# Area-Specific Transportation Master Plan

## Integrated Major Transit Station Area Study for Central Oshawa

## Natural Environment Assessment Report

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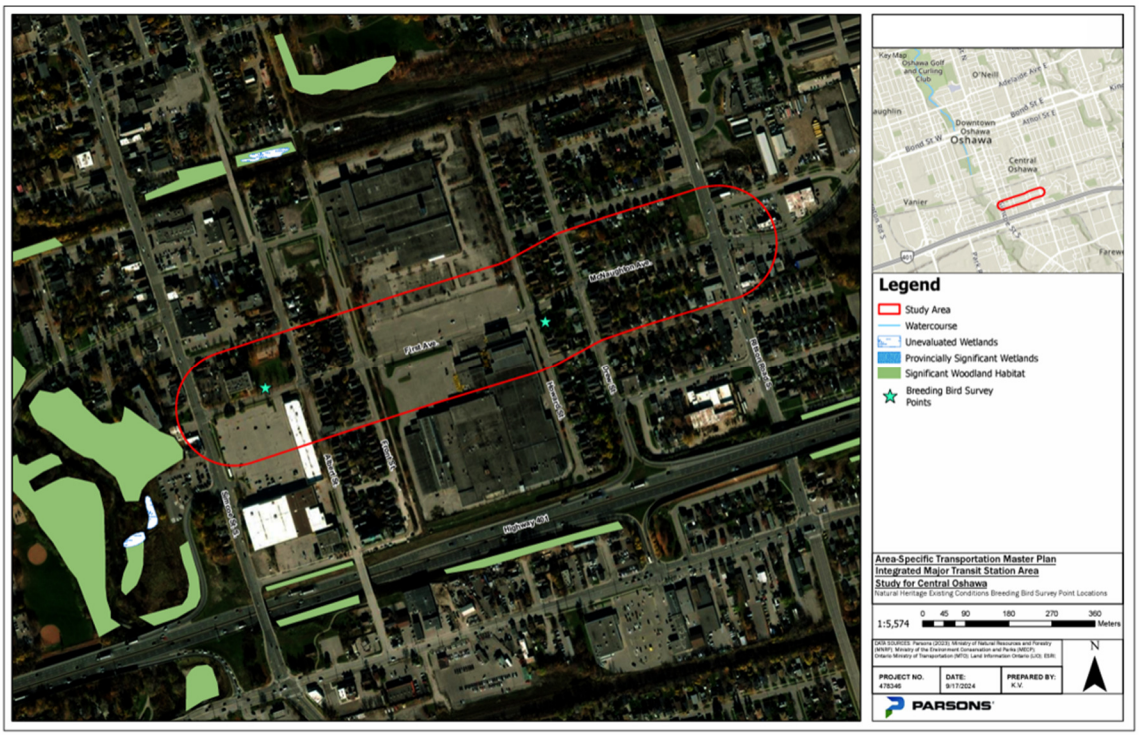
# 1.0 INTRODUCTION

The City of Oshawa has commenced a study to develop a Land Use and Urban Design Plan and an area-specific Transportation Master Plan (T.M.P.). The T.M.P. is being completed in accordance with the Master Planning Process under the Municipal Class E.A. following "Approach 3" (Municipal Engineers Association 2024). Approach 3 fulfills Phases 1 through 4 for Schedule B and C projects identified in the Master Plan. The T.M.P. identified one Schedule C project ("the project") is the reconstruction of First Avenue/McNaughton Avenue/Dean Avenue to provide a complete street incorporating active transportation facilities.

This Natural Environment Assessment Report was completed in support of the project identified from the T.M.P. which is widening of First Avenue/McNaughton Avenue between Simcoe Street South and Ritson Road South to incorporate complete street elements. This report documents areas of existing natural features, habitats, outcome of targeted surveys and concludes with potential constraints for the project. The natural environment study area (hereafter, "study area") was established in consideration of the requirements of the Natural Heritage Reference Manual for the Provincial Policy Statement (M.M.A.H. 2020) as 120m surrounding the defined road limits for the project as illustrated in (**Figure 1-1**).

Figure 1-1 Natural Environment Assessment Study Area




## 1.1 Scope of Natural Environment Assessment

The scope of the studies completed to support the project included:

- Review and consideration of relevant policy at the federal, provincial, and municipal levels that guides natural environment protection as related to the project;
- Gather natural environment background information about the study area in which the project is proposed;
- Identify natural environment features;
- Compile wildlife records which may identify potential habitat for provincially rare species and/or Species at Risk (S.A.R.) and/or Species of Special Concern;

- Complete vegetation community inventory through the use of Ecological Land Classification (E.L.C.);
- Conduct a tree inventory and vegetation assessment; and
- Identify natural environment constraints for the project.

For this report, the background review will collect and search current records (i.e., ≤ 30 years old) that occur within the study area.

# 2.0 REGULATORY FRAMEWORK

The regulatory framework provides guidance on the protection of natural environment features and evaluation of significance. Features identified within the study area were evaluated against applicable federal, provincial, and municipal planning policies.

## 2.1 Federal Legislation

### 2.1.1 Fisheries Act

The *Fisheries Act* sets out provisions to protect fish and fish habitat. In 2018, amendments were made to the *Act* with the aim to provide for the sustainability, proper management and control of fisheries and to restore lost protections to ensure the conservation and protection of fish and fish habitat, including the prevention of pollution. Applicable provisions include:

- *"34.4(1) No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish."*
- *"35(1) No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat."*
- *"36(3) …no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water."*

The *Fisheries Act* requires that projects avoid causing the death of fish and the Harmful Alteration, Disruption or Destruction (H.A.D.D.) of fish habitat unless authorized by the Minister of Fisheries and Oceans Canada (D.F.O.) or a designated representative. As per amendments made to the *Fisheries Act* in 2018, proponents have the responsibility to follow the measures to protect fish and fish habitat during the implementation of proposed projects in or near water to avoid potential impacts of the project resulting in the death of fish or the harmful alteration, disruption or destruction of fish habitat, as defined by the *Act*. Should the project activities follow the specific criteria outlined within the measures to protect fish and fish habitat, the project can proceed without D.F.O. review. However, should the project activities not meet the D.F.O. measures to protect fish and fish habitat criteria, the project may result in the death of fish or the harmful alteration, disruption or destruction of fish habitat and would require review by D.F.O. under the Fisheries Protection Provisions of the *Fisheries Act*.

### 2.1.2 Species at Risk Act

The federal *Species at Risk Act, 2002* (S.A.R.A.) includes provisions for the protection of species that are classified as Extirpated, Endangered and Threatened in Schedule 1 of the *Act*. This includes protection to the species and their residence (e.g., nest, den), including critical habitat. Critical habitat is defined as those habitats necessary for the survival or recovery of a listed species, as identified in the recovery strategy or in an action plan for the species. While the S.A.R.A. applies to species on federal land, such as Canadian oceans and waterways, national parks, national wildlife areas, some migratory bird sanctuaries and First Nations reserve lands, it also applies to migratory birds protected under the Migratory Birds Convention Act (M.B.C.A.) and fish, anywhere they occur. Under section 73 of the S.A.R.A., the competent minister may enter into an agreement or issue a permit authorizing an activity affecting a listed wildlife species, any part of its critical habitat, or the residences of its individuals and provided that the activity meets the following purposes:

- The activity is scientific research relating to the conservation of the species and conducted by qualified persons;
- The activity benefits the species or is required to enhance its chance of survival in the wild; or
- Affecting the species is incidental to the carrying out of the activity.

### 2.1.3 Migratory Birds Convention Act

The *Migratory Birds Convention Act, 1994* (M.B.C.A.) and associated Regulations have the goal of ensuring the conservation of migratory bird populations by regulating potentially harmful human activities. Environment and Climate Change Canada (E.C.C.C.) administers the M.B.C.A. through the Migratory Birds Regulations and Migratory Birds Sanctuary Regulations. The M.B.C.A. protects migratory birds listed in the *Act* and applies to all lands in Canada regardless of ownership.

Section 12 of the M.B.C.A. prohibits capturing, killing, injuring, taking or disturbing of migratory birds, their eggs and nests listed in the *Act*. Aquatic and other habitats used by migratory birds is also protected in accordance with section 5 of the M.B.C.A. This includes prohibitions on depositing (or allowing to be deposited) substances harmful to migratory birds, including in areas frequented by migratory birds, or that has the potential to enter waters where they occur.

Under section 5 of the M.B.C.A., killing or harming listed migratory birds and/or disturbing or destroying their nests or eggs is prohibited without authorization. Compliance under the M.B.C.A. is typically mitigated through avoidance, such as adhering to timing windows for works that may impact species to occur outside of the active breeding window (e.g., April 1 - August 31), where feasible. Works can occur during the active period provided that the activities do not impact the species. If activities are occurring in bird habitat during the breeding period, nest sweeps should be completed prior to any works to minimize risk of injury or incidental take. Permits are not issued for potential for incidental take except where there may be risk to human health and safety.

#### 2.1.3.1 Migratory Birds Convention Act Regulations, 2022

Updated regulations to the *Act*, adopted in 2022, include provisions for the year-round protection of nests of 18 species of migratory birds, identified on Schedule 1 of the *Act*, which reuse nests (E.C.C.C. 2023a). Removal of the inactive nests of these species requires that either notification be provided to E.C.C.C. through the Abandoned Nest Registry, or a species-specific waiting period of 18-36 months be respected in order to establish a nest as abandoned. Schedule 1 species include Pileated Woodpecker as well as herons and egrets.

## 2.2 Provincial Legislation

### 2.2.1 Environmental Assessment Act

The *Ontario Environmental Assessment Act* (E.A.A. 1990) was created to provide for the protection, conservation, and wise management of the environment in the province of Ontario. The E.A.A. forms the basis and foundation for environmental assessments (E.A.) undertaken within the province and identifies two planning and approval processes: Individual E.A.'s and Class E.A.'s.

Class E.A.'s, once approved by the Ministry of Environment, Conservation and Parks (M.E.C.P.), provide for specific classes of undertakings to follow an alternative planning and decision-making process that is different and less burdensome than that of an individual E.A. (which is laid out in Part II of the E.A.A.). Provided that the approved process is followed, undertakings conducted under Class E.A.'s have obtained approval under the E.A.A. and can proceed with implementation, given that all other approvals have been obtained. Class E.A.'s provide a more streamline process since the effects on the environment of the undertakings within that class are generally common or well understood.

### 2.2.2 Provincial Policy Statement

The natural heritage policies of the Provincial Policy Statement, 2020 (P.P.S.) was issued under section 3 of the *Planning Act*; and came into effect May 1, 2020 (Ministry of Municipal Affairs and Housing (M.M.A.H. 2020).

The natural heritage policies of the P.P.S. (Section 2.1) indicate that natural features shall be afforded long term protection such as maintenance, restoration, and improved function of diversity, connectivity, ecological function, and biodiversity of natural heritage systems as noted below. Oshawa is located in Ecoregion 6E:

*2.1.4 Development and site alteration will not be permitted in:*

*a. significant wetlands in Ecoregions 5E, 6E and 7E; and,*
*b. significant coastal wetlands.*

*2.1.5 Unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration will not be permitted in:*

*a. significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;*
*b. significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);*
*c. significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's 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 2.1.4(b).*

*2.1.6 Development and site alteration will not be permitted in fish habitat except in accordance with provincial and federal requirements;*

*2.1.7 Development and site alteration will not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements;*

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

*2.1.9 Nothing in policy 2.1 is intended to limit the ability of agricultural uses to continue.*

Development is defined in the P.P.S. as "*the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act*". Among other things, "*activities that create or maintain infrastructure authorized under an environmental assessment process*" are not considered development (M.M.A.H. 2020). Notwithstanding, avoidance or minimization of impacts on natural heritage features is considered an objective when planning, designing, and constructing infrastructure projects.

It should be noted that since writing, the P.P.S. has been superseded by the Provincial Planning Statement released in late August 2024. The natural heritage provisions as they apply to this project are largely the same.

### 2.2.3 Conservation Authorities Act

Section 28(1) of the *Conservation Authorities Act* empowers Conservation Authorities (C.A.'s) with the ability to make regulations governing development that can have an impact to watercourses, water bodies and wetlands. Under the *Act*, a permit is required from the applicable C.A. before any site alteration to a watercourse, water body, or wetland. C.A.'s also have the authority to grant permission to straighten, change, divert, or interfere with the existing channel of a river, creek, stream, or watercourse, or to change or interfere with a wetland under conditions outlined in The *Act* and associated regulation. The study area is within the jurisdiction of the Central Lake Ontario Conservation Authority (CLOCA) and regulated lands are captured under O.Reg. 42/06.

### 2.2.4 Endangered Species Act

The *Endangered Species Act, 2007* applies to species that are designated as Extirpated, Endangered or Threatened and listed on the Species at Risk in Ontario (S.A.R.O.) List (Ontario Regulation (O. Reg) 230/08). The E.S.A. includes provisions to ensure protection to the species and their habitat. Species designated as Special Concern are not given species or habitat protection under the *Act*. General habitat protection applies to all

Endangered and Threatened species with species-specific habitat protection also given to those species with regulated habitat, as identified in Ontario Regulation 242/08.

In order to balance protection and recovery goals with social and economic considerations, the E.S.A. also gives the Minister of Environment, Conservation and Parks the authority to issue permits or enter into agreements with proponents in order to authorize activities which would otherwise be prohibited by subsections 9(1) or 10(1) of the *Act*. The provisions under section 17 (2) of the E.S.A. include the authorization of activities that would otherwise contravene the *Act* through the issuance of an Overall Benefit Permit as long as an overall benefit to the species in Ontario is provided. Ontario Regulation 242/08 also outlines various exemptions or agreements that may be employed under the *Act*, which are project or species-specific. This may include registering the project activities and preparing a mitigation plan through a streamlined approval process.

Currently, no specific protection is afforded to species listed as Special Concern under the E.S.A., however as noted above, Special Concern species are considered Species of Conservation Concern (S.o.C.C.) and thus their habitat is considered Significant Wildlife Habitat and receives protection under the P.P.S.

## 2.3 Municipal Legislation

### 2.3.1 Region of Durham Official Plan

The Durham Regional Official Plan (R.O.P.) is the core planning document for the Region of Durham, which guides decisions on how to grow the region's cities and towns, and how to protect and improve its natural and rural environments. The Region of Durham is made up of eight local area municipalities.

The Durham R.O.P. was prepared under the Government of Ontario's *Planning Act*. 2.3.43

Any proposal for development or site alteration in proximity to key natural heritage or hydrologic features shall be required to include an Environmental Impact Study as part of a complete application. The Region, in consultation with the respective area municipality, conservation authority and applicant, may select and retain a qualified environmental consultant to peer review the study at the proponent's expense. Such a study shall apply to the area to be developed, or may be expanded to include additional lands, as may be deemed necessary by the Region, in consultation with the respective area municipality, conservation authority and any other appropriate agency, and it shall address the following:

a) the location and nature of the development;
b) the mapping of the location and extent of the environmental conditions, which may include key natural heritage or hydrologic features;
c) the degree of sensitivity of the environmental conditions and an evaluation of such conditions;
d) an assessment of the potential impacts including cumulative impacts on the environment;
e) the need for any measures to protect and/or mitigate negative impacts to key natural heritage or hydrologic features and functions and the surrounding environment, and definitions of such measures;
f) applicable environmental considerations of the Greenbelt Plan;
g) where applicable, assess the significance of the key natural heritage and hydrologic features; and
h) any other matters deemed necessary by Regional Council.

Such study may also include the requirements of a natural heritage evaluation and/or a hydrological evaluation, as detailed in the Oak Ridges Moraine Conservation Plan, in accordance with Policy 10B.2.7.

### 2.3.2 City of Oshawa Official Plan

The City of Oshawa's Official Plan outlines various policies and guidelines regarding environmental assessments to ensure sustainable development and the protection of natural resources. While the specific details can be found in the official document, key points generally include:

1. **Environmental Protection**: The plan emphasizes the protection of natural heritage features and areas, including wetlands, woodlands, and wildlife habitats. Environmental assessments are required to identify and mitigate potential impacts on these features.
2. **Sustainable Development**: Development proposals must demonstrate that they will not adversely affect the environment. This includes conducting environmental assessments to evaluate potential impacts and proposing measures to mitigate any identified risks.
3. **Public Consultation**: The plan encourages public participation in the environmental assessment process to ensure that community concerns and values are considered in decision-making.
4. **Compliance with Legislation**: All environmental assessments must comply with provincial and federal regulations, including the Ontario Environmental Assessment Act and the Canadian Environmental Assessment Act.
5. **Adaptive Management**: The plan supports the use of adaptive management strategies to address unforeseen environmental impacts and to ensure continuous improvement in environmental protection practices.

# 3.0 METHODOLOGY

The existing conditions for the study area have been described based on a desktop review of publicly available information.

### 3.1.1 Review of Background information

Prior to commencing field investigations, background information was collected including SAR, and environmental conditions for the study area compiled from the following on-line sources:

- The Natural Heritage Information Centre (N.H.I.C.) online mapping provided by M.N.R.F.;
- Ontario Breeding Bird Atlas (O.B.B.A. Bird Studies Canada et al., 2006);
- Ontario Reptile and Amphibian Atlas (O.R.A.A., 2019);
- iNaturalist (Accessed in June 2024);
- Ontario Butterfly Atlas (O.B.A. Macnaughton et al., 2022);
- Atlas of the Mammals of Ontario (Dobbyn, 1994); and
- eBird (Accessed in June 2024).

All background information retrieved was compiled into a preliminary description of the study area and data gaps were identified to be addressed during field investigations. Key data and information were compiled with recent field investigations to summarizes existing conditions and identify terrestrial resources and habitats. Significant terrestrial features or functions were flagged for the application of specific mitigation/protection requirements and to identify potential regulatory permits and approvals.

A data request was not submitted to M.E.C.P. for this project. Recent direction from M.E.C.P. has clarified that *Endangered Species Act* (E.S.A.) Authorization or exemption is now a proponent-led process and indicates that the person carrying out the activity is responsible for determining whether S.A.R. and their habitat are present on or around the site of the activity, and ultimately ensuring their actions do not contravene the E.S.A. S.A.R. screening has been completed on behalf of the proponent (**Section 6.0**).

# 4.0 DESCRIPTION OF THE NATURAL ENVIRONMENT

## 4.1 Aquatic Environment

Surface water features may include headwaters, rivers, streams, seepage areas and associated riparian area. the study area lies in the Oshawa Creek watershed within the purview of the Central Lake Ontario Conservation Authority. Oshawa Creek is the closest surface water feature, located beyond the study area to the west. There are no lands designated under Ontario Regulation 42/06.

## 4.2 Terrestrial Environment

The study area is located within the Oshawa-Cobourg Ecodistrict 6E-13. This area extends from the shorelines of Lake Ontario made up of Iroquois sand plains (Henson and Brodribb 2005).

Natural vegetation cover within Ecodistrict 6E-13 is primarily composed of forest and swamp along with other wetlands and alvar communities to a lesser degree (Henson and Brodribb 2005). Common forest species that are characteristic for this region include Sugar Maple (*Acer saccharum*), Red Maple (*Acer rubrum*), ash species (Fraxinus sp.), and American Beech (*Fagus grandifolia*) to name a few.

Due to the area being highly urbanized and developed, very few opportunities for wildlife exist within the study area. Large trees provide forage and nesting opportunities for rodents such as Eastern Grey Squirrel (Sciurus carolinensis), which were observed during tree inventory, however no other habitat opportunities were observed during field investigations.

## 4.3 Wetlands

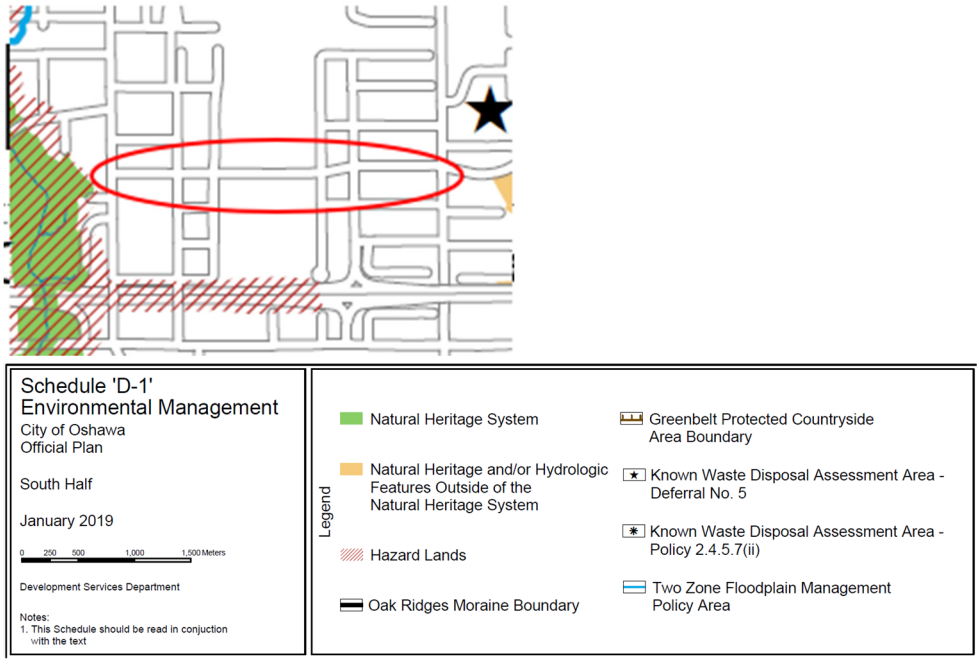
Wetlands within Ontario can have varying designations based on whether a wetland has been evaluated as per the Ontario Wetland Evaluation System (O.W.E.S.). As such, wetlands can be defined as either provincially significant, other-evaluated, or unevaluated. Provincially Significant Wetlands (P.S.W.) are the most valued and receive protection under the P.P.S. (MMAH 2020). The study area is absent of P.S.W's and Non-significant wetlands (**Figure 1-1**).

## 4.4 Natural Heritage Features

Natural heritage features are shown in Schedule D-1 and D-2, F1-A, F1-B of the City of Oshawa Official Plan. Schedule D-1 illustrates that the study area is absent of all features, except for the natural heritage system and hazard lands are slightly within the 120m boundary (

**Figure** 4-1).

Figure 4-1 Schedule D-1 Environmental Management City of Oshawa Official Plan




Schedule D-2, F1-A and F1-B are not shown as there are no features within the study area this includes: Oak Ridges Moraine boundary, Greenbelt protected countryside area, Greenbelt natural heritage system, Lake Iroquois beach, shoreline buffer, high volume recharge areas and high potential mineral aggregate areas.

Several specific natural heritage features require consideration for protection under the Ontario P.P.S. (M.M.A.H. 2020). The protection of these features is generally administered by the City of Oshawa, consistent with relevant provincial and federal legislation. These features are: - P.S.W's, Significant Woodlands, Significant Valleylands, Areas of Natural and Scientific Interest (A.N.S.I.). The study area is absent of these features.

## 4.5 Species at Risk and Species of Special Concern

This report considers S.A.R. as species classified as Extirpated, Endangered, or Threatened and protected under the *Endangered Species Act, 2007* (E.S.A.) and/or *Species at Risk Act, 2002* (S.A.R.A.). This includes:

- Provincially protected species on the Species at Risk in Ontario (SARO) List under O. Reg. 230/08.
- Federally listed migratory birds and fish on Schedule 1 of SARA; these species are protected anywhere they occur, including non-federal lands. All other federally listed species are generally[1] (except through an Order) only protected under the S.A.R.A. if they occur on federal lands.

A review of online resources (e.g., wildlife atlas records, N.H.I.C. database) identified S.A.R. with historical occurrence records that overlap with the study area, either within 1 km (as per N.H.I.C.) or 10 km (as per wildlife atlas records) These are provided in **Appendix A**.

[1] SARA can make a ministerial order to protect species and their critical habitat on non-federal lands that are not already subject to the provisions of the *Act*.

# 5.0 TARGETED SURVEYS

### 5.1.1 Site Visits

Parsons conducted targeted surveys within the study area on one site visit in the spring of 2024 (**Table 5-1**). Existing conditions and observations were documented by hand-written notes, digital note recording, handheld GPS, and digital camera (**Appendix B**). Natural heritage features assessed included that of vegetation communities, wildlife habitat, potential S.A.R. and habitat suitable for S.A.R., breeding bird survey and tree inventory. Surveys were conducted from publicly accessible lands including City lands and right-of-way (R.O.W.).

Table 5-1 Site Visit Details

| Date | Time | Reason for Visit | Weather | Staff |
|---|---|---|---|---|
| June 4, 2024 | 9:47-10:02am | Breeding Birds | 18°C 25% cloud high road noise, slight breeze | KV, DS |
| | 12:00pm-12:30pm | E.L.C. Vegetation communities | 20°C 25% cloud high road noise, slight breeze | KV, DS |
| | 10:15am-12:00pm | Tree Inventory | 20°C 25% cloud high road noise, slight breeze | KV, DS |

## 5.2 Breeding Bird Surveys

The breeding bird survey was modified from the protocols outlined in the Ontario Breeding Bird Atlas for point counts (Ontario Breeding Bird Atlas 2021), Forest Bird Monitoring Program (F.B.M.P. 2016). The survey methodology included:

- Point count stations that were at least 250m apart (F.B.M.P. 2016) to avoid double counting;
- Sessions were conducted between May 24 and July 10 according to the Breeding Bird timing window for Southern Ontario;
- Visits had regard for timing guidance and generally were conducted between 05:00am and 10:00am, five minutes per station
- Surveys were conducted during appropriate weather conditions (i.e., with light winds and no heavy rain).

Further details regarding the site visit are provided in **Table 5-1,** point count stations are shown in **Figure 1-1**.

### 5.2.1 Results

A total of eight species of birds were observed displaying some form of breeding behavior during the single survey (**Table 5-2**). Additionally, two species were recorded as incidental observations: Ring-billed Gull (*Larus delawarensis*) and Chimney Swift (*Chaetura pelagica*).

Table 5-2 Results of Breeding Bird Survey

| COMMON NAME | SCIENTIFIC NAME | STATION |
|---|---|---|
| American Robin | *Turdus migratorius* | 1,2 |
| Mouring Dove | *Zenaida macroura* | 2 |
| Killdeer | *Charadris vociferus* | 2 |
| American Goldfinch | *Spinus tristis* | 2 |
| House Sparrow | *Passer domesticus* | 1 |
| Red-winged Blackbird | *Agelaius phoeniceus* | 2 |
| Ring-billed Gull | *Larus delawarensis* | 2 |
| Chimney Swift | *Chaetura pelagica* | 1 |
| European Starling | *Sturnus vulgaris* | 1,2 |
| American Crow | *Corvus brachyrhynchos* | 1,2 |

MBCA Schedule 1 Bird Nest Surveys

Specific surveys for Schedule 1 bird nests and species were not carried out during the site investigation. Due to the absence of mature forest stands, suitable snag trees and wetlands within the study area, habitat for these species was not anticipated. Habitat for Schedule 1 birds and their nests was further confirmed during the tree inventory assessment as each tree was assessed and observed in detail. The lack of evidence observed pertaining to species listed in Schedule 1 did not trigger any further investigations. No incidental observations of any Schedule 1 species were recorded.

## 5.3 Vegetation and Vegetation Communities

Vegetation communities were generally characterized following the first approximation of the *E.L.C. System for Southern Ontario* (Lee *et al*., 1998). The second approximation of E.L.C. (Lee, 2008) was also used when there was no code available for a specific community type in the first approximation.

Prior to undertaking field surveys, aerial photograph interpretation of the study area was analysed. This exercise indicated that due to the highly urbanized nature of the study area, it is unlikely that any natural ecosystem E.L.C. communities are present.

### 5.3.1 Results

A botanical inventory was completed within the study area. The conservation status of plant species recorded in the study area was assessed to determine the presence of S.o.C.C. and S.A.R. A floristic quality assessment was also completed to determine the level of disturbance and overall quality of the vegetation / vegetation communities within the study area.

A total of 65 vegetation species were documented during the field investigations, representing 25 families, of which approximately 40% of the species are native and 60% are considered introduced (**Appendix C**). A floristic quality assessment was completed to assess the overall quality of habitat based on species composition and their assigned Coefficient of Conservatism (C.C.). Each species is assigned a C.C. value based on their tolerance to disturbance and fidelity to a specific habitat type. The mean C.C. value was determined to be 2.34, which is indicative of plants primarily associated with disturbed habitats.

The field investigations confirmed that there were no natural ecosystems E.L.C. communities present in the study area. The study area is completely urbanized with 2 very small, maintained parklands.

## 5.4 Tree Inventory

All trees located on City property were inventoried from publicly available R.O.W. and roadways within the study area using binoculars to observe when needed. Only a limited number of trees were not accessible or visible as they were located too far way and on private property. Diameter at breast height (D.B.H.) data was not recorded for these trees. Documentation collected was consistent with the International Society of Arborists (I.S.A.) standards information collected for trees including:

- Species;
- Size (i.e., measured in centimeters (D.B.H.) at 1.4 m above grade);
- Location (U.T.M. Coordinates);
- Tree Condition;
- Crown size (approximate diameter);
- Hazard Tree; and
- Significant Trees and S.A.R.

### 5.4.1 Results

A total of 107 trees were inventoried in the study area. The inventory did not identify any trees that provide essential habitat features, such as cavities for nesting or roosting, that are crucial for significant wildlife species. The trees present are typical of urban settings and do not offer specialized habitat conditions. Maps, physical attributes, U.T.M. location, health condition as well as photos are provided in **Appendix D**.

## 5.5 Significant Wildlife Habitat

The M.N.R.F. provides guidelines, tools and a decision support system to help with the complex task of identifying and designating Significant Wildlife Habitat (S.W.H.). These aids are documented in three separate resources: *Significant Wildlife Habitat Technical Guide* (S.W.H.T.G., M.N.R. 2000), *Significant Wildlife Habitat Mitigation Support Tool* (M.N.R.F. 2014b), and *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (M.N.R.F. 2015).

There are four categories of S.W.H.:

1. seasonal concentration areas;
2. migration corridors;
3. rare or specialized habitats; and
4. SCC.

Species and their habitats that are already protected as threatened or endangered under the E.S.A. are not considered in the assessment of S.W.H.

To determine candidate S.W.H. within the study area, targeted surveys followed and consulted with the S.W.H.T.G. (M.N.R. 2000) and *S.W.H. Criteria Schedules for Ecoregion 6E* (M.N.R.F. 2015). Surveys focused on features that may be associated with transportation corridors and urban landscapes, which include bat maternity colonies, snake hibernacula, turtle nesting and raptor wintering areas.

### 5.5.1 Results

The assessment identified no candidate or confirmed S.W.H. types within the study area.

A full evaluation of each of the S.W.H. types is provided in **Appendix E**.

# 6.0 SPECIES AT RISK SCREENING

A screening was completed for the S.A.R. identified as potentially occurring in the study area. The screening for potential S.A.R. and Special Concern species was based on the observed existing conditions, habitat needs of the species, and the identified presence of suitable habitat within the study area.

## 6.1 Results

Seven (7) species listed as threatened or endangered have potential to occur in the study area, one species, Chimney Swift, was observed flying over during surveys. Their preferred habitat includes urban areas where they nest and roost in chimneys and other manmade structures. The detailed assessment is provided in **Appendix F**.

## 7.0 IDENTIFIED CONSTRAINTS

This report documents the natural environment existing conditions within and adjacent to the study area. Based on the findings of this report, the following natural heritage features should be considered when evaluating impacts of a preferred design and in the development of mitigation measures to be considered before, during, and after construction. To guide future evaluations of a functional design/alignment, natural environmental constraints have been identified and are listed below:

- Chimney Swift is provincially and federally threatened and protected under the S.A.R.A. and E.S.A. If the proposed work will impact these species, permitting/approval/authorization through relevant agencies (e.g., E.C..C.C., M.E.C.P.) may be required. Preventative measures and best practices should be employed to mitigate potential impacts of the project on these species.
- A small portion of the westernmost portion of the study area includes lands identified as “Hazard Lands” according to the City O.P. During the next phases of the project, it should be verified what, if any, implications this may have on the project and whether a permit under O.Reg. 42/06 may be required.
- A small portion of the westernmost portion of the study area includes lands identified as “natural heritage system” according to the City O.P. During the next phases of the project, it should be verified what, if any, implications this may have on the project.

This report has been produced considering known natural environment existing conditions and regulatory requirements at the time this report was completed. In the case that considerable time passes (i.e., 5 years) before construction or final design occurs, the study area should be reassessed to determine if there are any changes to the natural heritage features and/or potential impacts identified above.

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