.	Stormwater Management	Direction of stormwater from site into outlet feeding into the site into the outlet feeding into the neighbouring watercourse. The primary concern is altering the wetland's water balance by increasing or decreasing the volume of water available to it.	High	Stormwater management will be designed to treat stormwater for both quality and quantity.	Quality and quantity stormwater control measures will account for little to no impact on the downstream wetland. An additional volume of water will likely be discharged into the wetland, which would provide more water in the growing season. The overall increase in the volume of stormwater that is being directed to the downstream wetlands is low. It is predicted that stormwater will increase by approximately 0.69 to 1.2 litres per minute during the growing season. Given the size of downstream wetland, this increase in water will have no measurable impact on water depth. The additional water during the summer may actually provide an enhancement.	No negative residual effects anticipated. Potential for an increase in water discharged into the wetland.
		Grading, Servicing, & Development	Light pollution	Low - medium	Lights directed downward will reduce the amount of ambient light issuing from the Subject Property. It is recommended that downward-casting lighting is used across the site.	Bright lights can draw migrating birds off course, delaying their migration.	If mitigation measures are implemented, the overall impact of light pollution on wildlife and insects can be reduced. There will likely be some impact due to night-time lighting, as not all

Feature/Function	Discussion	Proposed Activity	Identified Impact	Impact Importance	Mitigation measures	Impact Assessment	Residual Effects
							outdoor lighting will be eliminated. Given the urban landscape, ambient night lighting impacts are anticipated to be minor.
Wildlife	Wildlife observed during field investigations at the Subject Property includes common local bird and mammal species. The species observed are not particularly sensitive and are frequently found in developed or urban-adjacent areas. However, development can still impact these species.	Grading, Servicing, & Development Site Clearing/Tree Removal	Noise during construction pollution	Low	Limited measures can be employed as a certain level of construction noise will occur. Limit construction activities at sunrise and sunset during the active spring breeding bird season.	Noise from construction works can impact local and migrating wildlife.	Noise impacts to wildlife may occur; however, as the majority of the wildlife found within the local landscape is tolerant of disturbances, they are anticipated to return to the area once construction activities end. No residual effects are expected due to the short-term nature of the impact.
			Bird Strikes / Death on windows	Moderate	Pre-Installation measures include: exterior window coverings (i.e. shutters or muntins), installation of awnings and overhangs, avoiding the installation of vegetation on the interior of the building adjacent to exterior-facing windows, grade-level ventilation grates should have a porosity no greater than 20 mm x 20 mm or 40 mm x 10 mm. Post-installation Solutions: install deterrent measures on the outside of the windows, like decals, ribbon, or tape.	New developments close to natural areas with glass surfaces pose a threat to birds. Birds can see through glass and what is reflected on glass, but not the glass itself. It is recommended that houses backing onto Hedgerow 1 consider including bird strike mitigation measures or provide an awareness pamphlet with the home sale package. Bird-friendly measures are recommended for installation in the entire building. There is the potential for residual negative	Bird-friendly measures are recommended for installation in the entire building. There is the potential for residual negative impact on the local and migrating avian population from bird strikes. For more information on bird strikes and bird-friendly building design, visit FLAP Canada's website. It is unlikely that all bird strikes can be eliminated, but by employing mitigation

Feature/Function	Discussion	Proposed Activity	Identified Impact	Impact Importance	Mitigation measures	Impact Assessment	Residual Effects
					Turn off lights at night during migration periods.	impact on the local and migrating avian population from bird strikes. For more information on bird strikes and bird-friendly building design, visit FLAP Canada's website.	measures, particularly in areas of higher strike potential, bird strike occurrences can be reduced.
			Impacts on nests and nesting birds	Minor	Vegetation and tree clearing should not occur between April 1-September 30th as per the Migratory Birds Convention Act (1994). If clearing is to occur during the nesting season, a nest survey should be completed by a qualified bird biologist 48 hours prior to the proposed works to identify any nest which are not to be disturbed until the young have fledged. Nests are not to be disturbed until the young have fledged or until the nest is deemed inactive. Education of contractors on wildlife encounters	No tree clearing is proposed as part of this application.	No impact on birds from tree clearing is anticipated.

9.2. Direct Impact Assessment

Direct impacts are directly attributed to the proposed development activities, often occurring during the construction phase or associated with physically altering the landscape or removing vegetation communities. Construction activities, including grading, servicing, and site development, can cause direct impacts on the surrounding habitats and potential local and migrating wildlife.

These direct impacts can have long-term impacts associated with:

- The transport of sediment and contaminants into the neighbouring watercourse and its associated wetland, impacting aquatic habitat downstream.
- Vegetation removal, removing minor wildlife habitat in the form of the young cultural meadow communities onsite.
- Edge impacts on the nearby woodland due to soil compaction and the introduction of non-native vegetation.
- Change in surface runoff to the adjacent watercourse, woodland, and nearby wetlands due to grade changes and the increase in impermeable surfaces.
- Contaminant runoff into the adjacent watercourse, woodland, and nearby wetlands due to changes in land use.
- Noise impacts on local and migrating wildlife, which in particular can be disruptive to breeding individuals.

Table 13. Direct Impact Assessment

Impact	Impact Assessment	Mitigation Measures	Residual Effects
Noise from construction activity	Excessive noise could displace forest breeding birds within wooded areas. Noise may result in the avoidance of the adjacent areas during construction; however, as the majority of the wildlife found within the local landscape is tolerant to disturbances, they are anticipated to return to the area once construction activities end.	Since construction noise is very difficult to mitigate, the most effective measure is to limit construction activities during the breeding bird season (April to August).	Residual effects are anticipated to be minor and short-lived. Since the Subject Property is close to a rail line and existing road network, noise is already present. It is likely that the species within the Study Area are generally tolerant to this noise and adjacent urban activities.
Dust from construction activity	Dust from construction activities could drift to natural areas and adjacent residential areas. With proper controls, this should be limited.	Water suppression of dust should occur for all construction activities, including, but not limited to, site grading, haul roads and concrete cutting.	Residual effects are anticipated to be minor and short-term, given that appropriate mitigation measures are incorporated to reduce levels of dust due to construction.
Sediment loading off-Site	Sediment can enter downstream water bodies, especially during storm events, through erosion of exposed earth. This is particularly associated with site grading activities and the storage of fill.	With the implementation and maintenance of proper Erosion and Sedimentation Control Measures, impacts to the adjacent lands should be minimal.	No adverse effects from construction generated sediment runoff are expected with the implementation and maintenance of an approved ESC plan.

Based on the proposed mitigation measures, setbacks, and existing condition of the site, the proposed site development will not result in any measurable changes to the composition, structure, or function of adjacent natural heritage features.

9.3. Indirect Impact Assessment

Indirect impacts are those which occur as a secondary result of the proposed activity, and not necessarily as a direct result of the activity. These are usually associated with effects such as population growth, density changes, or alterations/additions to road networks. Indirect impacts can also include offsite impacts such as altering the water balance of a downstream wetland. Mitigation recommendations are provided where possible.

The Subject Property is in a largely agricultural area, with increased urban development to the west of the Property beyond the Grand River. The proposed development will increase vehicle traffic in the local area, resulting in an increase in daily car trips and associated impacts, such as increased noise and light, and an increased risk of roadkill and contaminant runoff. Within the context of the local natural heritage system, the internal road network associated with the development will not create a fragmentation of the landscape or result in the isolation of existing natural heritage features. While it recognized that an increase in car trips increases the potential for vehicle wildlife interactions, the development is not resulting in new roads being located in an area of critical wildlife movement between two natural heritage features.

The stormwater discharge from the site has the potential to change the hydrological conditions of the downstream wetland. When a site is converted from agriculture to residential housing, there is a corresponding increase in the amount of impervious surfaces. This increase in impervious area results in higher overall volumes of stormwater that are generated during a storm event. This additional stormwater is generally released to surface water features, as is the case with this development. This additional volume of water will ultimately report to the wetland located downstream from the Subject Property. It is estimated that the increase in the volume of water directed to the wetland will be approximately 0.69 to 1.2 litres per minute during the growing season. Based on the size of the wetland, approximately 3 ha, this will have no measurable impact on the water level within the wetland. It is likely that the additional water directed to the wetland during the growing season will actually provide a benefit to the wetland, particularly during drier years.

Overall, the proposed development will not have a measurable impact on the form and function of the natural heritage features located within the Study Area.

9.4. Cumulative Impacts

Cumulative impacts are changes to the environment due to past, present and the reasonably foreseeable future impacts. Cumulative impacts on the adjacent natural heritage system are difficult to predict and isolate from existing influences. The Subject Property and much of the surrounding landscape have experienced ongoing disturbance from historical land use, most notably agricultural use and, in more recent years, and commercial use to the northeast and south of the Property. These activities have resulted in the loss of natural features; however, the woodlands and wetland to the west of the property, and the watercourse that runs through them, still remain within the Study Area.

The neighbouring natural heritage features will experience changes as a result of the land use changing from agricultural to residential, as more foot traffic and vehicle traffic will be brought into the area. The hedgerow which remains onsite will be retained, helping to maintain a buffer between the proposed development and the natural features beyond the railway line. It is expected that the proposed development will not measurably alter the surrounding natural heritage features, but some changes to form and function are expected due to the shift from agricultural land use to residential land use. Implementing mitigation measures will ensure that possible cumulative impacts are minimal and decrease the amount of stress put on the neighbouring natural heritage features.

10. Mitigation Measures

The following mitigation measures are recommended to avoid and minimize impacts. The measures have two distinct intended outcomes: mitigation to reduce the impact on the natural heritage system and mitigation to reduce the impact of active construction.

10.1. Natural Heritage System Measures

Before machinery is active on site, a visual search of the work area should be conducted before work commences each day, particularly for the period when most wildlife is active (generally April 1st to October 31st). Visual inspections will aim to locate snakes, turtles, and other ground-dwelling wildlife such as small mammals. Visual searches should also include inspection of machinery and equipment left in the work area overnight before starting equipment to ensure that wildlife is safely out of the work area.

Other natural heritage system measures include:

- Minimize outdoor lighting and direct it down and away from natural areas.
- Architectural considerations to minimize bird strikes, which could include window glazing, frosting or etching, UV-treated glass, or exterior window coverings (i.e. shutters or muntins).
- Considering incorporating native species reflective of the local area in the naturalization plans for the block adjacent to the rail corridor and Hedgerow 1.
- Store snow in an area where snow melt water will flow away from the hedgerow and watercourse and into the stormwater management system, where it will receive treatment.
- Treat stormwater for quality and quantity control as directed by the County of Brant Development and Engineering Standards (2018) and Grand River Conservation Authority pre-consultation notes.

10.2. Construction Measures

General construction-related mitigation measures include the following:

- Clearing of vegetation within the subject property as part of site preparation should be conducted in late summer or winter months (September-March) so as not to coincide with breeding bird season.

If clearing is to proceed within the breeding bird window, the Subject Property should be screened by a qualified bird biologist to determine if any migratory songbirds are nesting within work zone.

- Implementation of the erosion and sediment control plan is recommended to prevent releases of sediment into the adjacent natural areas.
- Implementation of dust control measures is recommended to reduce dust impacts on the adjacent lands.
- Inspection by a qualified person(s) to conduct regular monitoring of all sediment and erosion measures implemented to ensure they are in working order. Any deficiencies observed are to be recorded and immediately reported to the site contractor.
- Construction activities should be limited at sunrise and sunset when birds are most active during the breeding bird season to reduce construction noise impacts.
- Topsoil removed during stripping is recommended to be stockpiled for reapplication post-construction.
- A construction work plan should designate specific locations for stockpiling of soils and other materials or outline the location of materials trucked offsite.

11. Policy Conformity

This EIS demonstrate that the proposed development is consistent with applicable federal, provincial and municipal natural heritage policies. A comprehensive breakdown of the relevant policies and regulations and how the development conforms is presented below in Table 6.

Table 14: Policy Conformity Table

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
Development within Natural Heritage Systems and Adjacent Lands	Provincial Planning Statement (2024)	Section 4.1.8 *"Development…shall not be permitted on adjacent lands…unless the ecological function of the adjacent lands has been evaluated and…demonstrated that there will be no negative impacts…"* (PPS, 2024).	Based on existing site conditions as detailed in Section 4, the proposed development is not within the natural heritage system. Development is proposed within lands adjacent to the natural heritage system as identified on Schedule B-1 in the County's OP. These features are identified as an Enhancement Woodland, a Significant Woodland, and a watercourse, within the rail corridor and to the west of the rail corridor. This EIS was triggered as the proposed development is situated
	A Simply Grand Plan (2023)	2.10.22 *An environmental impact study and/or environmental implementation plan is required…where the proposal is within and/or on adjacent lands to the Natural Heritage System and/or the Natural Heritage System for the Growth Plan* (SGP, 2023).	

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
		2.10.45 Development and site alteration proposed in the NHS shall demonstrate conformity to the following: • No negative impacts on key natural heritage features, key hydrologic features or their hydrological functions and ecological functions. • Connectivity along the system and between key natural heritage features and key hydrologic features located within 240 metres of each other. • Removal of…features not identified as key natural heritage features and key hydrologic features is avoided, where possible…shall be incorporated into the planning and design of the proposed use where possible. 2.10.46 *development, and site alteration are not permitted on adjacent lands to features in the Natural Heritage System, unless the applicant has demonstrated through an environmental impact study or similar study that there will be no negative impacts on the Natural Heritage System and that there will be a net gain in ecological functions and hydrologic functions* (SGP, 2023).	within lands adjacent to the identified NH features. This study demonstrates that the proposal will result in no negative impacts on the natural heritage system, and there will be a net gain in ecological function primarily from the enhancement of the vegetated corridor along the railway through the planting of native species. There are no hydrologic features identified within the Subject Property. However, stormwater management practices will be employed to maintain and/or improve infiltration. Stormwater is proposed to be discharged to the small drainage feature, which crosses under the rail corridor, conveying water to the watercourse and wetland complex to the west. Stormwater discharge will match pre-development peak flows. The discharge is not anticipated to have any measurable impact on the downstream wetland or channel.
Natural Heritage System Boundaries and Designation	A Simply Grand Plan (2023)	2.10.11 *The Natural Heritage System Designation has been mapped on Schedule A. Detailed mapping of the components of the Designation, including approximate location of known key natural heritage features and key hydrologic feature, has been illustrated on the B-series Schedules of this Plan* (SGP, 2023). 2.10.12 *To complement the Natural Heritage System Designation and consider further study, minimum vegetation protection zones, enhancement linkages, an adjacent lands overlay, as well as other supporting features of the Natural Heritage System, are illustrated on the annexes related to this Plan* (SGP, 2023).	The Schedules and Annexes of the Official Plan were reviewed in preparation of this EIS to inform the existing natural heritage features within the Study Area. Schedules B-1, A-1, and Annex of the Plan show the natural heritage system, identified as a Significant Woodland feature and its associated VPZ, spanning the southwestern section of the Subject Property. However, the majority of this NHS feature was removed prior to the acquisition of land by the proponent. The woodland is now characterized by a strip of wooded area (hedgerow) along the CNR corridor, which delineates the current feature boundary. The remaining hedgerow feature no

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
			longer meets the County's definition of Significant Woodland or woodlot.
Significant Woodlands, Enhancement Woodlands, Woodlands, and Forestry	Provincial Planning Statement (2024)	4.1.5 *Development and site alteration shall not be permitted in…* b) *significant woodlan*ds in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River)*…unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions* (PPS, 2024).	There are no significant woodlands present within the Subject Property, but there are treed areas within and adjacent to the property. The Schedules of the Official Plan depict a Significant woodland feature within the Subject Property. However, the majority of this woodland feature had been removed prior to this development application. The remaining strip of the OP's Significant woodland feature runs along the CN rail at the farthest extent of the southwest property limit. However, in its current condition, the remaining vegetated strip is determined to be a supporting woodlot feature, as defined by the Good Forestry Practices By-law, due to its reduced size and fragmentation by the rail corridor, disconnecting it from the larger woodland across the railway. An Enhancement Woodland feature is located to the west of the rail corridor and will be maintained and not impacted by the proposed development. No tree removals are proposed, and activities prohibited under the Migratory Bird Regulation (2022) are not anticipated.
	A Simply Grand Plan (2023)	2.10.38 *Prior to any…development, or site alteration…adjacent to enhancement woodlands the feature shall first be evaluated…through an environmental impact study to determine if all or part of the feature contains any key natural heritage features and/or key hydrologic features. Any portion determined to be a key natural heritage feature and/or key hydrologic feature shall be considered a constraint to development in accordance with the policies of this Plan* (SGP, 2023).	
	Good Forestry Practices By-Law 70-21	2.10.39 *Where enhancement woodlands are determined not to be a key natural heritage feature and/or key hydrologic feature, they should be maintained and enhanced. Where feasible, such features shall be incorporated into the design of a development* (SGP, 2023). The Good Forestry Practices By-Law is a by-law to prohibit or regulate the destruction or injuring of trees within and adjacent to natural heritage features and areas in the County of Brant. The by-law defines woodlands as forested or treed areas and plantations of 1 hectare or more and woodlots are defined as treed areas between 0.2 and 1.0 hectares (GFB 2021).	
	Migratory Birds Regulations (2022)	Migratory birds, their nests or eggs can be harmed as a result of many activities, including clearing trees or other vegetation. Unless authorized under the regulation, it is prohibited to: capture, kill, take, injure, or harass a migratory bird, and to damage, destroy, remove or disturb a nest shelter (MBR, 2022).	

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
Habitat of Endangered/Threatened Species and Significant Wildlife Habitat	Provincial Planning Statement (2024)	4.1.5 *Development and site alteration shall not be permitted in…* d) *significant wildlife habitat…unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions* (PPS, 2024). 4.1.7. "*Development…*shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*" (PPS, 2024).	The Subject Property, in its current conditions, have been determined by this EIS to provide no SAR habitat or Significant Wildlife Habitat. The Study Area generally provides habitat for species that are considered "apparently secure" (S4) and "secure" (S5). While two SAR species (Monarch – Confirmed Presence and Rusty Blackbird – Possibly occurring) were identified during GeoProcess field surveys, no significant habitats were present within the Subject Property. The hedgerow along the CN Rail to the west has the potential to provide perching habitat for Turkey Vultures (Vulnerable). However, no nesting habitat was observed as detailed in Section 4.5. Based on the evaluation and assessments in sections 4.2 to 6.1, this EIS determined that the vegetated areas within the Subject Property do not provide significant wildlife habitat or habitat for threatened/endangered species, and there are no tree removals required. The proposed development is in compliance with the regulations of the ESA and MBCA.
	Endangered Species Act (2007)	Subsection 9(1) "*No person shall, (a) kill, harm, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species*" (ESA, 2007). Clause 10(1)(a): *"No person shall damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species."* (ESA, 2007). Sections 7 & 8: habitat conservation, remediation, and offsetting measures (ESA, 2007).	
	Migratory Birds Convention Act (1994) and Migratory Bird Regulations (2022)	The Migratory Birds Regulations (2022) protects migratory birds, their eggs, and nests by prohibiting activities that cause them harm. Migratory birds, their nests or eggs can be harmed as a result of many activities, including those that do not primarily target a bird but may cause harm, such as: • Clearing trees or vegetation • Draining or flooding land (MBCA 1994; MBR 2022).	
	A Simply Grand Plan (2023)	2.10.2 *The federal Migratory Birds Convention Act protects migratory birds, their nests, and eggs by prohibiting activities that cause harm to them, such as through damaging, destroying or disturbing a nest. A list of 18 species are protected year round…Buffers and setbacks, beyond those established in this Plan and provincial guidance materials may be required (*SGP, 2023).	

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
		2.10.3 *It is the owner's responsibility to ensure that they comply with all applicable laws, including but not limited to the Fisheries Act, Endangered Species Act, Species at Risk Act, and Migratory Birds Convention Act* (SGP, 2023). 2.10.30 Development within or adjacent to the NHS must demonstrate through an EIS that: • Where there is potential for disturbances to nests, the proposal complies with the Migratory Birds Convention Act and applicable guidelines (SGP, 2023).	
Significant wetlands and wetlands	Provincial Planning Statement (2024) GRCA Policies for the Administration of O. Reg. 41/24 (2024)	Section 4.1.4. *"Development*…shall not be permitted in: a) *significant wetlands* in Ecoregions 5E, 6E and 7E" (PPS, 2024). 4.1.5 *Development and site alteration shall not be permitted in… a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E… f) coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 4.1.4(b)…unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions* (PPS, 2024). 8.4.1 *Development activity/interference within a wetland or development activity within an area of interference will not be permitted except in accordance with the policies in Sections 8.4.3-8.4.13* (GRCA, 2024). *The areas surrounding wetlands where development activity could interfere with the hydrologic function of the wetland are called "areas of interference". These areas include lands that are 30 metres…from the boundaries of all wetlands* (GRCA, 2024).	There are no Significant Wetlands, Coastal Wetlands, or Wetlands within the Study Area. The Subject Property does not coincide with areas of interference associated with a wetland.
Fish and Fish Habitat	Fisheries Act (1985) Provincial Planning Statement (2024)	Section 35 (1) "*No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat*" (Fisheries Act, 1985). 4.1.6 *Development* and *site alteration* shall not be permitted in *fish habitat* except in	The Subject Property does not contain any surface water features or potential fish habitat. The watercourse within the Study Area was not assessed for fish or fish habitat as it is outside the property boundary. The DFO online screening tool does not identify any aquatic SAR species within the vicinity.

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
	Species At Risk Act (2002) A Simply Grand Plan (2023)	accordance with *provincial and federal requirements* (PPS, 2024). DFO's approval under the Species at Risk Act is required if an activity affects an aquatic species at risk, any part of its critical habitat, or the residences of its individuals (SARA, 2002). 2.10.14 *Waters supporting aquatic species at risk identified in the Schedules are based on the Fisheries and Oceans Canada's aquatic species at risk map. Applicants shall consult the most up to date mapping and the species-site specific recovery documents* (SGP, 2023).	Stormwater from the development is be to outletted into the watercourse and will follow SWM best management practices to mitigate negative downstream effects on aquatic species. The proposed development and related activities are not expected to cause any harmful alteration, disruption or destruction of fish habitat in the adjacent lands.
Natural Hazards: Watercourses and Associated Flood and Erosion Hazards	O. Reg. 41/24 Prohibited Activities, Exemptions and Permits GRCA Policies for the Administration of O. Reg. 41/24 (2024) A Simply Grand Plan (2023)	Any development within the jurisdiction of the Authority and in, on or adjacent to watercourses, hazardous lands, wetlands, or river/stream valleys must be in accordance with the policies and guidelines set out by the Conservation Authority (O. Reg. 41/24). 8.9.1 *Alterations, including straightening, changing, diverting or interfering with an existing river, creek, stream or watercourse channel are not permitted except as specified in Sections 8.9.2-8.9.17* (GRCA, 2024). 2.10.1…*the placement, removal or re-grading of fill, the interference with wetlands, the alteration of any watercourse, or the construction or alteration of any buildings or structures within areas regulated by a Conservation Authority shall not be permitted without the approval of the Conservation Authority* (SGP, 2023).	No development or site alterations will occur within the GRCA-regulated area associated with the watercourse within the Study Area. The proposal plans to leverage the existing culvert crossing below the CN Rail connected to the watercourse to convey stormwater outflows from the development. This will not require the undertaking of any activities regulated or prohibited by the Grand River Conservation Authority. As a result, GRCA permits are not required to facilitate the development and related activities. . No interference with wetlands is proposed.
Protection, Restoration, and Enhancement of Natural Heritage Features	Provincial Planning Statement (2024)	Section 4.1.2. "diversity and connectivity of natural feature…and the long-term *ecological functi*on and biodiversity of *natural heritage systems* should be maintained, restored" (PPS, 2024). 2.10.19 *Unauthorized illegal acts that have resulted in a reduction in the area, form and/or function of features in the Natural Heritage System, whether previously evaluated or not, including but not limited to acts such as tree injury or destruction and alteration to a wetland or stream, will*	The previously removed portion of the Significant woodland within the Subject Property is not proposed for restoration; however, the remaining portion of the feature is proposed to be maintained, protected, and enhanced. As part of the overall site landscaping, additional native plantings within the block immediately adjacent to the rail corridor may be explored through detailed design once a landscape

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
	A Simply Grand Plan (2023)	*not be recognized as a legally existing use. In such cases, the lands will not be removed from the Natural Heritage System. Restoration of the area shall be required to the satisfaction of the County and any agency having jurisdiction. If the unauthorized illegal act is carried out prior to and/or in conjunction with a development application, restoration will be required prior to, or as a condition of, approval of infrastructure, development or site alteration* (SGP, 2023). 2.10.30 Development within or adjacent to the NHS must demonstrate through an EIS that: • Proposal contributes to achieving the provisions outlined in the policies… related to watershed and subwatershed planning…maintain, restore, and enhancing the NHS and the Water Resources System. 2.10.41 *Where replacement trees and vegetation are required, the applicant shall submit a proposal for replacement trees and vegetation to be planted: on the lands subject to the removal; on alternate lands approved by the County; or as a cash-in-lieu payment to the County's Replacement Tree Planting Fund. Cash-in-lieu and the posting of securities for replacement trees shall be based on a value determined by the County and/or a cost estimate for the planting and maintenance of all replacement trees and vegetation for a minimum period of two years* (SGP, 2023). 2.10.43…*to achieve a net environmental gain, the ratio of trees shall be based on the age of the woodland with more mature woodlands requiring a greater offsetting ratio. Where a woodlot or woodland is removed, the minimum density of replacement trees must meet the area and number of trees per hectare required to meet the definition of a woodlot or woodland* (SGP, 2023).	architect is retained. The treatment of the natural heritage features within the Study Area is determined by this EIS based on their form and function. This study assesses the features from the lens of their long-term ecological function and biodiversity. The existing strip of vegetated area along the CN rail within the Subject Property is to be maintained and is not proposed for removal. This woodlot feature (~0.4 hectares) will be protected through the application of a vegetation protection zone (VPZ) and enhanced by planting native species within the VPZ.
Natural Heritage Buffers and Vegetation Protection Zones (VPZs)	A Simply Grand Plan (2023)	2.10.47 *Minimum vegetation protection zones adjacent to features in the Natural*	The minimum VPZ for Significant Woodlands is 10 m. This study determined that the remaining

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
		Heritage System have been mapped on the Annexes of this Plan (SGP, 2023). 2.10.48 *The final established vegetation protection zone on adjacent lands may be greater than the minimum vegetation protection zone. The final established vegetation protection zone shall be determined by an* EIS*... which identifies a vegetation protection zone that is of sufficient width to protect the key natural heritage feature or key hydrologic feature and its functions from negative impacts* (SGP, 2023). 2.10.49 *Vegetation protection zones shall be established to achieve and be maintained as natural self-sustaining vegetation* (SGP, 2023). 2.10.50 Infrastructure, development, and site alteration are not permitted within the minimum or established vegetation protection zone, unless specifically permitted by this Plan (SGP, 2023).	hedgerow does not meet the criteria for Significant Woodlands. As a result, a 10 m VPZ is not required. However, a vegetated block has been provided adjacent to the hedgerow, providing a vegetated setback ranging from approximately 8 m to close to 30 m from the hedgerow's dripline. This vegetated setback will be sufficient to protect, maintain, and enhance the hedgerow. Native species will be planted in the setback/VPZ, and it will be maintained as natural self-sustaining vegetation where no development is proposed.
Linkages and Corridors	A Simply Grand Plan (2023)	4.1.5 *Development and site alteration shall not be permitted in...* b) *significant woodlan*ds in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River)*...unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions* (PPS, 2024). 2.10.35*...development, and site alteration shall maintain and improve the ecological and hydrological connectivity at the site-level, County level, subwatershed and watershed scale. The width of the enhancement linkage should be based on the greater of 50 metres or as recommended in an...environmental impact study* (SGP, 2023).	No development is proposed within a significant woodland. Rail corridors have been shown to act as wildlife movement corridors. By maintaining and enhancing the hedgerow along the rail corridor, the linkage function it provides will be maintained and enhanced. The plantings adjacent to the hedgerow will increase the width of the rail corridor along the Subject Property to a width of approximately 50 m.
Mitigation	A Simply Grand Plan (2023)	2.10.33 *Restrictions and mitigation measures necessary will be applied before, during, and after infrastructure, development and/or site alteration to protect and enhance the Natural Heritage System...and associated hydrologic and ecological features, functions, and systems from negative impacts. Mitigation*	Recommendations for mitigation measures have been provided in Sections 9 and 10 of this EIS Report. These include general construction measures, erosion and sediment control, tree protection, and other natural heritage system measures.

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
		measures may be determined through the recommendations of an Environmental Impact Study (SGP, 2023).	
Consultation and Engagement	A Simply Grand Plan (2023)	1.1.5 *Acknowledge the importance of protecting our water resources, green spaces, natural areas and wildlife to the health and vitality of Indigenous culture and heritage* (SGP, 2023). 2.10.18 *Applicants shall consult with Indigenous Communities as part of infrastructure, development, and intensification projects prior to submitting a complete application to determine if natural areas have any significant environmental, cultural, economic, or historical value. Where important values are identified, the applicant shall collaborate with the County and Indigenous Communities on the protection of these areas* (SGP, 2023). 2.10.30 Development within or adjacent to the NHS must demonstrate through an EIS that: • Indigenous Communities have been consulted and collaborated with on the conservation of natural areas that have significant environmental…values.	This EIS acknowledges the importance of the natural environment to the indigenous communities within the County of Brant. Interested indigenous communities were consulted in the preparation of this EIS to determine species of cultural value and their protection and inclusion in planting plans and wildlife habitat features. The engagement with the Six Nations of the Grand River did not identify areas of cultural value within the Subject Property.
EIS Guidelines	A Simply Grand Plan (2023)	2.10.25 Where an EIS or EIP is required, *it shall be prepared by qualified experts…in accordance with the County Environmental Impact Studies and Environmental Implementation Plans Terms of Reference Submission Guidelines… The study and plan must include all items in the County approved Terms of Reference, and that identified by Indigenous Communities or by any agency having jurisdiction. Where a study or plan has not been completed in accordance with a County approved Terms of Reference, the application will not be deemed complete* (SGP, 2023). 2.10.27 *Comprehensive environmental impact study and/or the equivalent shall be required for proposals for: large-scale infrastructure; development in designated greenfield areas; large-scale development*	This EIS has been prepared by qualified experts in accordance with the Environmental Impact Studies and Environmental Implementation Plans Terms of Reference Submission Guidelines. This study is a scoped EIS due to the lack of natural heritage features within or adjacent to the Subject Property. An EIP has been completed as a part of this EIS detailing how the recommendations of the study will be implemented at the detailed design stage. In conformance with policy 2.10.20, this EIS demonstrates that the proposed development conforms with applicable environmental

Environmental Feature	Regulatory Document	Policy/Regulation	Rationale
		proceeding by way of a secondary plan, area plan, block plan, plan of subdivision, vacant plan of condominium, or site plan; a settlement area boundary expansion; and/or where major impacts to and removal of features in the Natural Heritage System are anticipated as determined by the County in consultation with any agency having jurisdiction (SGP, 2023). 2.10.28 *A scoped environmental impact study and/or environmental implementation plan will be required for a project at a smaller geographic scale, such as a single lot severance and/or where impacts are anticipated to be minor, as determined by the County in consultation with any agency having jurisdiction* (SGP, 2023). 2.10.30 Development within or adjacent to the NHS must demonstrate through an EIS that: • *The study or plan has been completed by qualified experts*…in accordance with EIS/EIP Guidelines and the final approved ToR. • *The proposal conforms with all applicable environmental policies* in the plan, the PPS, Growth Plan, agencies having jurisdiction, and provincial/federal requirements. • Diversity and connectivity… between features of the NHS located within 240 m of each other and the long-term ecological function and biodiversity of natural heritage systems will be maintained, restored, or where possible, enhanced, recognizing the linkages between and among features of the natural heritage system, surface water features and groundwater features. • There will be no negative impacts on features in the Natural Heritage System or their ecological functions and hydrological functions, and that a net gain in the long-term ecological and hydrological features and functions will be achieved.	policies in the PPS and provincial and federal requirements. The existing connectivity between NHS features within 240 metres of each other and their long-term ecological function will be maintained as the proposed development: 1) is not removing any natural heritage features or linkage features; 2) is not resulting in a fragmentation of an existing linkage.

12. Closing

This EIS included a policy review, biophysical surveys to document existing ecological conditions, and reviewed the proposed site plan and functional servicing report. The primary trigger for the EIS was a Significant Woodland identified on Schedule B-1 of the County's Official Plan. This feature was mostly removed by the previous landowner, with only a hedgerow of trees remaining along the southwestern property limit, adjacent to the rail line corridor. Through field investigations, it has been determined that this hedgerow does not meet the criteria for a woodland or a woodlot. As a result, it is the position of this EIS that the Subject Property no longer has any Significant Natural Heritage System features as defined by the Official Plan.

The EIS identified the hedgerow along the rail line and the downstream wetland as the two most important valued components of the local natural heritage system that needed to be considered in this EIS. The EIS concluded that the hedgerow will be retained and protected within the proposed development, and impacts to the feature's form and function are not anticipated. The EIS concluded that the downstream wetland will not be impacted by stormwater discharged from the site, and in fact, the additional water may be a benefit to the wetland, particularly during drier summer conditions.

From a natural heritage perspective, the proposed plan meets the requirements of the County of Brant Official Plan, as demonstrated in the policy conformance section of the EIS, and with the implementation of the standard mitigation measures described, the development can proceed without negative impacts to the natural environment.

13. References

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Environmental Impact Statement
126 Dundas Street East, Paris, Ontario

Prepared for L!V Communities

December 17, 2025

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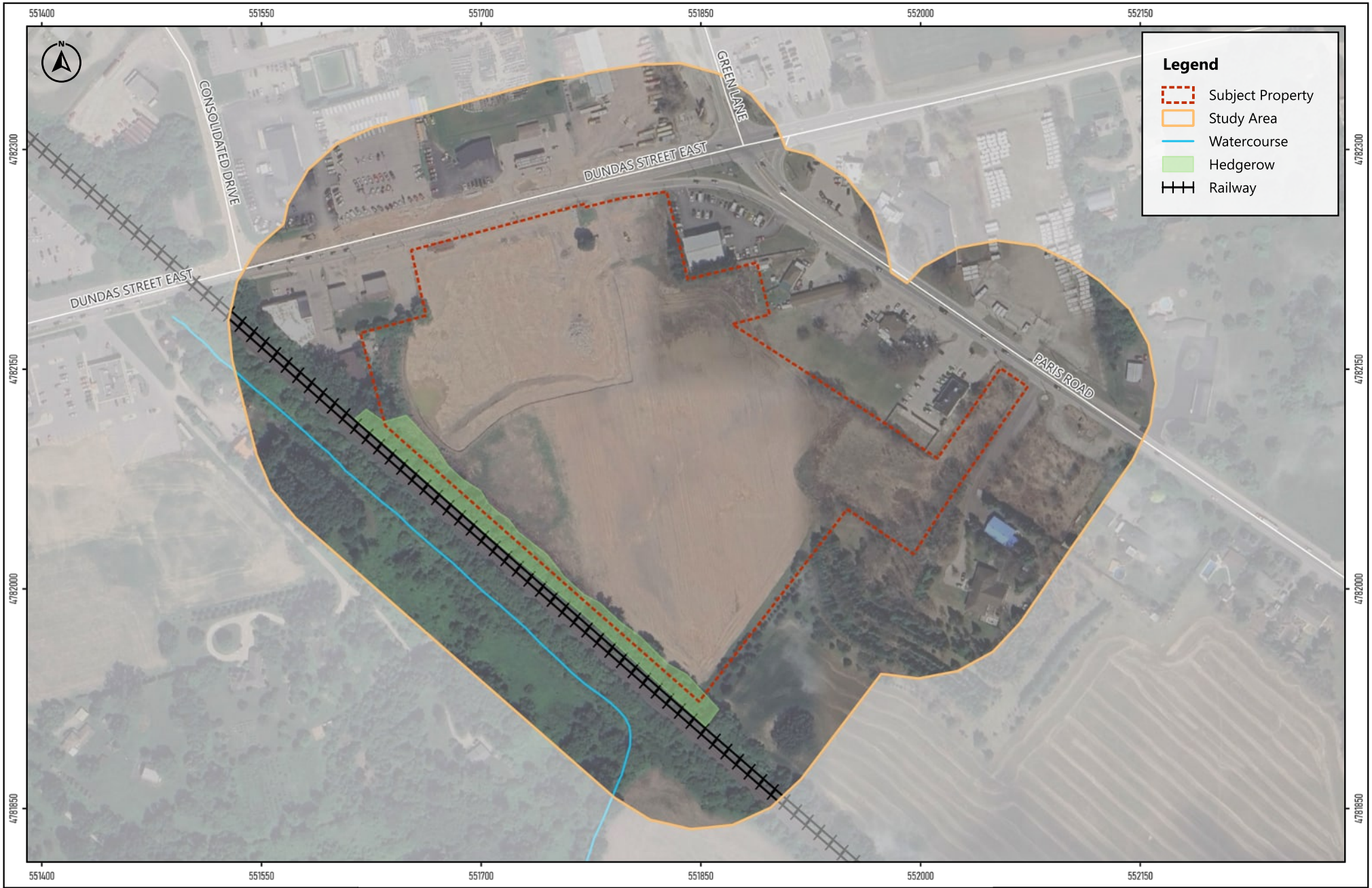
Project Number P2025-1000

Maps



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CHECKED BY: KG
PROJECT NO.: P2025-1000
DATE: Dec 12, 2025

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NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Watercourse layer: Grand River Conservation Authority
[2] Contains information made available under the Open Data License - Ontario, GRCA
[3] Road and Railway layer: Ontario Road Network
[4] Parcel data: County of Brant Open data portal
[5] Base imagery: Google (2025)

Map 1. Key Map

EIS for 126 Dundas Street East, Paris

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DATE: Dec 12, 2025

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NAD83 / UTM zone 17N (EPSG:26917)

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[1] Watercourse layer: Grand River Conservation Authority
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[4] Road and Railway layer: Ontario Road Network
[5] Parcel data: County of Brant Open data portal
[6] Base imagery: Google (2025)
[7] Site plan: Landwise

Map 2.
Existing Conditions

EIS for 126 Dundas Street East, Paris

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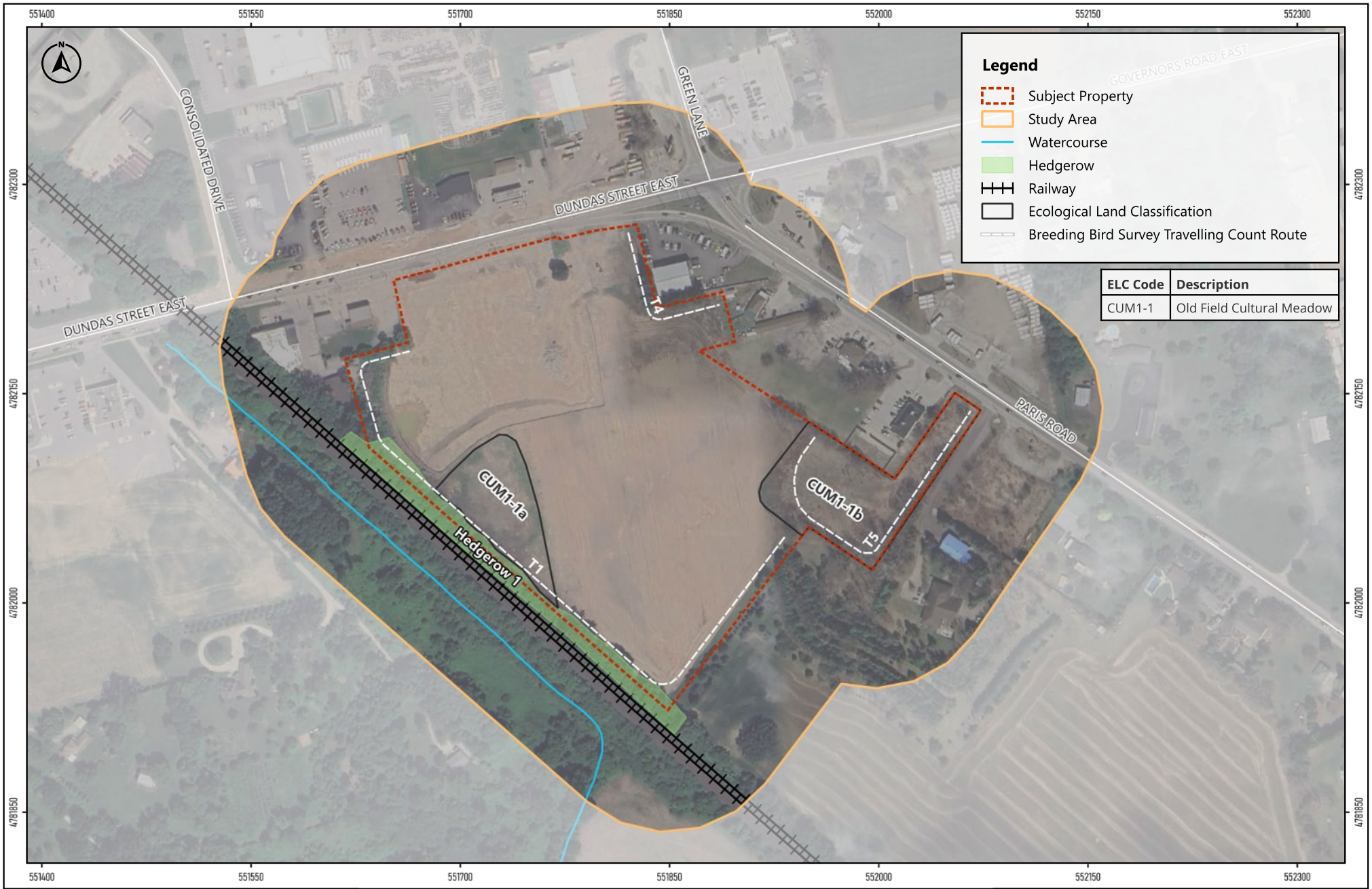

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DATE: Dec 15, 2025

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NAD83 / UTM zone 17N (EPSG:26917)

Notes:
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[2] Contains information made available under the Open Data License - Ontario, GRCA
[3] Road and Railway layer: Ontario Road Network
[4] Parcel data: County of Brant Open data portal
[5] Base imagery: Google (2025)

Map 3.
Field Surveys and Ecological Land Classification

EIS for 126 Dundas Street East, Paris

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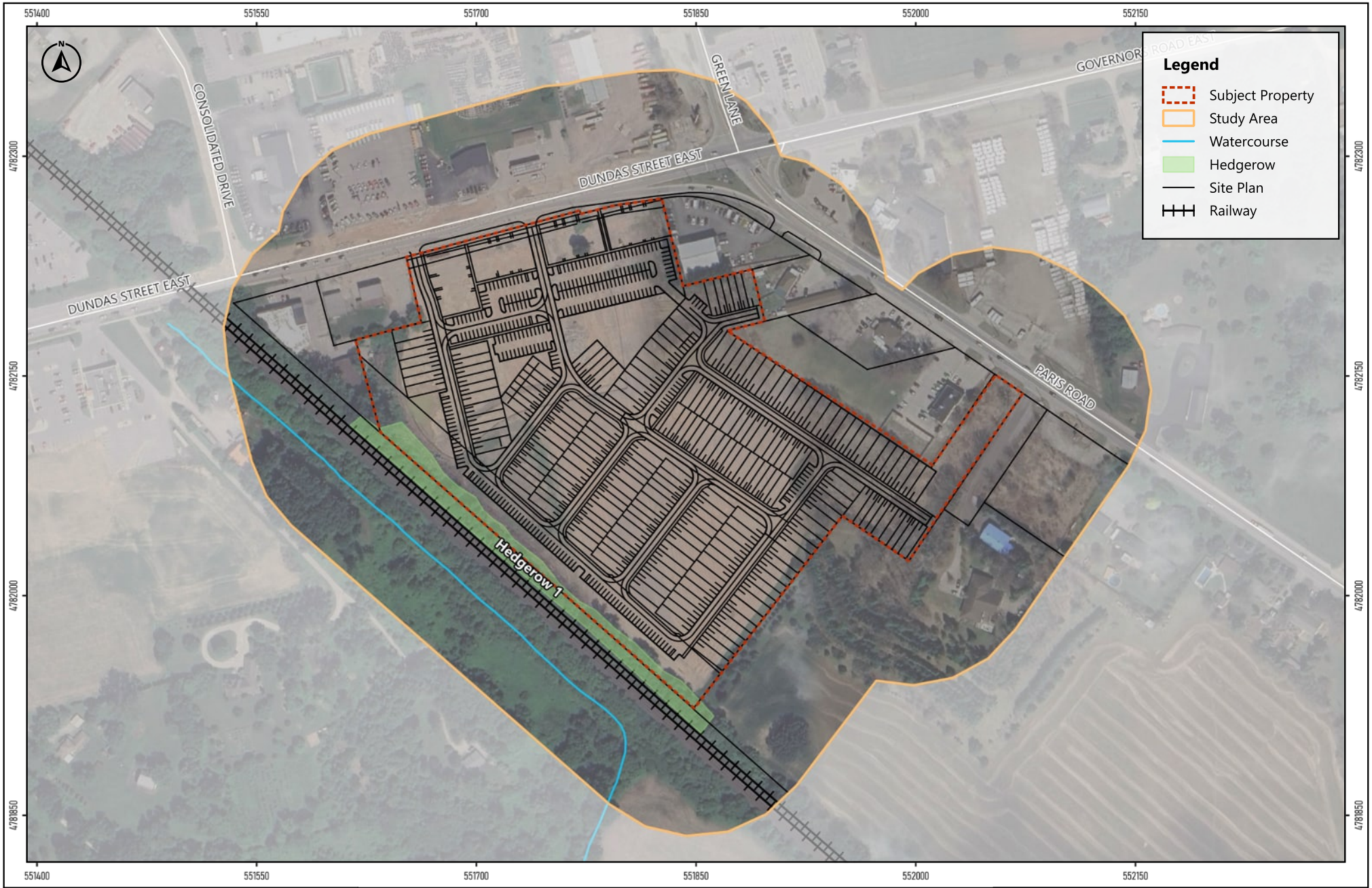

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PROJECT NO.: P2025-1000
DATE: Dec 15, 2025

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NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Watercourse layer: Grand River Conservation Authority
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[3] Road and Railway layer: Ontario Road Network
[4] Parcel data: County of Brant Open data portal
[5] Base imagery: Google (2025)
[6] Site plan: Landwise

Map 4.
Proposed Development

EIS for 126 Dundas Street East, Paris

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Appendix A

Vascular Plant List

Scientific	Common Name	Polygon(s)	S-rank*	CoC**	CoW***
Abutilon theophrasti	Velvetleaf	CUM1-1a	SNA		3
Acer negundo	Manitoba Maple	CUM1-1a, CUM1-1b	S5	0	0
Acer platanoides	Norway Maple	CUM1-1b	SNA		5
Amaranthus retroflexus	Redroot Amaranth	CUM1-1a	SNA		3
Artemisia absinthium	Absinthe Wormwood	CUM1-1b	SNA		5
Asclepias syriaca	Common Milkweed	CUM1-1a, CUM1-1b	S5	0	5
Celtis occidentalis	Common Hackberry	CUM1-1b	S4	8	0
Chenopodium album	Common Lamb's-quarters	CUM1-1a	SNA		3
Cichorium intybus	Wild Chicory	CUM1-1b	SNA		5
Cirsium arvense	Canada Thistle	CUM1-1a	SNA		3
Cirsium vulgare	Bull Thistle	CUM1-1a	SNA		3
Commelina communis	Asiatic Dayflower	CUM1-1a	SNA		0
Cornus sericea	Red-osier Dogwood	CUM1-1b	S5	2	-3
Dactylis glomerata	Orchard Grass	CUM1-1b	SNA		3
Daucus carota	Wild Carrot	CUM1-1a, CUM1-1b	SNA		5
Dipsacus fullonum	Common Teasel	CUM1-1b	SNA		3
Echinocystis lobata	Wild Cucumber	CUM1-1a, CUM1-1b	S5	3	-3
Echium vulgare	Common Viper's Bugloss	CUM1-1b	SNA		5
Erigeron annuus	Annual Fleabane	CUM1-1a	S5	0	3
Erigeron canadensis	Canada Horseweed	CUM1-1a	S5	0	3
Erigeron strigosus	Rough Fleabane	CUM1-1b	S5	4	3
Euthamia graminifolia	Grass-leaved Goldenrod	CUM1-1a	S5	2	0
Fraxinus americana	White Ash	CUM1-1a	S4	4	3
Galium sp.	Galium species	CUM1-1a			
Hypericum perforatum	Common St. John's-wort	CUM1-1b	SNA		5
Juniperus virginiana	Eastern Red Cedar	CUM1-1b	S5	4	3
Linaria vulgaris	Butter-and-eggs	CUM1-1a, CUM1-1b	SNA		5
Lonicera tatarica	Tatarian Honeysuckle	CUM1-1b	SNA		3
Lotus corniculatus	Garden Bird's-foot Trefoil	CUM1-1b	SNA		3
Melilotus albus	White Sweet-clover	CUM1-1b	SNA		3
Morus alba	White Mulberry	CUM1-1a, CUM1-1b	SNA		0
Nepeta cataria	Catnip	CUM1-1a	SNA		3
Oenothera biennis	Common Evening-primrose	CUM1-1b	S5	0	3
Onopordum acanthium	Scotch Thistle	CUM1-1a	SNA		5
Panicum capillare	Common Panicgrass	CUM1-1a	S5	0	0
Panicum dichotomiflorum	Fall Panicgrass	CUM1-1a	SNA		-3
Parthenocissus quinquefolia	Virginia Creeper	CUM1-1a, CUM1-1b	S4?	6	3
Physocarpus opulifolius	Eastern Ninebark	CUM1-1b	S5	5	-3
Phytolacca americana	Common Pokeweed	CUM1-1a	S4	3	3

Scientific	Common Name	Polygon(s)	S-rank*	CoC**	CoW***
Plantago lanceolata	English Plantain	CUM1-1a, CUM1-1b	SNA		3
Poa pratensis	Kentucky Bluegrass	CUM1-1b	S5	0	3
Populus tremuloides	Trembling Aspen	CUM1-1b	S5	2	0
Potentilla argentea	Silvery Cinquefoil	CUM1-1b	SNA		3
Rhamnus cathartica	European Buckthorn	CUM1-1b	SNA		0
Rhus typhina	Staghorn Sumac	CUM1-1a	S5	1	3
Robinia pseudoacacia	Black Locust	CUM1-1b	SNA		3
Rosa multiflora	Multiflora Rose	CUM1-1a	SNA		3
Rubus idaeus	Red Raspberry	CUM1-1a	S5	2	3
Rubus occidentalis	Black Raspberry	CUM1-1a, CUM1-1b	S5	2	5
Rumex crispus	Curled Dock	CUM1-1b	SNA		0
Sambucus sp.	Elderberry species	CUM1-1a			
Securigera varia	Purple Crown-vetch	CUM1-1b	SNA		5
Sedum acre	Mossy Stonecrop	CUM1-1b	SNA		5
Setaria faberi	Giant Foxtail	CUM1-1a	SNA		3
Setaria sp.	Foxtail grass species	CUM1-1a			
Setaria verticillata	Bristly Foxtail	CUM1-1a	SNA		3
Solanum dulcamara	Bittersweet Nightshade	CUM1-1a	SNA		0
Solanum emulans	Eastern Black Nightshade	CUM1-1a	S5	1	3
Solidago altissima	Tall Goldenrod	CUM1-1a, CUM1-1b	S5	1	3
Solidago juncea	Early Goldenrod	CUM1-1b	S5	3	5
Symphyotrichum lanceolatum	Panicled Aster	CUM1-1a	S5	3	-3
Symphyotrichum novae-angliae	New England Aster	CUM1-1b	S5	2	-3
Symphyotrichum pilosum	Old Field Aster	CUM1-1a, CUM1-1b	S5		3
Tanacetum vulgare	Common Tansy	CUM1-1a, CUM1-1b	SNA		5
Ulmus pumila	Siberian Elm	CUM1-1b	SNA		3
Verbascum thapsus	Common Mullein	CUM1-1a, CUM1-1b	SNA		5
Verbena urticifolia	White Vervain	CUM1-1a	S5	4	0
Viola arvensis	European Field Pansy	CUM1-1a	SNA		5
Vitis riparia	Riverbank Grape	CUM1-1a, CUM1-1b	S5	0	0

Note(s):

* Srank refers to the subnational rank that indicates the rarity and risk of a species within a region, ranging from S1, which indicates a critically imperiled species, to S5, which indicates a regionally secure species.

**CoC refers to the coefficient of conservatism, which indicates species sensitivity to disturbance on a scale of 0 to 10, with the most conservative or sensitive plants receiving a score of 10 and the least receiving a score of 0.

***CoW refers to the coefficient of wetness, which indicates a species' tolerance for soil moisture on a scale of 5 to -5, with -5 being species with a high tolerance for soil moisture, and 5 being species with a low tolerance.

Appendix B

Species at Risk Screening Sources

Table A 1. SAR screening resources

Screening Resource	Description
Natural Heritage Information Center (NHIC)	The Natural Heritage Information Center (NHIC), operated by the Ontario Ministry of Natural Resources and Forestry, collects, reviews, manages and distributes information on Ontario's biodiversity. Data distributed by the NHIC is used in conservation and natural resource management decision making and was a primary resource for this report. Through the NHIC Make-a-Map tool, data on species, plant communities, wildlife concentration areas and natural areas is made accessible to the public and professionals using generalized 1-kilometer grid units to protect sensitive information. The mapping interface provides current and historical occurrences of SAR within the specified grid unit. The database also identifies environmental designations which provide insight into habitat potential, including wetland, areas of natural and scientific interests and woodlands.
Breeding Bird Atlas	The atlas divides the province into 10×10 km squares, and then birders find as many breeding species as possible in each square. Atlassers who know birds well by song complete 5-minute "Point Counts", 25 of which are required to provide an index of the abundance of each species in a square. Data from every square are mapped to show the distribution of each species. Point count data from each square show how the relative abundance of each species varies across the province.
eBird	eBird data document bird distribution, abundance, habitat use, and trends through checklist data collected within a simple, scientific framework. Birders enter when, where, and how they went birding, and then fill out a checklist of all the birds seen and heard during the outing. eBird's free mobile app allows offline data collection anywhere in the world, and the website provides many ways to explore and summarize your data and other observations from the global eBird community. eBird hotspots that are within 1 km of the Study Area are selected for species review.
Ontario Moth Atlas	The Ontario Moth Atlas is a project of the Toronto Entomologists' Association. The atlas currently covers about 250 species from 7 of the best-known families. The atlas presently includes 62,000 records. The last update of the atlas was in April 2020. The atlas is updated at least every 3 months. Most atlas data come from iNaturalist records. However, there is some data from Chris Schmidt of Agriculture Canada, the BOLD (Barcode of Life Datasystems) project of the University of Guelph, and from other records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas.
Ontario Butterfly Atlas	The Ontario Butterfly Atlas is a project of the Toronto Entomologists' Association (TEA). The TEA has been accumulating records and publishing annual seasonal summaries (Ontario Lepidoptera) for 50 years, with the first edition appearing in 1969. Atlas data comes from eButterfly records, iNaturalist records, BAMONA records, and records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas.
i-Naturalist	i-Naturalist is a nature app that helps public identify plants and animals. Using algorithms as well as scientists and taxonomic experts' multiple observations, can be identified at a research scale. This data generated by the iNat community, can be used in science and conservation. The program actively distributes the data in venues where scientists and land managers can find it. I-Naturalist has a project group for (NHIC) Rare species of Ontario. GRA only records observations within 1 km of the Study Area.
Fisheries and Ocean Aquatic Species at Risk Maps	The DFO has compiled critical habitat and distribution data for aquatic species listed under the Species at Risk Act (SARA). The interactive map is intended to provide an overview of the distribution of aquatic species at risk and the presence of their critical habitat within Canadian waters. The official source of information is the Species at Risk Public Registry. Using this map, a 1 km radius circle is outlined around aquatic features located within the Study Area.

Appendix C

Significant Wildlife Habitat Assessment (7E)

Table A 2. Significant Wildlife Habitat Screening for Ecoregion 7E

Wildlife Habitat	Wildlife Species	Candidate SWH		Potential	Rationale	Confirmed Defining Criteria
		ELC Ecosite Codes	Habitat Criteria			
Seasonal Concentration Areas of Animals						
Waterfowl Stopover and Staging Areas (Terrestrial)	American Black Duck Northern Pintail Gadwall Blue-winged Teal Green-winged Teal American Wigeon Northern Shoveler Tundra Swan	CUM CUT1 Plus, evidence of annual spring flooding within these ecosites *Fields with seasonal flooding and waste grains in certain areas are specific to Tundra Swan	• Fields with sheet water during Spring (mid-March to May). • Agricultural fields with waste grain are not SWH unless they have spring sheet water available.	No	• 7/8 indicator wildlife species present in desktop screening, but none observed during BBS. • CUM1-1 ecosites present on property but are very small (>0.5ha) • No evidence of flooding in the spring based on aerial imagery.	• Any mixed species aggregations of 100+ individuals. • The flooded field plus 100-300 m radius, dependent on localized site and adjacent land use. • Annual use of habitat is documented from information sources or field studies. • Specific evaluation methods required.
Waterfowl Stopover and Staging Areas (Aquatic)	Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	• Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. • 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.	No	• No candidate habitat for waterfowl stopover and staging areas (aquatic).	• Aggregations of 100+ of species listed for 7 days, results in >700 waterfowl use days. • Areas with annual staging for ruddy ducks, canvasbacks and redheads. • The combined area of the ELC ecosites and a 100 m radius area. • Wetland area and shorelines associated with sites identified within the SWHTG, Appendix K, are significant wildlife habitat. • Annual use of habitat is documented from information sources or field studies.

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
	White-winged Scoter Black Scoter Ring-necked Duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck					• Specific evaluation methods required.
Shorebird Migratory Stopover Area	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin	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 in May to mid-June and early July to October. • No sewage treatment ponds.	No	• No candidate habitat for shorebird migratory stopover areas.	• Presence of 3 or more of listed species and >1000 shorebird use days during spring or fall migration period. • Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. • The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area. • Annual use of habitat is documented from information sources or field studies • Specific evaluation methods required.
Raptor Wintering Area	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl	Combo of one of each Community Series from: Forest (FOD FOM FOC) and	A combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors.	No	• No candidate habitat for raptor	• One or more Short-eared Owls, OR one or more Bald Eagles, OR at least 10 individuals and two of the listed hawk/owl species.

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
	Special Concern: Short-eared Owl, Bald Eagle	Upland (CUM CUT CUS CUW) Bald Eagle: Forest on shoreline area adjacent to large rivers and lakes FOD FOM FOC SWM SWC	• Need to be >20ha with a combo of forest and upland. • Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands. • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • Eagle sites have open water and large trees and snags available for roosting.		wintering areas.	• To be significant, a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. • For an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area. • Specific evaluation methods required.
Bat Hibernacula	Big Brown Bat Tri-coloured Bat	CCR1 CCR2 CCA1 CCA2 *Buildings are not to be considered SWH	May be found in caves, mine shafts, underground foundations, and Karsts. • Active mine sites are not considered SWH.	No	• No crevices, caves, or abandoned mines known onsite that could accommodate hibernating bats. • No candidate habitat for bat hibernacula.	• All sites with confirmed hibernating bats are SWH. • Area includes a 200 m radius around the entrance of the hibernaculum for most development types and 1,000 m for wind farms. • Studies are to be conducted during the peak swarming period (Aug.-Sept.). • Specific survey methods required.
Bat Maternity Colonies	Big Brown Bat Silver-haired Bat	All Ecosites in: FOD FOM SWD SWM	• Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered SWH). • Not found in caves or mines in ON. • Located in mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees. • Prefer snags in early stages of decay (class 1-3 or class 1 or class 2).	No	• No deciduous woodland on site. • Deciduous woodlands near Property are small, much less than 10ha.	• Maternity Colonies with confirmed use by >10 Big Brown Bats, >5 Adult Female Silver-haired Bats. • The area of the habitat includes the entire woodland or a forest stand ELC Ecosite, or an Ecoelement containing the maternity colonies. • Evaluation methods for maternity colonies should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind Power Projects"

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
			• Silver-haired Bats prefer older mixed or deciduous forests with at least 21 snags/ha.			
Turtle Wintering Areas	Midland Painted Turtle Special Concern: Northern Map Turtle, Snapping Turtle	Snapping and Midland Painted: SW MA OA SA and FEO/BOO Series. Northern Map: Open water areas such as deeper rivers or streams and lakes.	• Wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. • Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. • Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.	No	• There are no ponds suitable for turtle wintering areas located in the Study Area.	• Presence of 5 over-wintering Midland Painted Turtles is significant. • One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. • The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH. • Search for congregations in Basking Areas in spring and fall.
Reptile Hibernaculum	Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake Special Concern: Milksnake Eastern Ribbonsnake	Any ecosite other than very wet. Talus, Rock Barren, Crevice, Cave, Alvar may be directly related. Observations of congregations in spring or fall is good indicator.	• Sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line, such as rock piles or slopes, old stone fences, and abandoned crumbling foundations, assist in identifying candidate SWH. • Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. • Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or	No	• No potential snake hibernacula features observed within the Study Area. • No candidate habitat for snake hibernacula.	• Presence of snake hibernacula used by a minimum of 5 individuals of a snake sp. or individuals of 2 or more snake spp. • Congregations of a minimum of 5 individuals of a snake sp. Or individuals of 2 or more snake spp. near potential hibernacula (e.g. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct). • If there are Special Concern Species present, then site is SWH. • The feature in which the hibernacula is located, plus a 30 m radius area, is the SWH. • Hibernacula are used annually, often by the same individuals (strong site fidelity), and other life processes often take place nearby.

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
			shrubs with sphagnum moss or sedge hummock ground cover.			
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff)	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles, cliff faces, bridge abutments, silos, barns. CUM1 CUS1 BLS1 CLO1 CLT1 CUT1 BLO1 BLT1 CLS1	• Any site or areas with exposed soil banks, undisturbed or naturally eroding, that is not a licensed/permitted aggregate area. • Does not include man-made structures or licensed Mineral Aggregate Operation.	No	• No bank or cliff swallow nesting habitat was observed. • No candidate habitat for colonial-nesting birds.	• Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. • A colony identified as SWH will include a 50 m radius habitat area from the peripheral nests. • Field surveys to observe and count swallow nests are to be completed during the breeding season. • Specific evaluation methods required.
Colonially-Nesting Bird Breeding Habitat (Tree/Shrub)	Great Blue Heron Black-crowned Night Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	• Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. • Most nests in trees are 11-15m from ground, near the top of the tree.	No	• No groups of large stick nests were observed during field investigations. • No candidate habitat for tree/shrub colonial nesting birds.	• Presence of 2 or more active nests of Great Blue Heron or other listed species. • The habitat extends from the edge of the colony and a minimum 300 m radius or extent of the Forest Ecosite containing the colony, or any island <15.0ha with a colony is the SWH. • Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April-Aug) or by evidence such as the presence of fresh guano, dead young and/or eggshells.
Colonially-Nesting Bird Breeding Habitat (Ground)	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or	Nesting colonies on islands or peninsulas associated with open water or in marshy areas. Brewers Blackbird colonies found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands.	No	•No rocky islands or peninsulas are present within the Study Area. • No Brewer's blackbirds encountered (in southern	• Presence of >25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. • Presence of 5 or more pairs for Brewer's Blackbird. • Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant.

Wildlife Habitat	Wildlife Species	Candidate SWH ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
		shrubs (Brewer's Blackbird) MAM1-6 MAS1-3 CUM CUT CUS			Ontario, Brewer's Blackbird known occurrences are primarily restricted to the Bruce Peninsula; none are known to occur in the London Area) • No candidate habitat for ground colonial nesting birds was identified.	• The edge of the colony and a minimum 150 m radius area of habitat, or the extent of the ELC ecosites containing the colony, or any island <3.0ha with a colony, is the SWH. • Studies would be done during May/June when actively nesting. • Specific evaluation methods required
Migratory Butterfly Stopover Areas	Painted Lady Red Admiral Special Concern: Monarch	Combo of one of each: Field (CUM CUT CUS) and Forest (FOC FOD FOM CUP)	• Minimum 10ha in size with a combo of field and forest located within 5 km of Lake Erie or Lake Ontario. • Should not be disturbed. • Field/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. • Should provide protection from the elements, often spits of land or areas with the shortest distance to cross the Great Lakes.	No	• Meadows onsite and forested land beside Property does not meet minimum 10ha size requirement. • No candidate habitat for migratory butterfly stopover areas.	• Presence of Monarch Use Days (MUD) during Fall migration (Aug/Oct) • Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. •MUD of >5000 **or** >3000 with the presence of Painted Ladies or Red Admirals is to be considered significant.

Wildlife Habitat	Wildlife Species	Candidate SWH				Confirmed Defining Criteria
		ELC Ecosite Codes	Habitat Criteria	Potential	Rationale	
Landbird Migratory Stopover Areas	All migratory songbirds	All Ecosites within: FOC FOM FOD SWC SWM SWD	• Woodlots >5ha in size and within 5km of Lake Erie and Lake Ontario. • If woodlands are rare in area, smaller size can be considered. • If multiple woodlands located along shoreline, those 2km from shoreline are more significant. • Sites have a variety of habitats: forest, grassland and wetland complexes. • The largest sites are more significant. • Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Erie and Lake Ontario, are Candidate SWH.	No	• No candidate habitat for migratory landbird stopover areas.	• Use of the habitat by >200 birds/day and with >35 spp. with at least 10 bird spp. recorded on at least 5 different survey dates. • Studies should be completed during spring (Mar-May) and fall (Aug-Oct) migration using standardized assessment techniques. • Specific evaluation methods required.
Deer Winter Congregation Areas	White-tailed deer	All forested ecosites within: FOC FOM FOD SWC SWM SWD Conifer plantations much smaller than 50 ha may be used.	• Woodlots >100 ha in size, or if large woodlots are rare in a planning area woodlots >50ha. • Large woodlots >100ha and up to 1500ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha. • Woodlots with high densities of deer due to artificial feeding are not significant.	No	• No large woodlots >100ha were encountered. • No candidate habitat for deer winter congregation areas.	• Will be mapped by MNRF. • All woodlots exceeding the criteria are significant unless determined not to be by the MNRF. • Studies to be completed during winter when >20cm of snow is on the ground, using aerial survey or pellet count.
Rare Vegetation Communities						
Cliffs and Talus Slopes	N/A	Any Ecosite within: TAO TAS TAT CLO CLS CLT	• A Cliff is vertical to near vertical bedrock >3m in height.	No	• No cliffs or talus slopes were identified.	• Confirm any ELC Vegetation Type for Cliffs or Talus Slopes

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
			• A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris. Most cliff and talus slopes occur along the Niagara Escarpment.		• No candidate habitat for cliffs or talus slopes.	
Sand Barren	N/A	SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicketlike (SBS1), or more closed and treed (SBT1). Tree cover always < 60%	• A sand barren area >0.5ha in size. • Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat, such as forest or savannah. • Vegetation can vary from patchy and barren to tree covered, but less than 60%.	No	• No sand barrens were identified. • No candidate habitat for sand barrens.	• Confirm any ELC Vegetation Type for Sand Barrens. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.).
Alvar	N/A	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 *Five Alvar Indicator Species:* 1) Carex crawei 2) Panicum philadelphicum 3) Eleocharis compressa 4) Scutellaria parvula 5) Trichostema brachiatum	• An Alvar site >0.5ha in size, only known sites are found in the western islands of Lake Erie. • 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. The hydrology of alvars is complex, with alternating periods of inundation and drought. • Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands, and comprising several characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse,	No	• No alvars were identified. • No candidate habitat for alvars.	• Studies that identify four of the five ***Alvar Indicator Species*** at a Candidate Alvar site is Significant. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). • The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses.

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
			supporting many uncommon or are relict plant and animal species. • Vegetation cover varies from patchy to barren, with less than 60% tree cover.			
Old Growth Forest	N/A	FOD FOC FOM SWD SWC SWM	• Woodland area is >0.5ha • Characterized by heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	No	• No old growth forests were identified. • No candidate habitat for old growth forests.	• If dominant tree species of the area are >140 years old, then the area containing these trees is SWH. • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities. • The area of forest ecosites combined or an eco-element within an ecosite that contain the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest area containing the old growth characteristics.
Savannah	N/A	TPS1 TPS2 TPW1 TPW2 CUS2	• A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%. • No minimum size to site. • Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH. • Remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario).	No	• Tree cover in woodland too dense to qualify as savannah. • No candidate habitat for savannahs.	• Field studies confirm one or more of the Savannah indicator species found in Appendix N, Ecoregion 7E of the SWHTG, OMNR (2000). • Entire area of the ELC Ecosite is SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic species).
Tallgrass Prairie	N/A	TPO1 TPO2	• A Tallgrass Prairie has ground cover dominated by prairie grasses.	No	• No tall grass prairies were identified.	• Field studies confirm one or more of the Prairie indicator species in Appendix N, Ecoregion 7E of the SWHTG, OMNR (2000).

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
			• An open Tallgrass Prairie habitat has <25% tree cover. • No minimum size to site. • Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH.		• No candidate habitat for tall grass prairies.	• Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.)
Other Rare Vegetation Communities	N/A	Provincially Rare S1, S2 and S3 ELC Vegetation Types.	May include beaches, fens, forest, marsh, barrens, dunes, and swamps. See OMNRF/NHIC for up-to-date list of rare vegetation communities.	No	• No rare vegetation communities were identified. • No candidate habitat for rare vegetation communities.	• Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG, OMNR (2000). • Area of the ELC Vegetation Type polygon is the SWH.
Specialized Habitat for Wildlife						
Waterfowl Nesting Area	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard	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 PSWs	• A waterfowl nesting area extends 120 m from a wetland (>0.5ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120 m or a cluster of 3 or more small (<0.5ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. • Wood Ducks and Hooded Mergansers utilize large diameter trees (>40 cm dbh) in woodlands for cavity nest sites. • Upland areas should be at least 120 m wide so that predators such as racoons,	No	• There were no aggregations of nesting waterfowl observed in the meadow marsh community during spring field investigations. • No candidate habitat for waterfowl nesting areas.	• Presence of 3 or more nesting pairs for listed species excluding Mallards OR presence of 10 or more nesting pairs for listed species including Mallards. • Any active nesting site of an American Black Duck is considered significant. • Nesting studies should be completed during the spring breeding season (April-June). • Specific evaluation methods required. • A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
			skunks, and foxes have difficulty finding nests.			habitat for waterfowl to successfully nest.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey Special Concern: Bald Eagle	ELC Forest Community Series: FOD FOM FOC SWD SWM and SWC directly adjacent to riparian areas (rivers, lakes, ponds and wetlands)	• 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. • Osprey nests are usually at the top of a tree, whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy.	No	• No large stick nests were identified. • No candidate habitat for Osprey or Bald Eagle habitat.	• One or more active Osprey or Bald Eagle nests in an area. • Some species have more than one nest in a given area, and priority is given to the primary nest, with alternate nests included within the area of the SWH. • For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH with additional requirements. • For a Bald Eagle, the active nest and a 400-800 m radius around the nest is the SWH with additional requirements. • To be significant, a site must be used annually. • When found inactive, the site must be known to be inactive for >3 years or suspected of not being used for >5 years before being considered not significant. • Observational studies to determine nest site use, perching sites and foraging areas need to be done from early March to mid-August. • Specific evaluation methods required.
Woodland Raptor Nesting Habitat	Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	May be found in all forested ELC Ecosites. May also be found in: SWC SWM SWD CUP3	• All natural or conifer plantation woodland/forest stands >30ha with >4ha of interior habitat. • Interior habitat determined with a 200 m buffer.	No	• No forest interior habitat present within Study Area. • No candidate	• Presence of 1 or more active nests from species list is considered significant. • Red-shouldered Hawk and Northern Goshawk – A 400 m radius around the nest or 28ha area of habitat is the SWH (the 28ha habitat

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
			• 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 Cooper's hawk nest along forest edges, sometimes on peninsulas or small offshore islands. • In disturbed sites, nests may be used again, or a new nest will be near old nest.		habitat for woodland raptor nesting.	area would be applied where optimal habitat is irregularly shaped around the nest). • Barred Owl – A 200 m radius around the nest is the SWH. • Broad-winged Hawk and Coopers Hawk – A 100 m radius around the nest is the SWH. • Sharp-Shinned Hawk – A 5 0m radius around the nest is the SWH. • Conduct field investigations from early March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area.
Turtle Nesting Areas	Midland Painted Turtle Special Concern: Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	• Best nesting habitat for turtles are close to water and 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.	No	• No natural areas of exposed mineral soil in the Study Area. • Access to and from nearby Grand River impeded by railroad. • No candidate habitat for turtle nesting areas.	• Presence of 5 or more nesting Midland Painted Turtles. • One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. • The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100 m around the nesting area, dependant on slope, riparian vegetation and adjacent land use, is the SWH. • Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100 m area of habitat. • Field investigations should be conducted in prime nesting season, typically late spring to early summer. • Observational studies observing the turtles nesting is a recommended method.

Wildlife Habitat	Wildlife Species	Candidate SWH				Confirmed Defining Criteria
		ELC Ecosite Codes	Habitat Criteria	Potential	Rationale	
Seeps and Springs	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	• Where groundwater 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.	No	• Wooded area not within headwater areas. • No candidate wildlife habitat for seeps and springs.	• Presence of a site with 2 or more seeps/springs should be considered SWH. • The area of an ELC forest ecosite or an eco-element within ecosite containing the seeps/springs is the SWH. • The protection of the recharge area, considering the slope, vegetation, height of trees and groundwater condition, need to be considered in delineation the habitat.
Amphibian Breeding Habitat (Woodland)	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	All Ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM SWD • Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	• Presence of a wetland, pond or woodland pool (including vernal pools) >500 m^2 (about 25 m diameter) within or adjacent (within 120m) 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.	No	• No candidate wildlife habitat for amphibian breeding habitat (woodlands) within the Study Area.	• Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or egg masses) or 2 or more of the listed frog species with Call Level Codes of 3. • A combo of observational and call count surveys required during the spring (March-June). • The habitat is the wetland area plus a 230m radius of woodland area. • If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat.
Amphibian Breeding Habitat (Wetlands)	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus	SW MA FE BO OA SA • Typically, these wetland ecosites will be isolated (>120m) from woodland ecosites; however, larger	• Wetlands >500 m^2 (about 25 m diameter), supporting high species diversity, are significant. • Some small or ephemeral habitats may not be identified on MNRF mapping and could	No	• No candidate wildlife habitat for amphibian breeding habitat (wetlands).	• Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or egg masses) or 2 or more of the listed frog/toad species with Call

Wildlife Habitat	Wildlife Species	Candidate SWH ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
	Northern Leopard Pickerel Frog Green Frog Mink Frog Bullfrog	wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	be important amphibian breeding habitats. • 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. • Bullfrogs require permanent water bodies with abundant emergent vegetation.			Level Codes of 3 **or** Wetland with confirmed breeding Bullfrogs are significant. • The ELC ecosite wetland area and the shoreline are the SWH. • A combo of observational and call count surveys will be required during the spring (March-June). • If a SWH is determined for Amphibian Breeding Habitat (Wetlands), then Movement Corridors are to be considered.
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)						
Woodland Area-Sensitive Bird Breeding Habitat	Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren Pileated Woodpecker Special Concern: Cerulean Warbler Canada warbler	FOC FOM FOD SWC SWM SWD	• Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30ha. • Interior forest habitat is at least 200m from forest edge habitat.	No	• No forest interior habitat identified in the Study Area. • No candidate habitat for woodland area-sensitive breeding bird habitat.	• Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. *Any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. • Conduct field investigations in spring and early summer. • Specific evaluation methods required.
Marsh Bird Breeding Habitat	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites	• Nesting occurs in wetlands. • All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. • For Green Heron, habitat is at the edge of water, such as sluggish streams, ponds and	No	• No wetlands occurring within Study Area. • No candidate habitat for marsh	• Presence of 5 or more nesting pairs of Sedge Wren **or** Marsh Wren or breeding by any combination of 4 or more of the listed species. • Any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH.

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
	Common Loon Green Heron Trumpeter Swan Special Concern: Black Tern Yellow Rai		marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.		breeding birds.	• Area of the ELC ecosite is the SWH. • Breeding surveys should be done in May/June. • Specific evaluation methods required.
Open Country Bird Breeding Habitat	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow Special Concern: Short-eared Owl	CUM1 CUM2	• Large grassland areas (includes natural and cultural fields and meadows) >30ha. • Grasslands not Class 1 or 2 agricultural lands and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). • Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. • The Indicator bird species are area sensitive, requiring larger grassland areas than the common grassland species.	No	• No meadows >30ha identified. • No candidate habitat for open country breeding bird habitat.	• Presence of nesting or breeding of 2 or more of the listed species. • A field with 1 or more breeding Short-eared Owls is to be considered SWH. • The area of SWH is the contiguous ELC ecosite field areas. • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Specific evaluation methods required.
Shrub/Early Successional Bird Breeding Habitat	<u>Indicator Spp:</u> Brown Thrasher Clay-coloured Sparrow <u>Common Spp:</u> Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher <u>Special Concern:</u> Yellow-breasted Chat	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 • Patches of shrub ecosites can be complexed into a larger habitat for some bird species.	• Large field areas succeeding to shrub and thicket habitats>10ha in size. • Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no rowcropping, haying or livestock pasturing in the last 5 years). • Shrub thicket habitats (>10ha) are most likely to	No	• No large field areas succeeding to shrub and thicket habitat >10ha in size.	• Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. • A habitat with breeding Yellow-breasted Chat or Golden-winged Warbler is to be considered as SWH. • The area of the SWH is the contiguous ELC ecosite field/thicket area. • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
	Golden-winged Warbler		support and sustain a diversity of these species. • Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands.			defending their territories. • Specific evaluation methods required
Terrestrial Crayfish	Chimney or Digger Crayfish (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish (*Cambarus diogenes*)	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1 with inclusions of above meadow marsh ecosites can be used by terrestrial crayfish.	• Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. • Usually, the soil is not too moist, so that the tunnel is well formed. • Can often be found far from water.	No	• No wet meadows or marshes present within Study Area. • No candidate habitat for terrestrial crayfish.	• Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites. • Area of ELC ecosite or an eco-element area of meadow marsh or swamp within the larger ecosite area is the SWH. • Surveys should be done April to August in temporary or permanent water. • Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult.
NHIC species element occurrences and field observations of Special Concern and rare wildlife species	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species.	All plant and animal element occurrences (EO) within a 1 or 10km grid.	Identified within a 1 or 10km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites.	Yes	•Potential for several S1-S3 species present within site, to be confirmed or denied during site visits.	• Visual confirmation of foraging Barn Swallows during two breeding bird surveys. • Singing male Eastern Wood-pewee detected in suitable breeding habitat.
			Animal Movement Corridors			
Amphibian Movement Corridors	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander	Corridors may be found in all ecosites associated with water. Corridors will be determined based on	Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is	No	• No candidate amphibian breeding habitat	• Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites.

Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Candidate SWH Habitat Criteria	Potential	Rationale	Confirmed Defining Criteria
	Gray Treefrog Western Chorus Northern Leopard Pickerel Frog Green Frog Mink Frog Bullfrog	identifying the significant breeding habitat for these species.	confirmed as SWH from this Schedule.		(wetland) identified in the Study Area. • No candidate habitat for amphibian movement corridors.	• Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant. • Corridors should have at least 15 m of vegetation on both sides of waterway or be up to 200 m wide of woodland habitat and with gaps <20m. • Shorter corridors are more significant than longer corridors; however, amphibians must be able to get to and from their summer and breeding habitat.
Exceptions for EcoRegion 7E						
Bat Migratory Stopover Area	N/A	No specific ELC types.	Long-distance migratory bats typically migrate during late summer and early fall from summer breeding habitats throughout Ontario to southern wintering areas. Their annual fall migration may concentrate these species of bats at stopover areas.	No	No habitat features on site.	Only confirmed site is Long Point. Confirmation criteria and habitat areas are still being determined.