

Environmental Approvals

Fisheries & Aquatic Ecology

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Environmental Site Assessment

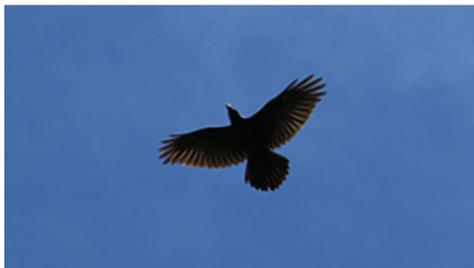
Species at Risk

Project Management

Environmental Impact Assessment

Water and Wastewater Engineering

Environmental Site Inspection / Construction Monitoring



Environmental Impact Study

476420 3rd Line

Township of Melancthon

Prepared for Josh Blokhuis

AEC Project No. 23-394 | August 2025



Environmental Assessments & Approvals

August 11, 2025

AEC 23-394

Josh Blokhuis
1000719578 Ontario Inc.
josh@sheldoncreek.com

Re: **Environmental Impact Study for a Proposed Redevelopment on 476420 3rd Line,
Township of Melancthon, County of Dufferin**

Josh Blokhuis:

Azimuth Environmental Consulting, Inc. was retained to provide an Environmental Impact Study report for the proposed redevelopment of the existing Chipwoods Park community containing seasonal and permanent year-round residences, located at 476420 3rd Line, Township of Melancthon, County of Dufferin. The purpose of this report is to provide the Township of Melancthon and other review agencies with an understanding of natural environmental conditions and potential for impacts related to the proposed redevelopment on significant natural heritage features and functions of the property and adjacent lands. This report also documents the natural environmental features present within the property and adjacent lands with regard to Species at Risk and their habitats.

Should you have any questions or require additional information please do not hesitate to contact the undersigned.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

David d'Entremont, H.B.Sc.
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1.0 INTRODUCTION

Azimuth Environmental Consulting, Inc. (Azimuth) was retained by 1000719578 Ontario Inc. (the “proponent”) to undertake an Environmental Impact Study (EIS) for a proposed residential redevelopment on 476420 3rd Line (Chipwoods Park) within the Township of Melancthon (the “Township”), County of Dufferin (the “County”). A map illustrating the limits of the proposed redevelopment in its regional context is shown on Figure 1. It is our understanding that the Township has requested that an EIS be undertaken due to presence of mapped Woodlands, Unevaluated Wetlands and fish habitat within the study area.

The study area including the proposed redevelopment footprint is mapped within the jurisdiction of the Nottawasaga Valley Conservation Authority (NVCA), and therefore a permit issued Ontario Regulation (O. Reg.) 41/24 may be required to proceed with the proposed redevelopment within NVCA regulated lands (Appendix A).

This purpose of this EIS is to identify the candidate Key Natural Heritage Features (KNHFs) present within the study area and address potential impacts to candidate KNHFs. A review of background information in combination with high-level constraints site visit was completed on late fall 2023, followed by a detailed field program undertaken in spring/summer 2024, to identify significant natural heritage features and functions. This report also examines potential for Species at Risk (SAR) protected under the *Endangered Species Act, 2007* (ESA) within the study area. The potential for negative impacts to natural heritage features resulting from the proposed redevelopment is considered and recommendations for avoidance and mitigation are provided.

For the purposes of this EIS the study area described in this report includes the property on Figures 1-3 and adjacent lands (within approximately 120 metres (m)) of the property limits. Natural features in the overall planning area beyond the defined study area limits are discussed where applicable throughout this report.

2.0 PLANNING CONTEXT

2.1 Provincial Planning Policy (2024)

The Provincial Planning Statement (PPS) (MMAH, 2024) outlines policies related to natural heritage features (Section 4.1) and water resources (Section 4.2). Ontario's *Planning Act, (1990)* requires that planning decisions shall be consistent with the PPS. The study area for this assessment is located entirely within **Ecoregion 6E**. According to the PPS development and site alteration shall not be permitted in:



- *Significant wetlands* in Ecoregions 5E, 6E and 7E; and,
- *Significant coastal wetlands*.

Similarly, Section 4.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted within:

- a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E; and 7E;
- b) *significant woodlands* in Ecoregions 6E; and 7E;
- c) *significant valleylands* in Ecoregions 6E; and 7E;
- 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).

It is ultimately the responsibility of the Province and/or the Municipality to designate areas identified within Section 4.1.4 and 4.1.5 of the PPS as “significant”.

Section 4.1.6 of the PPS states that development and site alteration is not permitted in fish habitat except in accordance with federal and provincial requirements.

Section 4.1.7 of the PPS states that development and site alteration shall not be permitted in the habitat of Threatened and Endangered species, except in accordance with provincial and federal requirements.

Furthermore, under Section 4.1.8 of the PPS, no development or site alteration will be permitted on lands adjacent to 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 there will be no negative impacts on the natural features and their ecological functions.

2.2 Endangered Species Act, 2007

Ontario’s *Endangered Species Act, 2007* (ESA) provides regulatory protection to Endangered and Threatened species prohibiting harm and/or killing of individuals and destruction of their habitats. On June 4, 2025, the province of Ontario adopted *Bill 5, Protect Ontario by Unleashing Our Economy Act, 2025* (“Bill 5”), which received Royal Assent the following day. Bill 5 amends the provincial ESA and provides a modified definition of “habitat” under the provincial ESA, as follows:



“habitat” means, subject to subsection (3),

(a) in respect of an animal species,

(i) a dwelling-place, such as a den, nest or other similar place, that is occupied or habitually occupied by one or more members of a species for the purposes of breeding, rearing, staging, wintering or hibernating, and

(ii) the area immediately around a dwelling place described in subclause (i) that is essential for the purposes set out in that subclause.

(b) in respect of a vascular plant species, the critical root zone surrounding a member of the species, and

(c) in respect of all other species, an area on which any member of a species directly depends in order to carry on its life processes; (“habitat”).

According to subsection (3):

“(3) A reference to “habitat” in any of the following provisions is deemed to be a reference to the definition of “habitat” under subsection (1) as it read immediately before the transition date:

8. In respect of Black Ash, any provision of this Act, the regulations or a permit issued under this Act.”

The various schedules of the ESA included under O. Reg. 230/08 identify SAR in Ontario. These include species listed as Extirpated, Endangered, Threatened and Special Concern. As noted above, only species listed as Endangered and Threatened receive protection from harm and destruction to habitat on which they depend.

2.3 County of Dufferin

The Dufferin County Official Plan (“Dufferin OP”; 2017) illustrates the property within the Countryside Area designation under Schedule B (Community Structure and Land Use; 2025 Schedule Updates; Appendix A).



Natural Features including Woodlands, Waterbodies and Watercourses are depicted on the property on Schedule E (Natural Heritage Features) of the Dufferin OP (2025 Schedule Updates; Appendix A).

Natural features including Unevaluated Wetlands, Provincially Significant Wetlands, and Areas of Natural and Scientific Interest (ANSIs) are not shown in the vicinity of the property on Schedule B (Community Structure and Land Use) or Schedule E (Natural Heritage Features) of the Dufferin OP (Appendix A).

Section 5.3 within the Dufferin OP discusses development policies as they relate to Natural Heritage Features, under the Development and Site Alteration subsection, which states:

- a) Development and site alteration will not be permitted in significant wetlands.

- b) Development and site alteration will not be permitted in
 - i. significant woodlands;
 - ii. significant valleylands;
 - iii. significant wildlife habitat; and,
 - iv. significant areas of natural and scientific interest,unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

- c) Development and site alteration will not be permitted in fish habitat except in accordance with Provincial and Federal requirements.

- d) Development and site alteration will not be permitted in habitat of endangered species and threatened species, except in accordance with Provincial and Federal requirements.

2.4 Township of Melancthon

The Township of Melancthon Official Plan (“Melancthon OP”; 2014) illustrates the property as Rural, with the majority of the property designated as Environmental Conservation, on Schedule A-5 – Land Use & Roads Plan (Appendix A).

Schedule D – Natural Heritage 1 Wetlands (Appendix A) illustrates the majority of the property as Locally Significant and Unevaluated Wetlands, although it does not distinguish between these designations and does not designate wetlands within the study area as Locally Significant. No Provincially Significant Wetlands are identified within proximity to the property on Schedule



D. Schedule E – Natural Heritage 2 Woodlands, Wildlife Habitat and ANSI (Appendix A) illustrates Significant Woodlands on the property and a Watercourses crossing the property, but does not illustrate any Significant Wildlife Habitat – Deer Wintering Areas, Significant Wildlife Habitat – Deer Wintering Yards or Significant ANSI within proximity to the property.

Section 3.4.2 of the Melancthon OP generally outlines the expectations for EIS assessments. While specific thresholds for development within or adjacent to natural heritage features are not outlined in this section, Sections (f) and (g) note that, following the analysis of potential impacts to the environmental features and functions of the site and area:

(f) Any approval of the proposed development or site alteration shall be subject to the findings and recommendations of the EIS in addition to compliance with any other related policies of this Plan.

(g) Should the review of an EIS determine that natural heritage features and areas or other important features of the natural environment such as groundwater resources cannot be suitably protected, the development or site alteration will not be approved.

Section 5.5(b) of the Melancthon OP indicates that the Environmental Conservation overlay designation includes, or is intended to include, locally significant and unevaluated wetlands, significant woodlands, significant wildlife habitat, significant areas of natural or scientific interest (ANSIs), habitat of endangered species and threatened species, fish habitat, and hazardous lands such as sites close to rivers and streams subject to flooding and erosion hazards.

Section 5.5.2 (g)(i) indicates that within adjacent lands to natural heritage features and areas included within the Environmental Conservation overlay, “Development, including the creation of new lots, may be permitted on adjacent lands only if it will not have any negative impacts on the nearby natural heritage features and areas recognized by the application of the Environmental Conservation overlay designation, or their ecological function.”

In regards to Locally Significant Wetlands and Unevaluated Wetlands, Section 5.5.2 states:

(h) Locally significant wetlands and unevaluated wetlands are shown on Schedule D. Generally, locally significant wetlands shall be protected and maintained in a natural state. They may be protected through stewardship agreements or conservation easements.



(i) Wetland loss will be avoided where possible and the re-establishment and creation of wetlands will be encouraged if loss or degradation occurs

Section 5.5.2 (j) indicates that “the policies of section 3.4.2 with regard to assessing environmental impact shall apply to any development or site alteration within a locally significant wetland”, and Section 5.5.2 (k) indicates that “the determination of the appropriate policies relating to development and site alteration will be based on the wetland’s identified level of significance. A similar approach will be taken with regard to development on adjacent lands to unevaluated wetlands.”

Section 5.5.2 (o) states the following in regards to Significant Woodland:

(o) The policies of section 3.4.2 with regard to assessing environmental impact shall apply to any development or site alteration within significant woodlands.

Environmental impact documentation may also be required for any development on adjacent lands to significant woodlands. The construction of a dwelling or accessory buildings to a dwelling on such adjacent lands may not require an assessment of environmental impact.

Section 5.5.2 (s) states the following in regards to Significant Wildlife Habitat:

(s) Development or site alteration will not be permitted in significant wildlife habitat unless it has been demonstrated through an Environmental Impact Study or site assessment in accordance with the policies of section 3.4.2 that there will be no negative impacts on the habitat or its ecological function.

Section 5.5.2 (z) states the following in regards to Habitat of Endangered and Threatened species:

z) Development and site alteration shall not be permitted in habitat of endangered species and threatened species except in accordance with legislation and policies administered by the provincial or federal governments, where applicable, for the purpose of protecting species at risk and their habitat.

Section 5.5.3 states the following in regards to Watercourses and Fish Habitat:

(e) In general, development should be set back a minimum of 30 metres from a watercourse regardless of whether or not that watercourse is shown on the schedules to this Plan. The Environmental Conservation overlay designations on the A, B and C schedules to this Plan generally include that minimum setback distance within frequently larger estimated floodplain



areas. The policies in parts (f), and (g) immediately below relate more specifically to land uses and setbacks in the general vicinity of large scale drains including municipal drains.

(f) For the purposes of the setback policies in subsection 5.5.3(d) above, a large drain including a municipal drain may not be classified as a watercourse particularly in situations where such natural features as a major floodplain or fish habitat are not found in association with the drain. The conservation authority having jurisdiction may be consulted in this classification process. If a drain is not classified as a watercourse, appropriately lower setbacks from the drain primarily for maintenance purposes may be permitted.

(h) Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

2.5 Nottawasaga Valley Conservation Authority

The study area is located within the jurisdiction of the NVCA. Preliminary NVCA correspondence (Appendix B) indicates presence of unevaluated wetland, floodplain and erosion hazard areas within the property. Regulated lands are subject to O. Reg. 41/24 – “Prohibited Activities, Exemptions and Permits” under the *Conservation Authorities Act* (Appendix A). Under O. Reg. 41/24, the NVCA may require that approvals be obtained for a proposed development, redevelopment or site alteration within areas regulated under the Conservation Authority’s jurisdiction.

2.6 Federal Fisheries Act

The *Fisheries Act* includes protections for fish and fish habitat in the form of standards, codes of practice, and guidelines for projects near water. The *Fisheries Act* provides protection against the “death of fish, other than by fishing”, (Section 34.4(1)) and the “harmful alteration, disruption or destruction of fish habitat”, (Section 35(1)), otherwise known as HADD. In cases where impacts to fish and fish habitat cannot be avoided, and the project does not fall within waterbodies where Fisheries and Oceans Canada (DFO) review is not required, proponents are asked to submit a request for review to their Fish and Fish Habitat Protection Program regional office to determine approval requirements. All projects are encouraged to avoid causing the death of fish and a HADD of fish habitat, using measures to protect fish and fish habitat that include standards and codes of practice for common works, undertakings and activities.



3.0 STUDY APPROACH

A combination of a background information and field data were used to fulfill the objectives of this EIS. Azimuth undertook the following activities for this study:

- Conducted field surveys to document existing natural heritage features, functions, and species. Surveys included:
 - Mapped vegetation community types using methods of the Ecological Land Classification for Southern Ontario (Lee *et al.*, 1998; Lee, 2008)(winter 2023, spring/summer 2024);
 - Conducted one (1) wetland delineation exercise to determine limits of wetlands within the study area (spring-summer 2024). The wetland delineation was completed with GPS hardware (Garmin Montana) and did not involve physical staking of the limit in 2024;
 - Scheduled one (1) site visit with the NVCA to confirm the limits of the wetland due to proximity of redevelopment to the wetland boundary (summer 2024), however this was deferred to summer 2025 by NVCA;
 - Conducted a woodland delineation exercise to determine the woodland boundary (July 30, 2024);
 - Conducted two (2) vascular plant inventories (June 24 and August 1, 2024);
 - Conducted three (3) evening amphibian breeding surveys (April 23, May 15 and June 28, 2024);
 - Conducted two (2) dawn breeding bird surveys (June 13 and June 24, 2024);
 - Conducted two (2) marsh breeding bird surveys (June 13 and June 24, 2024);
 - Conducted two (2) aquatic site visits to confirm the presence of aquatic/fish habitat on the property and document any sensitive fish habitat features (May 22 and August 22, 2024); and,
 - Recorded all incidental wildlife observations during the field program; and,
- Completed an assessment of potential SAR and their habitats that could be present within the study area.

The above were provided to the Township as a Terms of Reference for the field program and impact assessment on April 26, 2024, as presented in Appendix B. A response from the Township and their peer reviewer R.J. Burnside & Associates Limited (Burnside) was received on June 18, 2024 (Appendix B). As part of their response, Burnside requested to be present for a joint woodland staking, which was completed on July 30, 2024 with Azimuth, the Township and Burnside in attendance.



The following assessment was also conducted subsequent to the collection of field data, as detailed within this EIS document:

- Identified/evaluated/mapped Key Natural Heritage Features and functions in the context of the study area and broader ecological landscape;
- Completed a Significant Wildlife Habitat assessment based on the results of the field program;
- Assessed the potential direct and indirect impacts of the proposed redevelopment envelopes on the natural heritage features and functions identified on or adjacent to the property;
- Developed an appropriate avoidance/mitigation/restoration strategy relative to the proposed redevelopment in the context of documented natural heritage features and functions; and,
- Demonstrated the proposed redevelopment's conformity with applicable municipal, provincial, and federal natural heritage policies.

3.1 Background Information

A review of the following background documents provided information on site characteristics, habitat, wildlife, rare species and communities and general cultural/historic aspects of the study area:

- Ministry of Natural Resources (MNR) Ontario Geohub, Land Information Ontario: Wildlife Values Area (MNR, 2025a);
- MNR Natural Heritage Information Centre (NHIC; MNR, 2025b);
- MNR Fish On-Line (MNR, 2025c);
- MNR Ontario Geohub, Land Information Ontario: Aquatic resource area survey point (MNR, 2025d);
- MNR Ontario Geohub, Land Information Ontario: Aquatic resource area line segment (MNR, 2025e);
- Atlas of the Breeding Birds of Ontario (OBBA; Cadman *et al.*, 2007);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2020);
- Ministry of the Environment, Conservation and Parks (MECP)'s Species at Risk Ontario list (MECP, 2025);
- iNaturalist (NHIC) Rare Species of Ontario (iNaturalist, 2025);
- Ontario Butterfly Atlas (Toronto Entomologists' Association, 2025);
- Aquatic Species at Risk Map (DFO, 2025);
- Air photos available for the Project Area (Google, VuMap);



- Government of Canada's Species at Risk Public Registry; and,
- Atlas of the Mammals of Ontario (Dobbyn, 1994).

3.2 Vegetation Community Mapping and Surveys

Prior to undertaking the field studies, an initial classification of vegetation communities was undertaken using recent air photo imagery for an area encompassing the study area.

Vegetation community boundaries were then investigated in the field on December 11, 2023, June 24, 2024, and August 1, 2024, with the two primary detailed surveys (June 24 and August 1) occurring during the growing season when the emergent ground cover vegetation layer was present. Vegetation community types were classified using ELC protocols.

The site visit was undertaken by a qualified ecologist with existing knowledge related to rare, Special Concern, Threatened, and Endangered plant species with potential to occur in the area. The site assessment was focused during ELC work to ensure that appropriate effort was made to detect any federally or provincially designated species, notably SAR as identified under the ESA.

A detailed survey including a screening for Butternut (Endangered) and Black Ash (Endangered) was also conducted within the study area.

3.3 Wildlife Surveys

Wildlife species utilizing the study area were identified from direct observation, auditory signs, and through interpretation of other signs (tracks, scat, vocalizations, *etc.*) as a matter of course while conducting field surveys.

3.3.1 Species at Risk

The SAR screening undertaken for the scope of this assignment includes an assessment of SAR with potential to occur in the overall planning area, compared with potential habitat features identified within the study area. Habitat requirements and appropriate designations (Endangered, Threatened, or Special Concern) are outlined in Table 1.

3.3.2 Breeding Birds

Two (2) dawn breeding bird surveys were conducted within the study area on June 13 and June 24, 2024 guided by point count methodology presented in Appendix D of the OBBA Guide for Participants (2001) and Forest Monitoring Bird Protocol (TRCA, 2016). All surveys were conducted no earlier than one half hour before sunrise and were completed prior to 10:00a.m. Surveys were completed under suitable weather conditions (*i.e.* no precipitation and light



winds (Beaufort wind scale ≤ 3)), with an observation period of 10 minutes carried out at the point count stations shown on Figure 2.

Two (2) marsh breeding bird surveys were conducted within the study area on June 13 and June 24, 2024 according to the recommended marsh bird survey protocols of the Marsh Monitoring Program (Bird Studies Canada, 2009). Point counts (15 minutes in duration) were undertaken at each of the points outlined in Figure 2, with the surveyors facing the wetland area being surveyed. As per the protocol, the first 5 minutes of each point count were spent silently recording bird activity, followed by 5 minutes of playing the contents of the Marsh Monitoring Program Broadcast CD on a portable speaker (containing marsh bird calls intended to elicit a call-back response from wild birds), followed by a final 5 minutes of silently recording bird activity. All bird species (seen, heard) were recorded at each point count station. Breeding evidence for marsh species was assessed based on the criteria of the OBBA (2001). All surveys were conducted no earlier than one half hour before sunrise and were completed prior to 10:00a.m. Surveys were completed under suitable weather conditions (*i.e.* good visibility, warm temperatures $\geq 16^{\circ}\text{C}$, no precipitation and light winds (Beaufort wind scale ≤ 3)). Surveys were completed at least 10 days apart.

3.3.3 Breeding Amphibians

Azimuth conducted three (3) evening calling amphibian surveys on April 23, May 15 and June 28, 2024 to assess amphibian breeding within and adjacent to the property in accordance with the Great Lakes Marsh Monitoring Program (Bird Studies Canada, 2008) protocol. In accordance with the protocol, amphibian surveys were completed during the period between 30 minutes after sunset and midnight, on evenings with winds Beaufort ≤ 3 . Point counts took place with an observation period of three (3) minutes at each survey station. Surveys occurred during early (April 15-30), middle (May 15-31), and late (June 15-30) spring periods on evenings with minimum temperatures of 5°C , 10°C , and 17°C respectively. The locations of survey stations are illustrated on Figure 2.

3.4 Fish and Fish Habitat

Watercourses and drainage features in the study area were evaluated on May 22 and August 22, 2024 by an Azimuth fisheries ecologist (low flow and high flow conditions). The site investigations were aimed at understanding the location of watercourses within the study area to determine the presence of direct and indirect fish habitat features, which included documentation of channel characteristics such as wetted width, water depths, flow, bank slopes, aquatic vegetation, substrate, and general morphology. Fish sampling was not



completed as sufficient fish community data was available from online sources to assist with characterization of the thermal regimes and habitat sensitivities.

4.0 EXISTING CONDITIONS

4.1 Land Use

The property consists of a mixture of disturbed, sparsely-treed open parkland of the existing community areas surrounding a pond (associated with the existing trailer park) adjacent densely treed upland woodlands abutting a wetland complex, these exhibiting an array of historical disturbance regimes.

The majority of densely treed areas on the west half of the property appear to be successional young or early mid-aged communities with elevated coniferous elements (especially Eastern White Cedar) and some planted elements, suggesting successional tree establishment following widespread historical disturbance and site use across upland areas. Existing paths/driveways traverse much of these areas, and small swamp pockets occur on the west property edge adjacent the existing pond. These may have been partially isolated from nearby wetlands as a result of historical earthworks to support the existing community, or a land use prior to the existing community.

A wetland complex (unevaluated wetland) abuts the upland woodlands to the east, north and northwest. This wetland complex also appears to exhibit signs of historical disturbance, including drainage manipulation to create a linear drainage feature classified as a Municipal Drain, connected to the McKibbon Drain. This wetland complex is composed of a matrix of different treed, shrub and herbaceous wetland elements at a variety of successional stages, and there is some evidence of at least historical paths through some parts of this area. At its furthest southern corner, near where the ephemeral drainage feature enters the property, a portion of the wetland's floodplain appears to have been historically converted into lawn/yard adjacent a small existing home within the existing Chipwoods community.

Lands to the north, west, and south of the property limits include a complex of woodland, wetland, active farmland and rural residential elements, with woodland and wetland features on lands to the north and west directly contiguous with those on the property. The east property abuts the 3rd Line right of way, with a matrix of woodland, wetland, farm, and rural residential elements occurring on adjacent lands to the east of 3rd Line, including the continuation of the McKibbon Drain, as well as woodland blocks <20m separated from woodlands on the property.



4.2 Terrestrial Resources

4.2.1 Vegetation

The limits of all ELC communities identified on the property are illustrated in Figure 2. A complete list of vascular plant species identified within the property is presented in Table 2. Summary descriptions of vegetation communities on the property are presented in Table 3, and are categorized into the following broad ecotypes, as illustrated on Figure 2:

Upland Woodlands:

- FOCM4-3: Fresh - Moist White Cedar - Balsam Fir Coniferous Forest
- FOMM4-3: Dry - Fresh White Cedar - Hardwood Mixed Forest
- FOMM8-1: Fresh - Moist Poplar Mixed Forest

Wetlands:

- SWTO2-6: Mixed Willow Organic Deciduous Thicket Swamp
- SWDM4-5: Poplar Mineral Deciduous Swamp
- SWD/SWC/SWT/MAM, Deciduous Treed Swamp/ Coniferous Treed Swamp/ Thicket Swamp/ Meadow Marsh Wetland Complex

Aquatic Systems:

- OAO: Open Aquatic

Cultural/Anthropogenic:

- ML: Maintained Lands

A total of 221 vascular plant species and three (3) plant hybrids were identified within the property limits. Of the species and hybrids identified, 150 (67%) are considered native to Ontario.

None of the vegetation communities or species documented are of federal or provincial conservation concern (MNR, 2025b).

4.2.1.1 Provincially Rare and SAR Plants

There is one (1) Element of Occurrence (EO_ID) within 2 kilometres (km) of the study area for provincially Endangered or Threatened, or provincially rare vegetation species according to the NHIC database (MNR, 2025b):

- Floating Crystalwort (*Riccia fluitans*; S-Rank 3).



The above-noted species was not identified within the property. One (1) Endangered plant species, Black Ash, was identified within the property; individuals of this species were primarily associated with property wetlands and wetland edges (see Tables 2 and 3). No other listed Endangered or Threatened plant species identified during the site investigation, including no Butternut trees. Further, no provincially rare (S1-S3) species were observed during the field program.

4.2.2 Wildlife

4.2.2.1 Mammals

Evidence of five (5) mammalian species was documented throughout the course of the field program, including: Coyote (tracks), Eastern Cottontail (direct observation), Eastern Gray Squirrel (direct observation), Red Squirrel (direct observation), White-tailed Deer (tracks, direct observation).

Given the proximity of the study area to large natural areas in the greater landscape, it is expected the following other mammals could conceivably be encountered within the study area: American Mink, Beaver, Black Bear, Eastern Chipmunk, Groundhog, Muskrat, Northern Flying Squirrel, Porcupine, Raccoon, Red Fox, small mammal species (various mice, voles, and shrews), Snowshoe Hare, Striped Skunk, Virginia Opossum, and various weasel species.

4.2.2.2 Reptiles and Amphibians (Herpetofauna)

A total of six (6) amphibian species were identified during the evening calling amphibian surveys, including Wood Frog, Spring Peeper, Northern Leopard Frog, American Toad, Green Frog, and Gray Treefrog. Detailed results of the amphibian breeding survey program are presented in Table 4.

No salamander, snake or turtle species were observed within the study area throughout the course of the field program.

4.2.2.3 Birds

A total of 45 bird species were recorded during the dawn breeding bird survey and marsh breeding bird survey programs, plus an additional seven (7) species were observed throughout the remainder of the field program (52 species total). A summary of breeding birds observed within the study area limits is presented in Table 5.

During the marsh breeding bird survey program, none of the target marsh breeding species were identified. Only one bird species (Gray Catbird) was found exclusively during marsh



breeding bird surveys, with all other species observed during dawn breeding bird surveys or incidentally.

No evidence of nesting activity for species listed under Schedule 1 of the federal Migratory Birds Regulations (2022) under the *Migratory Birds Convention Act, 1994* were identified during breeding bird studies, or incidentally throughout the course of the field program. These species include, but are not limited to, Pileated Woodpecker, Great Blue Heron, Great Egret, Green Heron, and Black-crowned Night Heron.

4.2.2.4 Insects

Invertebrate species were documented as a matter of course throughout the field program, and included observations of the following:

- Ebony Jewelwing (*Calopteryx maculata*, direct observation);
- Emerald Ash Borer (*Agrilus planipennis*, exit holes and galleries in Ash trees); and,
- Slender Spreadwing (*Lestes rectangularis*, direct observation).

Monarch (*Danaus plexippus*) was not directly observed within the property; however, due to this species' generic habitat preferences and generally common occurrence in this region, this species is considered in the context of Candidate Significant Wildlife Habitat (SWH)(Special Concern and Rare Wildlife Species) below, due to being listed as Special Concern under Ontario's ESA. None of the observed invertebrates are of provincial conservation concern (MNR, 2025b).

4.3 Species at Risk

The SAR assessment (Table 1) fully considers SAR with potential to occur in the planning area. Based on this assessment in combination with vegetation communities and other environmental features observed during the site investigation, the following species are considered below in this report:

- **Threatened or Endangered:**
 - Black Ash
 - Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tricolored Bat
- **Special Concern:**
 - Monarch
 - Snapping Turtle



Only species designated Threatened or Endangered receive individual and habitat protection under Section 9 and Section 10 of the ESA. Special Concern species are further discussed in the context of SWH (Habitat for Special Concern and Rare Wildlife Species) below.

4.3.1 Black Ash

Numerous Black Ash trees were documented during site investigations, primarily associated with wetlands and wetland edges (see Tables 2 and 3, Figure 2). 2024 site investigations confirmed the presence of live Black Ash in these areas $\geq 8\text{cm}$ Diameter at Breast Height (DBH), which require assessment and report submission to determine whether they are protected under Section 9 of the ESA or are considered exempt under O.Reg. 6/24.

At this time, no assessment has been completed, although incidentally, numerous Black Ash were observed to exhibit generally poor health/decline characteristics, likely due to Emerald Ash Borer (EAB), with abundant physical symptoms showing evidence of EAB presence. Regardless, all living Black Ash $\geq 8\text{cm}$ DBH are expected to retain their protected status under the ESA until an assessment and report are completed and submitted based on the Black Ash Assessment Guidelines: Assessment of Black Ash (*Fraxinus nigra*) for the purposes of the *Endangered Species Act, 2007* (MECP, 2024).

4.4 Wetlands

Wetlands within the study area are not identified as Provincially Significant Wetland (PSW). The closest mapped PSWs to the property are located approximately 4 kilometres (km) from the property boundary, including the Terra Nova Wetland Complex PSW to the northeast, and the Melancthon Wetland Complex #1 PSW to the northwest (MNR, 2025b). Neither of these PSW complexes are contiguous with the study area.

Wetlands in the study area are not depicted on the Schedules of the Dufferin OP. Wetlands within the study area are identified as “Locally Significant and Unevaluated Wetlands” on Schedule D of the Melancthon OP, without distinction between the categories of “Locally Significant Wetland” (LSW) and “Unevaluated Wetland” (Appendix A). The Melancthon OP does not indicate that property wetlands, or the wetland complex connected to property wetlands, have been characterized as Locally Significant. For the purposes of this assessment, property wetlands will be considered as “Other Wetlands”.

Wetlands occurring throughout the property limits include the following wetland types, occurring in polygon, inclusions and complexes as illustrated in Figure 2:



- SWD/SWC/SWT/MAM, Deciduous Treed Swamp/ Coniferous Treed Swamp/ Thicket Swamp/ Meadow Marsh Wetland Complex
- SWDM4-5: Poplar Mineral Deciduous Swamp
- SWTO2-6: Mixed Willow Organic Deciduous Thicket Swamp

Small inclusion-sized wetlands depicted on Figure 2 (SWDM4-5 (incl.), SWTO2-6 (incl.), and the SWD/SWC/SWT/MAM (incl.)) were not directly connected to the overall wetland complex. These inclusions did not contain highly unique species or ELC types, and on their own were very small (<0.5 hectares (ha)).

The overall SWD/SWC/SWT/MAM Complex (Figure 2) is estimated to cover more than 16ha within the property. Considering connections to wetland elements beyond the property boundary, this wetland complex may be contiguous with the SWTO2-6 polygon at the north end of the OAO/pond, for a total size of approximately 17ha within the property, and is expected to be broadly contiguous with off-property wetlands to the north and west.

It should be noted that while a wetland staking to confirm the mapped wetland edge depicted in Figure 2 was scheduled with the NVCA on more than one occasion, due to circumstances beyond Azimuth's control, this staking visit was not completed during the field season in 2024 and was deferred to summer 2025 by NVCA. The wetland delineation was completed by Ontario Wetland Evaluation System (OWES)-certified staff (D. d'Entremont) during appropriate seasonal timing (June and August 2024) based on the most recent provincial criteria (OWES, 2022). At this time, wetland boundaries derived by Azimuth will be used for the purposes of this EIS.

4.5 Significant Woodland

Woodlands within the study area are identified as Woodlands under the Dufferin OP (Schedule E; Appendix A) as well as Significant Woodlands under the Melancthon OP (Schedule E; Appendix A).

The woodland edge presented in Figures 2 and 3 was confirmed through a joint woodland dripline staking exercise completed on July 30, 2024, with Azimuth, the Township and Burnside in attendance. The line presented uses the staking points provided by Burnside.



4.6 Candidate Significant Valleyland

No portion of the study area is identified as Significant Valleyland, nor assigned a similar designation on municipal or provincial mapping resources (Appendix A).

There are no valleyland features located within the property limits according standards presented in the NHRM or Melancthon OP, principally due to the lack of well-defined valley morphology and/or landform prominence required to be considered either Valleyland or Candidate Significant Valleyland.

4.7 Candidate Significant Wildlife Habitat

An assessment of the potential for SWH within study area was conducted, using the criteria outlined within the Significant Wildlife Habitat Technical Guide (OMNR, 2000) and the accompanying the Ecoregion 6E Criteria Schedules (MNR, 2015). An assessment of Candidate Significant Wildlife Habitat categories relative to documented vegetation communities and habitats within the study area limits is presented in Table 6. The following Candidate SWH types were determined or have potential to be present within the study area based on the results of the field program:

- Waterfowl Stopover and Staging Areas (Aquatic);
- Bat Maternity Colonies;
- Turtle Wintering Areas;
- Woodland Area-Sensitive Bird Breeding Habitat;
- Special Concern and Rare Wildlife Species:
 - Monarch; and,
 - Snapping Turtle.

4.8 Areas of Natural and Scientific Interest

There are no Areas of Natural and Scientific Interest associated with the study area in accordance with municipal or provincial mapping resources (Appendix A).

4.9 Fish and Fish Habitat

The property is contained within the Boyne River subwatershed within the larger Nottawasaga River watershed. The property is located near the upstream limits of an unnamed Boyne River tributary. During the field investigations, one watercourse feature and five smaller drainage features were identified. These features are described in detail below and shown on Figure 2. Representative photographs are also provided in Appendix C.



Boyne River Tributary

The main watercourse channel through the property consists of an unnamed tributary of the Boyne River. The tributary originates approximately 1km upstream (west) of the property, and drains in an east then northeast direction across the property. Near the upstream (west) limits on the property, the channel enters an online pond that appears to have been man-made for recreational purposes associated with the seasonal residential area. The western segment of the pond appears shallow (~1m deep) with silty substrate, algae, and cattail edges. The eastern segment of the pond is slightly deeper in sections (1m+ deep) with manicured lawn edges. Minnows were observed in the pond, which is characterized as providing permanent direct fish habitat to a cool/warmwater fish community. The outlet of the pond consists of a drop structure that creates a 1m+ elevation change to the channel downstream. The drop structure is located at a culvert crossing along a roadway, and the culvert outlet was perched 10cm at the outlet. Fish would not be able to pass upstream into the pond, but would fall downstream during periods of elevated flow. Therefore, the pond outlet acts as a fish barrier. The pond would also act as a heat sink given the shallow open water conditions with minimal riparian vegetation (*i.e.*, water within the pond is warmed and then released into the creek downstream).

Downstream of the pond, the tributary naturally meanders through a forested area and continues to drain east/northeast. As the channel begins to flow northeast as shown on Figure 2, the morphology of the tributary becomes fairly straight. The channel is bordered by grass hummock edges, and large watercress patches were observed at the downstream limits of the property near 3rd Line indicating potential groundwater contributions. The average wetted width observed in the unnamed tributary was 1.5m, with water depths up to 40cm observed.

No thermal regime information was available from online MNR resources (MNR, 2025e). Fish survey data was available for multiple locations downstream of the property, including at the 3rd Line culvert crossing at the downstream limits of the property. At this location, the following species were caught: Blacknose Dace, Brook Stickleback, Central Mudminnow, Creek Chub, Fathead Minnow, Johnny Darter, Northern Redbelly Dace, White Sucker (MNR, 2025d). These species are considered common coolwater baitfish. No aquatic SAR or coldwater species have been recorded in proximity to the property. According to the NVCA Fisheries Habitat Management Plan (2009), the NVCA wishes to manage the Boyne River and its tributaries as coldwater fisheries through the protection, enhancement and restoration of these fish habitat ecosystems. Therefore, while the overall existing fish habitat community appears to function as direct coolwater baitfish habitat, efforts should be made to mitigate thermal impacts and enhance the potential for coldwater species (*i.e.*, Brook Trout) to become established in the system. For the purposes of this report, the Boyne River tributary on the property is



characterized as a coolwater system that provides permanent direct fish habitat and would be protected under the Federal Fisheries Act. However, design and management strategies to promote coldwater fisheries are discussed in Section 7 as per the NVCA recommendations.

Drainage Feature 1 (DF1)

DF1 consists of a straight drainage channel along the northern property boundary. This feature flows east, originating from a wetland feature at the northwest corner of the property and discharging into Boyne River tributary upstream of the 3rd Line crossing as shown on Figure 2. DF1 was observed to have flow during the spring field investigation with an average wetted width of 1m and average depth of 8-10cm. Minnows were also observed in the downstream segment of DF1 during the spring investigation along with large patches of watercress. However, during the summer investigation the feature had predominantly standing water with moist soils and would not be expected to host fish year-round. DF1 generally had poorly defined banks with no substrate sorting, no riffles or pools were noted, and the channel bottom was predominantly lined with vegetation. Overall, these characteristics are representative of an intermittent stream. As shown on Figure 2, a barrier to flow/fish passage exists along DF1, which is located at an existing walking/ATV trail crossing. A culvert could not be identified at this location as it may be collapsed/buried in thick vegetation. This is evident by the impounded water on the upstream (west) side of the trail crossing. Regardless, the channel upstream of the barrier becomes diffuse/poorly defined within wetland vegetation and would not be expected to host fish. Therefore, the segment of DF1 downstream of the fish barrier is characterized as seasonally direct coolwater fish habitat, and the segment upstream of the barrier is considered indirect fish habitat. Both segments of DF1 would be afforded protections under the Federal *Fisheries Act* due to their direct/indirect fish habitat functions.

Drainage Feature 2 (DF2)

DF2 consists of a short (~100m in length) drainage feature that flows north into DF1 as shown on Figure 2. The feature emerges within wetland vegetation and is poorly defined with no banks or substrate sorting. During the spring investigation, the feature was approximately 1m in width with water depths of 3-5cm. A trickle flow was noted at the downstream limits of the feature during the spring investigation, and the feature was dry during the summer investigation. Fish may seasonally access the feature from DF1 during periods of elevated flow. Therefore, while the feature is characterized as seasonally direct coolwater fish habitat, the overall direct fish use/function would be limited. DF2 would still be afforded protections under the Federal *Fisheries Act*.

Drainage Feature 3 (DF3)



DF3 drains northeast across the property, entering the property from a farm field to the south and draining into the Boyne River tributary in the central area of the property. The feature consists of a poorly defined swale feature that was densely covered in grasses and terrestrial vegetation during the summer investigation. Flow was observed in the feature during the spring investigation, but was predominantly dry during the summer investigation with segments of standing water and moist soils. Due to the partially defined nature of the channel, exposed soils with an evident flow path, and direct connection to a receiving watercourse, DF3 is characterized as an intermittent feature that would provide minimal indirect fish habitat functions to downstream receiving systems (*i.e.*, conveyance of flow, nutrients, sediment). Direct fish use of DF3 is not anticipated due to the shallow (1-3cm) and narrow (30cm wide) channel characteristics observed during high flow conditions in the spring. Therefore, DF3 would still be afforded protections under the Federal *Fisheries Act*.

Drainage Feature 4 (DF4)

DF4 was noted at the northern edge of the online pond where a wetland feature borders the pond edge. DF4 consists of a lowland swale that had sparse standing water during the spring investigation, but was dry during the summer. There were no defined banks, no substrate sorting, and only the duff layer was moist through a majority of the lowland swale feature during the spring investigation. These are characteristics of an ephemeral feature, and would not be considered direct or indirect fish habitat. Therefore, DF4 is not afforded protections under the Federal *Fisheries Act*.

Drainage Feature 5 (DF5)

DF5 consists of a lowland area that conveys seasonal flows from an off-site pond feature to the south of the property. The DF5 flow path is poorly defined with no defined banks, no substrate sorting, and no water was present during the spring or summer investigation. The duff layer was moist indicating it may hold water during/after large rain events, but no direct connection to a downstream receiving watercourse was identified during the field investigations. Therefore, DF5 is characterized as an ephemeral feature and would not be afforded protections under the Federal *Fisheries Act*.

There are no records of aquatic SAR in this watershed or within 1km of the study area (DFO, 2025).

5.0 NATURAL HERITAGE FEATURES AND FUNCTIONS

The results of Azimuth's field studies combined with review of background information indicate the potential and/or confirmed presence of the following candidate KNHFs within the study area:



- Habitat for Threatened or Endangered Species
 - Black Ash
 - Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tricolored Bat
- Wetlands
 - Other Wetlands
- Significant Woodland
- Candidate Significant Wildlife Habitat
 - Waterfowl Stopover and Staging Areas (Aquatic)
 - Bat Maternity Colonies
 - Turtle Wintering Areas
 - Woodland Area-Sensitive Bird Breeding Habitat
 - Special Concern and Rare Wildlife Species:
 - Monarch
 - Snapping Turtle
- Fish Habitat
 - Direct coolwater fish habitat in Boyne River Tributary
 - Direct/indirect fish habitat in DF1, DF2, and DF3.

6.0 PROPOSED REDEVELOPMENT

The proposed redevelopment involves the removal of lands from a Prime Agricultural Area via the creation of a New Community Settlement area, as well as the establishment of 224 single detached residential houses as part of an affordable leasehold community associated with the lands of the Existing Chipwoods Park Community. In addition to the single detached residential houses, servicing and amenities are proposed including three (3) Stormwater Management (SWM) blocks, one (1) Advanced Treatment System Block, one (1) proposed Water Well/Centralized Water Treatment Facility, connecting internal roads and visitor parking (43 spaces), servicing, three parkettes, one (1) Common Recreation Area with Recreation Centre/Tuck Shop, and open space areas which may retain some existing elements. This redevelopment is proposed within the upland and historically utilized areas of the west half of the property, and avoids the wetland features which surround this upland area.

A proposed redevelopment concept is presented in Appendix D, and overlain on environmental features mapping in Figure 3. It is anticipated that the limits of grading will not extend beyond the limits of these proposed features, with the exception of the anthropogenic pond in the middle of the existing trailer park area (marked OAO in Figures 2 and 3), which may be altered as a part of detailed design.



7.0 IMPACT ASSESSMENT

This impact assessment is prepared with regards to the proposed redevelopment plan, as described above and illustrated in Figure 3 and presented in Appendix D.

7.1 Habitat for Threatened or Endangered Species

Impacts with regards to the ESA and Habitat of Threatened or Endangered species are covered under Section 9 and 10 of the ESA. Section 9 deals directly with killing, harming, or harassing living members of a species while Section 10 covers destruction or damage to habitat of Threatened or Endangered species. The following Threatened or Endangered species are treated as present or confirmed to occur within the limits of the study area:

- Black Ash
- Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tricolored Bat

7.1.1 Black Ash

The Province of Ontario has limited protections on the harm or harassment to Black Ash and its habitat through O. Reg. 6/24, which exempts Black Ash <8cm DBH or <1.37m in height from protections under the ESA (*i.e.*, ESA protections are limited to Black Ash $\geq 8\text{cm}$ DBH and ≥ 1.37 in height). As discussed in Section 4.3.1, numerous Black Ash trees were documented during site investigations, primarily associated with wetlands and wetland edges (see Tables 2 and 3, Figure 2), including living Black Ash $\geq 8\text{cm}$ DBH. The proposed redevelopment avoids wetlands and avoids the majority of lands within 15m of wetland edges. As such, the vast majority Black Ash are anticipated to be avoided by redevelopment.

However, there is still potential for redevelopment to encroach living Black Ash $\geq 8\text{cm}$ DBH, and redevelopment may be proposed within 30m of living Black Ash $\geq 8\text{cm}$ DBH, which is the prescribed habitat radius for Black Ash under O. Reg. 7/24. Under the current ESA following from *Bill 5*, it is our understanding that Black Ash habitat protections remain unchanged at this time, per subsection 2(3)(8) of the ESA. However, it should be noted that changes to such protections may result from the future adoption of the *Species Conservation Act* by the Province. This document represents a point-in-time assessment and provides Azimuth's best recommendations available at this time relating to SAR.

The Province has provided a framework for assessing the health of Black Ash (Black Ash Assessment Guidelines: Assessment of Black Ash (*Fraxinus nigra*) for the purposes of the *Endangered Species Act*, 2007 (MECP, 2024)). O. Reg. 6/24 further exempts Black Ash which



have been determined to be unhealthy from ESA protections, provided that a Black Ash Assessment Report is submitted to the Province prior to the commencement of an activity that would impact the unhealthy Black Ash. Further, any healthy Black Ash $\geq 8\text{cm}$ DBH within 30m of proposed site alteration/disturbance would require permitting to be completed prior to initiating the site alteration/disturbance.

As such, recommendations have been made in Section 8.0 which outline next steps relating to Black Ash. Provided that the recommendations in Section 8.0 are adhered to, there is no expectation that the proposed redevelopment would result in a contravention of the ESA with respect to Black Ash. Further, it is our understanding that the Dufferin OP and Melancthon OP broadly defer to the Province's requirements under the ESA regarding Endangered and Threatened species; as such, provided that the recommendations in Section 8.0 are adhered to, the proposed redevelopment is expected to be consistent with the requirements of the Dufferin OP and Melancthon OP with respect to Black Ash.

7.1.2 Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tricolored Bat

No bat species were directly observed throughout the course of the field program, however these species are treated as present in lieu of conducting detailed ecological studies to verify presence/absence. Caves, karst topography, and/or abandoned mines are absent within the study area, therefore potential hibernacula are not located within the study area limits. Structures within study area were limited to occupied dwellings that are routinely maintained and are unlikely to provide suitable maternity roosting habitat for the species with potential to make use of them (primarily Little Brown Myotis, with minor potential for Northern Myotis, Silver-haired Bat, and Tricolored Bat).

With regards for potential roosting habitat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tri-colored Bat may utilize woodlands as maternity roost sites, preferring trees $>25\text{cm}$ diameter at breast height with evidence of cracks, holes, splits, lifted bark, *etc.* (called "snags") to provide refuge for the rearing of young during the late spring and early summer months (approximately June) (Environment Canada, 2015). Larger trees are preferred, and for Silver-haired Bat, older woodlands are preferred, although trees of any size with suitable access features have potential to be occupied by bats during the active period (Environment Canada, 2015; COSEWIC, 2023).

Potential roosting Habitat for Hoary Bats and Eastern Red Bats may include the foliage of trees and occasionally shrubs in both deciduous and coniferous forests of any age class. Maternity



roosts in particular tend to be found in large-diameter, tall trees, reaching or exceeding the height of the surrounding canopy, with preferred roosting locations typically located in south-facing sites sheltered from wind and temperature extremes. Roosting tends to occur in locations with overhead foliage for cover with open flight space below, frequently near the edge of the tree canopy crown (COSEWIC, 2023).

During the site investigation, potentially suitable snags were observed within woodlands on the property, which included a general screening of the property for snags and snag clusters during the early leaf-out period such that potential cracks, holes, splits, *etc.* could be viewed by the site investigator. It was observed that mature deciduous trees and suitable snags for *Myotis* species, Silver-haired Bat and Tricolored Bat roosting activities were limited to occasional within coniferous forest areas, but ranged from moderately common to common within mixed forest and treed swamp wetland areas within the property, and in the greater landscape beyond the property boundaries. Potentially suitable roosting areas for Eastern Red Bat and Hoary Bat were observed throughout forested and treed swamp areas within the property and beyond the property on the local landscape.

If SAR bat species (Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tricolored Bat) were to be identified within the redevelopment footprint as a result of acoustic monitoring, it would be our expectation that the extensive, contiguous woodlands (including upland forest and treed swamp wetlands) within and adjacent to the property, and within the greater region would retain potential bat habitat function. The proposed works would therefore not negatively impact the ability for SAR bat species to carry out their life processes should an appropriate mitigation approach be applied. In Azimuth's opinion, a suitable mitigation approach that would avoid potential impacts to SAR bats includes a no-cut window from **April 1-September 30**, as included within the Recommendations within Section 8 below.

For projects of a similar scope, Azimuth has engaged the MECP regarding potential impacts to woodland bat habitat. Guidance was provided via the Bat Survey Standards Note (MECP, 2022), which clarifies the following:

"If a proposed activity will avoid impairing or eliminating the function of habitat for supporting bat life processes (e.g. remove, stub, etc. a proportionally small number of potential maternity or day roost trees in treed habitats which would not result in fragmentation/barriers) and the timing of tree removal will avoid the bat active season (April 1-September 30 in Southern Ontario)"... "then there is no need to conduct species at risk bat surveys of treed habitats."



The above is consistent with Azimuth’s understanding when suitable habitat availability is not limiting, a mitigation approach that restricts vegetation removals during the active period for bats is a suitable approach to avoid a contravention to SAR bat individuals or habitats under Section 9 and Section 10 of the ESA.

The proposed redevelopment is expected to require less than 6.0ha of woodland tree clearance to accommodate proposed homes, access routes, grading and associated amenities within property woodlands, but would retain an estimated 82.09ha (93.2%) of the contiguous woodland areas within property wetlands, and within contiguous upland and wetland woodlands extending off-property into the local landscape. There is no expectation that such minor removals would undermine potential bat maternity and/or day roosting function within the property, and such habitat functions would persist in the post-redevelopment setting. Similarly, full tree clearance within all portions of the redevelopment footprint may not be required to facilitate the proposed dwellings, access routes, and associated amenities. Based on the above, no impacts to SAR bats species are anticipated in this location.

With regard for the assessment provided above, providing works occur in accordance with mitigation and other recommendations detailed in Section 8 below, there is no expectation that the proposed redevelopment would negatively impact Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tricolored Bat, or the habitat upon which these species depend. Further, it is our understanding that the Dufferin OP and Melancthon OP broadly defer to the Province’s requirements under the ESA regarding Endangered and Threatened species; as such, provided that the recommendations in Section 8 are adhered to, the proposed redevelopment is expected to be consistent with the requirements of the Dufferin OP and Melancthon OP with respect to Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat and Tricolored Bat.

7.2 Other Wetlands

As discussed in Section 4.4 above, property wetlands have not been identified as Locally Significant Wetlands (LSW). In the absence of a framework for evaluating local significance, for the purposes of this assessment, impacts to Other Wetlands will be assessed using the same criteria as would apply to LSW under the Melancthon OP (generally, LSW are to be protected and maintained, but where development is contemplated within or adjacent to the LSW, an EIS must determine whether or not the feature is suitably protected, *i.e.* whether there is no negative impact to the feature)(see Section 2.4 above).



With regard for proposed single detached houses, driveways, and associated servicing amenities and grading, the proposed redevelopment will avoid wetland, and so no direct impacts to wetland are anticipated. Further, a setback of 15m to the wetland edge will be maintained by the majority of the redevelopment footprint, with minor areas in the northeast and southeast edges encroaching this setback zone. However, larger areas of setback well exceeding 15m are proposed along the northwest redevelopment footprint, resulting in an average setback exceeding 15m overall. Regarding SWM blocks which currently encroach the setback zone, the refinement of SWM block designs is anticipated to result in reduction or elimination of encroachment by these features. The existing wetland edge has a history of anthropogenic disturbance, and includes existing infrastructure such as driveways/paths and existing lots, and particularly along the east edge, the wetland edge and (sometimes) the wetland itself exhibits evidence of historical human disturbance/clearing. No rare ELC communities, rare species or rare SWH functions were observed in these areas, and these wetland edges are not anticipated to be sensitive to disturbance. As such, an average buffer exceeding 15m is anticipated to be sufficient to protect Other Wetlands and maintain the natural heritage features and functions of Other Wetlands identified on-site. Further, given that the proposed redevelopment avoids wetlands, the connectivity between various wetland elements within and adjacent to the property will be retained, avoiding wetland fragmentation, and maintaining the overall linkages and corridors which permit species and ecological processes function within the greater wetland. Providing conformance is demonstrated for recommendations and mitigation measures described in Section 8 of this report, no negative impacts to Other Wetlands are anticipated as a result of the proposed redevelopment. This is anticipated to satisfy the requirements of the Melancthon OP for LSW, which are expected to be protected and maintained; as such, the proposed redevelopment is expected to be consistent with the requirements of the Melancthon OP, regardless of the specific designation of Other Wetlands.

7.3 Candidate Significant Woodland

According to the PPS, development and site alteration are not permitted within Significant Woodlands located in Ecoregion 6E, unless it can be demonstrated there will be no negative impacts upon the feature and its ecological functions, which is the same standard used by the Dufferin OP. The Melancthon OP designates property woodlands as Significant Woodland, and implements a similar standard (*i.e.* where development is contemplated within or (potentially) adjacent to Significant Woodland, an EIS is required to determine whether or not the feature is suitably protected, *i.e.* whether there is no negative impact to the feature).

The proposed redevelopment involves woodland removals within the western portion of the study area, totaling approximately 6.0ha. The removal of 6.0ha of woodland would represent a



minor loss (**6.81%**) of the overall contiguous woodland feature to which property woodlands are connected, which measures approximately 88.09ha in size. No portions of the overall woodland feature would become fragmented/isolated as a result of the proposed redevelopment. Further, given that the proposed redevelopment avoids woodland fragmentation, the connectivity between various woodland elements within and adjacent to the property will be retained, and maintaining the overall linkages and corridors which permit species and ecological processes function within the greater woodland.

Based on the above, the proposed redevelopment would retain approximately 82.09ha of 88.09ha (**93.2%**) of the overall contiguous woodland feature, and would be anticipated to preserve woodland form and function as it relates to Woodland Size and its associated significance. As such, there is no expectation that the proposed redevelopment would result in negative impacts to Significant Woodland. As such, this is anticipated to satisfy the requirements of the PPS, Dufferin OP and Melancthon OP.

7.4 Candidate Significant Wildlife Habitat

According to the PPS development and site alteration are not permitted within SWH located in Ecoregion 6E, unless it can be demonstrated there will be no negative impacts upon the feature and its ecological functions. This standard is also used by the Dufferin OP and Melancthon OP. For the purposes of this assessment, Candidate SWH listed in Section 5 above is treated as significant.

7.4.1 Waterfowl Stopover and Staging Areas (Aquatic);

Small natural/naturalized ponds are present adjacent lands to the south, southeast and east, and shallow water marsh areas have potential to occur on adjacent lands to the west and north. There is marginal potential for adjacent lands to provide this SWH function (Figure 2).

However, no redevelopment is proposed within 30m of the ponds or shallow marsh areas with potential to provide this SWH category. As such, there is no expectation that the proposed redevelopment will result in negative impacts to SWH with respect to Waterfowl Stopover and Staging Areas (Aquatic). As such, this is anticipated to satisfy the requirements of the PPS, Dufferin OP and Melancthon OP.

7.4.2 Bat Maternity Colonies

Woodlands within the study area may provide suitable roosting habitat for Bat Maternity Colonies during the late spring period (approximately June). As described in Section 7.1.2 above in the context of SAR bats, potentially suitable snags were observed within woodlands



adjacent to the property, which were determined to exhibit features such as cracks, splits, peeled bark, and cavities.

Although MECP does not comment on natural heritage features/functions associated with planning applications (*i.e.* only comment/implement matters related to protected species according to Ontario's ESA), a similar approach to the assessment for this potential SWH function would apply. As described in Section 7.1.2 above, extensive, continuous/unbroken upland and wetland woodlands occur within and adjacent to the property, and within the greater region would retain potential bat habitat function in the post-construction setting. As such, there is no expectation of negative impacts to Bat Maternity Colonies; this is anticipated to satisfy the requirements of the PPS, Dufferin OP and Melancthon OP. A suitable mitigation approach that includes a no-cut window from **April 1-September 30** would be anticipated to suitably avoid potential impacts to Bat Maternity Colonies. This is further discussed in Section 8 below.

7.4.3 Turtle Wintering Areas

Wetlands and ponds within and adjacent to the study area have potential to be used as Turtle Wintering Areas, including the SWTO2-6 wetland polygon and inclusion as well as suitably deep-water portions of the SWD/SWC/SWT/MAM Wetland Complex.

The proposed redevelopment will not occur within any of the features with potential to function as Turtle Wintering Areas. As such, no direct impacts to Turtle Wintering Areas are anticipated.

The majority of the proposed redevelopment is expected to occur >30m from potential Turtle Wintering Areas, particularly potential functions associated with the overall SWD/SWC/SWT/MAM Wetland Complex, or potentially suitable features to the north, east or south of the property. However, as depicted on Figure 3, the west portion of the proposed redevelopment may occur within 30m of the SWTO2-6 wetland polygon and inclusion, and may occur within 30m of off-property wetlands. However, a 15m setback to wetlands is provided to wetlands in these areas, and these features will remain either contiguous with adjacent natural lands or (in the case of the SWTO2-6 inclusion) connected by Open Space, which would be expected to suitably permit turtle movement in a post-redevelopment scenario should this feature be used. Further, as discussed in Section 7.2, no negative impacts are anticipated to Other Wetlands (including these wetlands) as a result of the proposed redevelopment, and the function of the overall wetland block (both on and off-property) would not be anticipated to be affected by the proposed redevelopment. Provided that the recommendations in Section 8.0 are adhered to, there is no expectation that the proposed redevelopment will result in negative



impacts with respect to potential Turtle Wintering Areas. This is anticipated to satisfy the requirements of the PPS, Dufferin OP and Melancthon OP.

7.4.4 Woodland Area-Sensitive Bird Breeding Habitat

Woodlands within and adjacent to the study area have potential to function as SWH for Woodland Area-Sensitive Bird Breeding, including all upland woodlands (FOCM4-3, FOMM4-3, FOMM8-1) and wetland woodlands (SWDM4-5, as well as SWD and SWC elements of the SWD/SWC/SWT/MAM Complex).

As discussed in Section 7.3 above, the proposed redevelopment involves upland woodland removals within the western portion of the study area, totaling approximately 6.0ha. The removal of 6.0ha of woodland would represent a minor loss (**6.81%**) of the overall contiguous woodland feature to which property woodlands are connected, which measures approximately 88.09ha in size.

However, the proposed redevelopment would retain approximately 82.09ha of 88.09ha (**93.2%**) of the overall contiguous woodland feature, and would be anticipated to preserve woodland form and function as it relates to Woodland Size and potential to support Woodland Area-Sensitive Bird Breeding. Further, none of the woodlands proposed for removal within the property are rare or unique, and no portions of the overall woodland feature would become fragmented/isolated as a result of the proposed redevelopment.

As such, there is no expectation that the proposed redevelopment would result in negative impacts to Woodland Area-Sensitive Bird Breeding. This is anticipated to satisfy the requirements of the PPS, Dufferin OP and Melancthon OP.

7.4.5 Habitat for Special Concern and Rare Wildlife Species

Monarch

Monarch Butterfly can generally be identified in any old field or cultural meadow habitat often including disturbed ditches along road right of ways, however the key habitat is typically associated with tracts of old-field meadow habitat containing an abundance of Common Milkweed (*Asclepias syriaca*). Common Milkweed was identified occasionally within various ELC polygons (FOCM4-3, FOMM4-3, SWD/SWC/SWT/MAM Complex, and within the fringes of Maintained Lands), however this species was not abundant in any given community. Generally speaking, no high-quality habitat with high populations of any *Asclepias* species were noted within the property. As such, while the property has potential to support this species in a general sense, it did not contain any features which would characterize it as higher quality



habitat than other natural lands within the local landscape. No Monarchs were directly observed during the course of the field program.

Habitat for Monarch is highly represented in the general area within and beyond the study area, including extensive farm/pastureland and open wetlands located east of the property boundary. Given the ubiquity of habitat opportunities for the species in the surrounding rural landscape, no negative impact to the species or its habitat is anticipated as a result of the proposed redevelopment. As such, this is anticipated to satisfy the requirements of the PPS, Dufferin OP and Melancthon OP.

Snapping Turtle

Potential habitat opportunities for Snapping Turtle are present within wetlands within and adjacent to the property, as well as within natural/naturalizing ponds on adjacent lands to the south, southeast and east (Figure 2). Shallow water marsh areas have potential to occur on adjacent lands to the west and north. As such, there is potential for habitat of Snapping Turtle to occur on and adjacent to the property.

The proposed redevelopment will avoid the above-noted wetland and pond features. Further, extensive, continuous/unbroken wetlands occur on adjacent lands and beyond, within the overall contiguous wetland block to the north, west and southwest of the property. As such, potential habitat features within the greater region would be expected to retain potential Snapping Turtle habitat function in the post-construction setting. Given the ubiquity of habitat opportunities for the species within the property as well as the surrounding landscape, no negative impact to potential Snapping Turtle habitat is anticipated as a result of the proposed redevelopment. As such, this is anticipated to satisfy the requirements of the PPS, Dufferin OP and Melancthon OP.

7.5 Fish Habitat

A majority of the watercourses and drainage features on the property are contained within wetland communities, and are therefore protected by the 15m buffer applied to these wetlands. Typically for coolwater systems, a 20m setback is recommended by provincial guidelines to protect fish and fish habitat associated with these features (OMNR, 2010). The 20m setback is achieved throughout the Boyne River Tributary, with much larger setbacks present where the wetland complex is located downstream of the proposed redevelopment. Where the Boyne River Tributary flows through the redevelopment footprint (*i.e.*, at the online pond), a 20m setback has been established for the concept plan. DF1 and DF2 would also have 20m+ setbacks based on the proposed design. The 20m setback is being encroached upon along DF3 near the proposed SWM block at the south edge of the property. It is understood



that DF3 may be realigned/piped along a segment of the entrance road when roadway upgrades are completed (*i.e.*, when the road is widened). However, given the minimal flow observed within DF3 during the spring high flow investigation, the dry nature of DF3 during the summer, and the small catchment area upstream within the agricultural lands to the south, a minor (estimated 10-20m) increase in the piped segment of this feature is not expected to negatively impact the indirect fish habitat function of this feature. Flow will still be conveyed downstream to the Boyne River Tributary in the same manner post-redevelopment if the appropriate design and mitigation measures are implemented as per Section 8 below.

To further understand the potential impacts on fish and fish habitat from the proposed redevelopment, the various project components have been itemized below.

Housing Layout/Redevelopment Footprint:

No direct in-water works are proposed as a result of the proposed housing layout and construction of single detached dwellings, driveways, and associated amenities. Therefore, the proposed redevelopment would not result in direct impacts to fish habitat. The 20m buffer as outlined above has been applied to the Boyne River Tributary when in proximity to the redevelopment footprint, and all other drainage features/watercourses are 20m+ from the redevelopment footprint. Potential impacts from nearby construction works (*i.e.*, sediment laden site runoff) can be mitigated using standard BMPs for working near water. These mitigation measures are outlined below in Section 8, and sediment fence is proposed around the entire grading limits of the proposed redevelopment as per the Functional Servicing Report (Appendix D).

Road Crossings:

The internal road network will be reconfigured and upgraded to accommodate the proposed redevelopment. These works will include paving an internal road network, but specific details related to road grading/cross-sections/crossing structures will be determined at detail design. However, it is understood that two watercourse crossings will be reconstructed and upgraded.

As outlined above, the crossing of DF3 along the entrance road will be upgraded, which will likely involve lengthening and realignment a portion of the intermittent channel. Given the low flow and low sensitivity of this feature, alterations to the flow path of DF3 is not anticipated to cause a HADD to fish habitat if the appropriate mitigation measures as outlined in Section 8 below are followed.

The proposed crossing at the Boyne River Tributary immediately downstream of the online pond would also need to be upgraded to an adequately sized structure. Currently, the existing



crossing consists of a drop structure inlet at the pond which outlets into a CSP, which is undersized and creates a permanent barrier to fish passage. Details on the road crossing are unknown at this time, but upgrading the crossing provides ample opportunity to improve flow conditions, fish passage, and overall fish habitat quality within the Boyne River Tributary. There is also the potential to remove the online pond feature, which currently acts as a thermal sink along the watercourse. For both the DF3 and the Boyne River Tributary crossing locations, a Fisheries Screening during detail design would be needed to understand potential impacts to fish habitat. The Fisheries Screening would allow the opportunity to provide input to the design to ensure fish habitat impacts are mitigated, and to determine if additional permitting (*i.e.*, DFO review) is required. Additional recommendations for crossing design and mitigation measures for in-water works are provided in Section 8 below.

Stormwater Management

As per the Functional Servicing and Preliminary Stormwater Management Report (SWM report), a total of three SWM ponds are proposed to service the redevelopment. The proposed SWM facilities will be dry ponds located near the northeast corner (North Pond), east (Mid Pond) and southeast corner (South Pond) of the proposed redevelopment and will control post-redevelopment peak flows to their predevelopment levels or lower (Post-to-Pre Control). Dry ponds are proposed due to the small catchment areas which are not suitable/feasible for wet pond structures. Outlets from the three SWM ponds into the Boyne River Tributary will ultimately be constructed to provide discharge, but details on the specific location and design of the outlets are unknown at this time and will be assessed through a Fisheries Screening during detail design. Design measures such as flow dissipation devices and scour prevention/channel armoring will be assessed as part of the detail design Fisheries Screening review. It is estimated that with the size of the ponds, discharge into the Boyne River Tributary would only occur during rainfall events that exceed 10mm+. Therefore, discharge would be considered infrequent to the watercourse. Water quality control will be provided with “Enhanced Protection” as outlined in the Stormwater Management Planning and Design Manual (MOE, 2003) which will remove at least 80% of Total Suspended Solids. Oil-grit separators (Stormceptor EF4 or approved equivalent) are also proposed at the pond inlets. During future detail design of the three proposed dry ponds, the dry ponds will likely require a clay liner or geosynthetic liner to prevent groundwater seepage into the facilities due to the high groundwater table on the property. The design of these liners will be prepared by the Geotechnical Engineer and provided at detailed design.

Sanitary Servicing

As per the SWM report, the redevelopment is proposed to be serviced by an internal sanitary sewer network that will collect sewage flows from each house via individual service



connections, and convey sewage flows to a centralized advanced sewage treatment plant before discharging treated effluent to the existing tributary at a controlled release rate. The SWP report states that the effluent criteria are generally feasible for treatment using an advanced sewage treatment plant. However, further investigation and assessment of the assimilative capacity of the tributary is recommended by collecting site-specific monitoring data which would confirm the above discharge criteria. Details of the proposed pumping station and the sanitary treatment systems will be provided in a future submission package, and should be included as part of the Fisheries Screening prepared at detail design.

Fish Habitat Summary

Overall, the proposed redevelopment footprint has applied suitable setbacks of 20m+ to the watercourse features, and future detail design work should allow the opportunity to further assess and mitigate potential impacts on fish habitat from the proposed in-water and near-water works. As outlined above, multiple design elements should be reviewed at detail design once impacts are known and specific impacts to fish habitat can be determined. These design elements are summarized below, and should be included in a Fisheries Screening document prepared by a qualified ecologist:

- Boyne River Tributary watercourse crossing at online pond location;
- DF3 watercourse crossing location along entrance road;
- Three SWM pond outlets into the Boyne River Tributary; and,
- The Sanitary Sewer system and proposed outlet in to the Boyne River Tributary.

From a fisheries perspective, the proposed redevelopment can be supported based on the provided concept plan and anticipated works to be completed at detail design. There is no expectation that the proposed redevelopment would result in HADD to fish or fish habitat if the appropriate mitigation measures are implemented. In addition, should flow and fish passage be improved along the main channel of the Boyne River Tributary when the existing crossing is upgraded, this would provide the opportunity to improve both fish habitat quality (*i.e.*, removing the thermal sink of the pond) and restoring fish passage to the upstream reaches. General fish habitat mitigation measures and detail design recommendations are provided in Section 8, which should be refined during the subsequent detail design process.

8.0 RECOMMENDATIONS

8.1 Species at Risk

It should be noted that the absence of a protected species within the study area does not indicate that they will never occur within the area. Given the dynamic character of the natural



environment, there is a constant variation in habitat use. Care should be taken in the interpretation of presence of species of concern including those listed under the ESA. Changes to legislation and policy (including the future adoption of the *Species Conservation Act*), or the natural environment, could result in shifts, removal, or addition of new areas to the list of areas currently considered SAR habitat. This report is intended as a point in time assessment of the potential to impact SAR; not to provide long term “clearance” for SAR. A review of the assessment provided in this report by a qualified person is expected to be sufficient to provide appropriate advice at the time of the onset of future site works.

While there is no expectation that the assessment should change significantly, it is the responsibility of the proponent to ensure that they are not in contravention of the ESA at the time that site works are undertaken. Activities must occur in conformity with Section 9 and Section 10 under the ESA that afford individual and habitat protection, respectively, to species listed as Threatened or Endangered in Ontario. The MECP has provided Azimuth with specific direction that the agency no longer issues Letters of Advice (LOAs) nor does MECP “sign off” on every proposed redevelopment. The roles and responsibilities of the proponents are outlined in the Draft Client’s Guide to Preliminary Screening for SAR (MECP, 2019), which advises that the proponent should consider whether a proposed activity is likely to contravene the ESA prior to initiating correspondence with MECP. Where an assessment determines that a proposed activity is not expected to contravene the ESA, there is no requirement to contact MECP.

8.1.1 Black Ash

As noted in Section 7.1.1 above, **prior to site alteration**, Azimuth recommends the completion a Black Ash assessment, following the guidance of the Black Ash Assessment Guidelines: Assessment of Black Ash (*Fraxinus nigra*) for the purposes of the *Endangered Species Act, 2007* (MECP, 2024). This would include, at minimum, the completion of a detailed screening of areas within 30m of the proposed redevelopment footprint (including disturbance and grading) where Black Ash have potential to be impacted, followed by a health assessment for all living Black Ash within 30m of the proposed redevelopment footprint that are $\geq 8\text{cm DBH}$.

In compliance with O. Reg. 6/24, a Black Ash Assessment Report detailing the findings of the above assessment should be submitted to the MECP **prior to site alteration within 30m of any living Black Ash $\geq 8\text{cm DBH}$** . Living Black Ash $\geq 8\text{cm DBH}$, whether healthy or unhealthy, are considered protected under the ESA until a Black Ash Assessment Report is submitted to the MECP. Following submission of the Black Ash Assessment Report, it is Azimuth’s understanding that only healthy Black Ash $\geq 8\text{cm DBH}$ would remain protected under the ESA.



For any Black Ash determined by a Black Ash Assessment Report to be healthy, sized $\geq 8\text{cm}$ DBH, and within 30m of proposed site alteration/disturbance, the proponent is recommended to complete ESA permitting with the MECP prior to the initiation of any site alteration/disturbance within 30m of the healthy Black Ash $\geq 8\text{cm}$ DBH.

Provided the above recommendations are followed, there is no expectation that the proposed redevelopment would result in a contravention of the ESA with respect to Black Ash.

8.2 Migratory Breeding Birds and Bats

Activities involving the removal of vegetation should be restricted from occurring during the breeding season. Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act, 1994* (MBCA) and the *Fish and Wildlife Conservation Act, 1997* (FWCA). Environment Canada outlines dates when activities in any region have potential to impact nests at the Environment Canada Website (<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html>). In Zone C2 vegetation clearing should be avoided between **April 1 through August 31** of any given year. If work requires that vegetation clearing is required between these dates screening by an ecologist with knowledge of bird species present in the area could be undertaken to ensure that the vegetation has been confirmed to be free of nests prior to clearing. It is advisable that migratory bird nest screenings during the breeding window are generally appropriate for “simple” habitats (*e.g.* hedgerows, disturbed areas) and less suitable for “complex” habitats (*e.g.* thickets, woodlands) given the increased risk for non-detection of active nesting sites in dense areas.

Activities involving tree removal should be avoided between **April 1 through September 30** of any given year, during the active period for bat species that may utilize trees for maternity and day roosting purposes. It is anticipated that adherence to this timing restriction will avoid impacts to individual SAR bats, therefore remaining in compliance with Section 9 of the ESA affording individual protection to Endangered species.

8.3 Site Preparation and Operations

Diligent application of sediment and erosion controls (ESCs) and adherence to Best Management Practices (BMPs) for the duration of site works is recommended for the mitigation of direct, indirect, and cumulative impacts upon retained natural heritage features and functions. Recommendations related to implementation of ESCs and BMPs are listed below, and should be adhered to throughout the duration of the site activities:



- Installation and maintenance of ESCs are recommended for all future construction activities to minimize the extent of accidental or unavoidable impacts to adjacent vegetation communities, wildlife habitat and fish habitat.
- Routine inspection/maintenance of the silt fencing should occur throughout construction.
- ESCs should be maintained until vegetation is re-established post-construction.
- Materials storage on the property (*i.e.* soil stockpiles) should be located over 30m from natural features where feasible. Material storage areas should be contained with ESCs to avoid potential indirect impacts to natural features onsite.
- All site disturbance should be minimized to the extent possible.
- All maintenance activities (including refueling) required during future construction should be conducted at least 30m away from natural features to prevent accidental spillage of deleterious substances that may harm natural environments.
- The contractor is recommended to have a Contaminant and Spill Management Plan in place prior to initiation of works. This should include keeping an emergency spill kit on site at all times. In the event of a spill, the contractor must report it immediately to the provincial Spills Action Centre (SAC).

8.4 Fish and Fish Habitat

As specified above, future redevelopment on the property should have regard for the adjacent natural environmental features, and utilize BMPs during construction as follows:

- All ESC measures are to be installed prior to any ground disturbance, and shall be maintained until all disturbed soils have been restored and stabilized following construction. Along watercourses and wetland features, it is recommended that heavy duty sediment fence be installed.
- Downstream flow quantity and quality is to be maintained at all times during and after construction.
- Should dewatering be needed during construction, water should be discharged into a filter bag (*i.e.*, envirobag or equivalent). Filter bags should be placed a minimum of 30m from fish habitat and wetlands on stable, vegetated ground to allow fines to settle out of the water. Monitoring of dewatering operations should occur throughout the construction process to ensure water is free of fines before entering the watercourses or wetlands.
- Disposal of excess material should occur in a timely fashion to minimize risk of entry into the watercourse.



Below are recommendations for consideration during future design of the Boyne River Tributary crossing location downstream of the online pond:

- All in-water construction is to occur in the dry and in isolation of flow. Cofferdam installation and bypass flow management, if required, should follow DFO's *Interim standard: in-water site isolation* Code of Practice (DFO, 2023a).
- The proposed crossing should be sized properly to adequately convey storm flows and improve/restore fish passage if feasible. If possible, DFO's Code of Practice for Clear Span Bridges (DFO, 2023b) should be reviewed to determine if a clear span bridge is suitable, which would eliminate the need for DFO review for the structure.
- Cofferdams are to be installed at the inlet and outlet location where the new culvert is to be installed to allow for works to be completed "in the dry". If metre bags or "sandbags" are used for cofferdam construction, the contractor should ensure the bags do not contain sand, and alternatively utilize stone/peagravel. All materials used for site isolation must be removed at the conclusion of in-water work.
- Prior to final dewatering of an in-water work area, a fish salvage shall be completed by a qualified Fisheries Ecologist in isolated work areas prior to dewatering. All fish salvage requires a License to Collect Fish for Scientific Purposes from MNR.
- Downstream flow quantity and quality is to be maintained at all times during and after construction.
- All dewatering required within an isolated work area is to discharge water into a filter bag (*i.e.*, envirobag or equivalent). Filter bags should be placed a minimum of 30m from fish habitat on stable, vegetated ground to allow fines to settle out of the water. Monitoring of dewatering operations should occur throughout the construction process to ensure water is free of fines before entering the watercourses.
- In-water work in direct fish habitat shall not be permitted from March 15 – July 15 of any given year to protect spring spawning fish.
- All stone placed below the high water mark in direct fish habitat should be natural and rounded material.
- All site disturbance should be minimized to the extent possible.
- Disposal of material excavated during culvert installation (if necessary) should occur in a timely fashion to minimize risk of entry into the watercourse. All excess soil material and debris shall be disposed of more than 30m from natural features.
- All machinery maintenance/refueling is recommended to maintain a minimum distance of 30m from wetlands and fish habitat to prevent accidental spillage of deleterious substances.



Below are recommendations for consideration during future design of the DF3 crossing location:

- All in-water construction is to occur in the dry and in isolation of flow. Cofferdam installation and bypass flow management, if required, should follow DFO's *Interim standard: in-water site isolation* Code of Practice (DFO, 2023a).
- The proposed crossing should be sized properly to adequately convey storm flows and improve/restore fish passage if feasible.
- Cofferdams are to be installed at the inlet and outlet location where the new culvert is to be installed to allow for works to be completed "in the dry". If metre bags or "sandbags" are used for cofferdam construction, the contractor should ensure the bags do not contain sand, and alternatively utilize stone/peagravel. All materials used for site isolation must be removed at the conclusion of in-water work.
- Downstream flow quantity and quality is to be maintained at all times during and after construction.
- All dewatering required within an isolated work area is to discharge water into a filter bag (*i.e.*, envirobag or equivalent). Filter bags should be placed a minimum of 30m from fish habitat on stable, vegetated ground to allow fines to settle out of the water. Monitoring of dewatering operations should occur throughout the construction process to ensure water is free of fines before entering the watercourses.
- In-water work in direct fish habitat shall not be permitted from March 15 – July 15 of any given year to protect spring spawning fish downstream of the work area.
- All site disturbance should be minimized to the extent possible.
- Disposal of material excavated during culvert installation (if necessary) should occur in a timely fashion to minimize risk of entry into the watercourse. All excess soil material and debris shall be disposed of more than 30m from natural features.
- All machinery maintenance/refueling is recommended to maintain a minimum distance of 30m from wetlands and fish habitat to prevent accidental spillage of deleterious substances.

Below are recommendations for consideration during future design of the SWM ponds:

- If a SWM pond outlet channel is constructed, measures should be incorporated into the design to reduce sedimentation and thermal impacts on the receiving watercourse.
- Riparian plantings along the pond and outlet channel to shade water and reduce surface water temperatures;
- If feasible, install cooling trenches and/or lengthen the outlet channel to increase the shading potential, reduce flow velocities during storm events, and allow sediment to settle; and,



- Install an energy dissipation device at the pond outlet to reduce flows rates and potential scouring at the receiving channel outlet location.

9.0 CONCLUSIONS

Based upon our analysis, it is concluded that subject to the incorporation of the environmental protection measures and criteria described throughout this report, the proposed redevelopment is not anticipated to result in a negative impact upon KNHFs or their ecological functions.

At this time, Azimuth's findings are summarized as follows:

- The proposed redevelopment is consistent with the applicable natural heritage policies of the Provincial Planning Statement, *Endangered Species Act, 2007*, Township of Melancthon Official Plan, County of Dufferin Official Plan, and the federal *Fisheries Act*.
- Our impact assessment has given full consideration to the habitat requirements of all SAR assumed and documented to occur in the area. The results indicate that there is no expectation that the proposed site redevelopment will result in a contravention of the ESA with respect to SAR, providing conformance is demonstrated to mitigation measures described in Section 8.
 - As indicated in Section 8.1.1, a Black Ash Assessment and Black Ash Assessment Report should be completed prior to site alteration, with reporting submitted to the MECP.
 - The Black Ash Assessment may determine that an ESA permit for Black Ash is required to be obtained. Permitting would be required to prior to undertaking site alteration/disturbance within 30m of healthy Black Ash $\geq 8\text{cm}$ DBH.
- The proposed works are not expected to negatively impact the ecological functions of the Other Wetlands, Significant Woodland, or Candidate Significant Wildlife Habitat outlined in Section 5 if the appropriate mitigation measures outlined in Section 8 are followed.
- From a fisheries perspective, the proposed redevelopment can be supported based on the provided concept plan and anticipated works to be completed at detail design. A Fisheries Screening will need to be completed during detail design to further understand



impacts to fish habitat and DFO reporting requirements (if any) with respect to the following project components:

- Boyne River Tributary watercourse crossing at online pond location;
- DF3 watercourse crossing location along entrance road;
- Three SWM pond outlets into the Boyne River Tributary; and,
- The Sanitary Sewer system and proposed outlet in to the Boyne River Tributary.

If the appropriate mitigation measures and design elements are included during these future in-water and near-water design elements, significant impacts to fish habitat should be mitigated and/or eliminated. If through the completion of the Fisheries Screening the proposed works are determined to cause negative residual impacts that constitute a HADD to fish habitat, a DFO Request for Review would be submitted during detail design.



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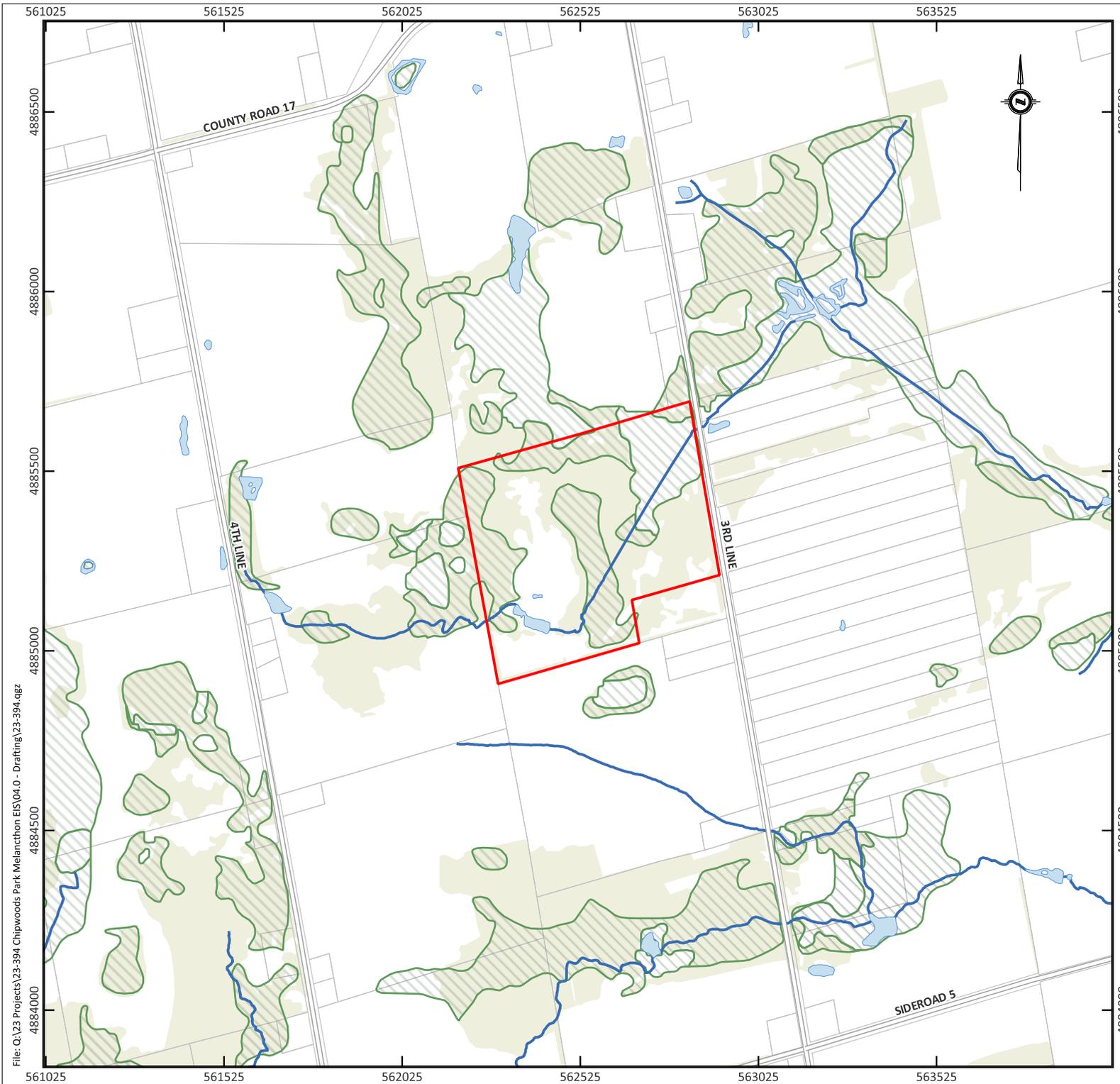


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File: Q:\23 Projects\23-394 Chipwoods Park Melancthon EIS\04.0 - Drafting\23-394.qgz

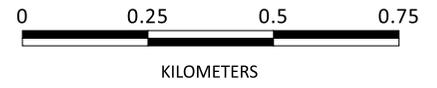
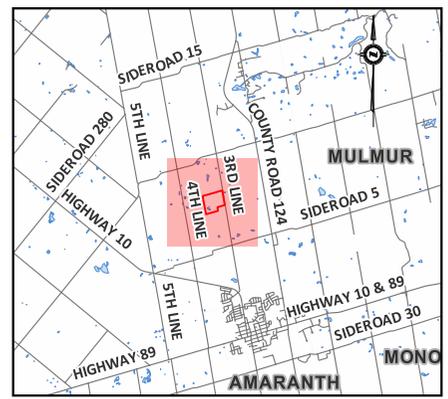
LEGEND

- Approx. Property Boundary
- Waterbody
- Mapped Watercourse
- Unevaluated Wetland
- Wooded Area
- Road

NOTES

1. Watercourse, Waterbody, Wetland, Woodland and ANSI layers are derived from MNRFS GIS data, retrieved December 2022.

REGIONAL MAP SCALE 1:250000

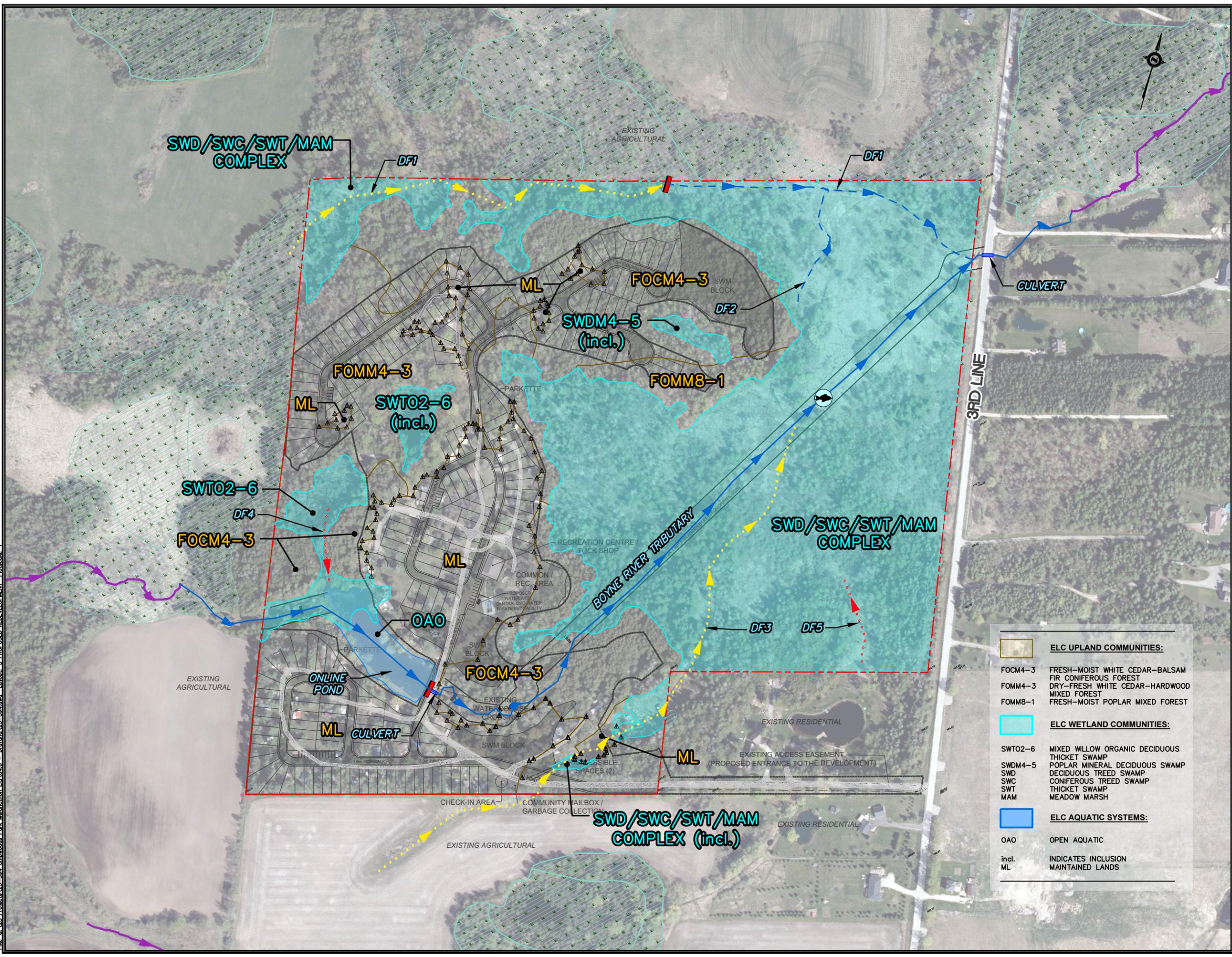


SITE LOCATION

476520 3RD LINE
MELANCTHON, ON

DATE ISSUED: AUGUST 2025	Figure No. 1
CREATED BY: A.L.	
PROJECT NO.: 23-394	
BASE MAP: MNRFS	

Projected by ALU on August 7, 2025 at 9:42am
 File: G:\23_Prospect\23-394_Caharoads_Park_Melancthon_EIS\04.0 - Drafting\23-394.dwg Layout: 3 PROPOSED REDEVELOPMENT - Plotbook: 1



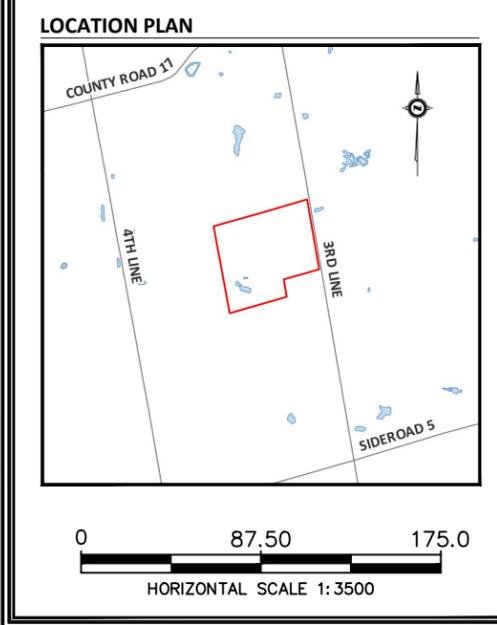
LEGEND:

- APPROX. PROPERTY BOUNDARY
- UNEVALUATED WETLAND (MNR, 2023)
- CULVERT

FISH HABITAT:

- PERMANENT WATERCOURSE / DIRECT FISH HABITAT
- - - INTERMITTENT DRAINAGE FEATURE / DIRECT FISH HABITAT
- - - EPHEMERAL DRAINAGE FEATURE / INDIRECT FISH HABITAT
- - - EPHEMERAL DRAINAGE FEATURE / NOT FISH HABITAT
- - - DRAINAGE FEATURE (NOT ASSESSED)
- █ FISH BARRIER
- COOLWATER THERMAL REGIME

▲ DRIPLINE STAKED BY R.J. BURNSIDE & ASSOCIATES LIMITED (JULY 30, 2024)



ELC UPLAND COMMUNITIES:	
FOCM4-3	FRESH-MOIST WHITE CEDAR-BALSAM FIR CONIFEROUS FOREST
FOMM4-3	DRY-FRESH WHITE CEDAR-HARDWOOD MIXED FOREST
FOMM8-1	FRESH-MOIST POPLAR MIXED FOREST
ELC WETLAND COMMUNITIES:	
SWTO2-6	MIXED WILLOW ORGANIC DECIDUOUS THICKET SWAMP
SWDM4-5	POPLAR MINERAL DECIDUOUS SWAMP
SWD	DECIDUOUS TREED SWAMP
SWC	CONIFEROUS TREED SWAMP
SWT	THICKET SWAMP
MAM	MEADOW MARSH
ELC AQUATIC SYSTEMS:	
OAO	OPEN AQUATIC
incl.	INDICATES INCLUSION
ML	MAINTAINED LANDS

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

PROPOSED REDEVELOPMENT

**476420 3RD LINE
MELANCTHON, ON**

DATE ISSUED:	AUGUST 2025	Figure No.
CREATED BY:	A.L.	3
PROJECT NO.:	23-394	
REFERENCE:	DUFFERIN COUNTY	

Table 1: Species at Risk Habitat Summary, Chipwoods Park (Melancthon) EIS

AEC23-394

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species ¹	Initial Assessment
Bank Swallow	<i>Riparia riparia</i>	THR	THR	Nests in burrows excavated in natural and human-made settings with vertical sand and silt faces. Commonly found in sand or gravel pits, road cuts, lakeshore bluffs, and along riverbanks (COSEWIC, 2013a). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g. , excavated vertical sand/silt stockpile faces) are not found on the property. Property not associated with sand or gravel pits etc . The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Barn Swallow	<i>Hirundo rustica</i>	SC	THR	Ledges and walls of man-made structures such as buildings, barns, boathouses, garages, culverts and bridges. Also nest in caves, holes, crevices and cliff ledges (COSEWIC, 2021a). ESA Protection: N/A	No Barn Swallow nests were identified on structures throughout the study area limits. The species was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Black Ash	<i>Fraxinus nigra</i>	END	No status	Facultative wetland tree species frequently found in floodplain forests, swamps, seepage areas, shoreline margins and fens. Occupied sites are generally seasonally-flooded (COSEWIC, 2018a). ESA Protection: Species and general habitat protection (ESA protections take effect January 27, 2024)	Black Ash identified within wetlands and wetland edge areas within the study area. Considered further in main text.
Black Tern	<i>Chlidonias niger</i>	SC	No status	Colonial nesters typically found within marshes. Its preferred nesting habitat is a hemi-marsh (i.e. a wetland with 50:50 open water and emergent vegetation). Nests are usually built on an upturned cattail root, floating vegetation mat or patch of mud (Cadman <i>et al.</i> , 2007). ESA Protection: N/A	Key habitat requirements (e.g. , hemi-marshes with abundant cattails) are not found within the property. The species was not observed on the property or adjacent lands. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Bobolink	<i>Dolichonyx oryzivorus</i>	THR	THR	Nests primarily in forage crops (e.g. hayfields and pastures) dominated by a variety of species such as clover, Timothy, Kentucky Bluegrass, tall grass, and broadleaved plants. Also occurs in wet prairie, graminoid peatlands, and abandoned fields dominated by tall grasses. Does not generally occupy fields of row crops (e.g. corn, soybeans, wheat) or short-grass prairie. Sensitive to habitat size and has lower reproductive success in small habitat fragments (COSEWIC, 2022a). ESA Protection: Species and general habitat protection	Key habitat requirements for the species (e.g., hayfields, pastures, tall grass fields) are not found on the property. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Broad Beech Fern	<i>Phegopteris hexagonaptera</i>	SC	No Status	Rich soils in deciduous forests, such as Maple-Beech forests (MECP, 2023). ESA Protection: N/A	Not identified during the vascular plant inventory.
Butternut	<i>Juglans cinerea</i>	END	END	Commonly found in riparian habitats, but is also found in rich, moist, well-drained loams, and well-drained gravels. Butternut is intolerant of shade (COSEWIC, 2017a). ESA Protection: Species and general habitat protection	Not identified during the vascular plant inventory.
Cerulean Warbler	<i>Setophaga cerulea</i>	THR	END	Associated with large tracts of mature deciduous forest with tall trees and an open understory. Found in both wet bottomland forests and upland areas (COSEWIC, 2010). ESA Protection: Species and general habitat protection	Key habitat requirements for the species (e.g. , large areas of mature deciduous forest) are not found on the property or adjacent lands. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.

Table 1: Species at Risk Habitat Summary, Chipwoods Park (Melancthon) EIS

AEC23-394

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species ¹	Initial Assessment
Chimney Swift	<i>Chaetura pelagica</i>	THR	THR	Nests primarily in chimneys though some populations (<i>i.e.</i> in rural northern areas) may nest in cavity trees (COSEWIC, 2018b). Recent changes in chimney design may be a significant factor in recent declines in numbers (Cadman <i>et al.</i> , 2007). ESA Protection: Species and general habitat protection	Manmade buildings within the study area did not feature chimney features with potential to provide access to Chimney Swifts (<i>i.e.</i> chimneys were capped and/or undersized). The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Common Nighthawk	<i>Chordeiles minor</i>	SC	THR	Open habitats including sand dunes, beaches recently logged/burned over areas, forest clearings, short grass prairies, pastures, open forests, bogs, marshes, lakeshores, gravel roads, mine tailings, quarries, and other open relatively clear areas (COSEWIC, 2018c). ESA Protection: N/A	Key habitat requirements for the species (<i>e.g.</i> , sand dunes, beaches, recently logged/burned areas, short grass prairies, etc.) are not found on the property or adjacent lands. Species not expected to occur.
Eastern Meadowlark	<i>Sturnella magna</i>	THR	THR	Most common in grassland, pastures, savannahs, as well as anthropogenic grassland habitats, including hayfields, weedy meadows, young orchards, golf courses, restored surface mines, etc. Occasionally nest in row crop fields such as corn and soybean, but there are considered low-quality habitat. Large tracts of grassland are preferred over smaller fragments and the minimum area required is estimated at 5ha (COSEWIC, 2011a). ESA Protection: Species and general habitat protection	Property and adjacent lands do not meet the key habitat requirements (<i>e.g.</i> , large grassland habitats). The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Eastern Red Bat	<i>Lasiurus borealis</i>	END	Not Listed	Utilize mostly treed habitats (deciduous and coniferous of any age class) for roosting or foraging. Maternity roost trees tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy with southern exposure and sheltered from the wind. Eastern Red Bats typically roost among the foliage of trees and occasionally shrubs and are typically solitary roosters (COSWIC, 2023). ESA Protection: Species and general habitat protection	Treed areas present. Species with potential to use forest and treed swamp vegetation communities within study area. Considered further in main text.
Eastern Small-footed Myotis	<i>Myotis leibii</i>	END	No status	Generally occurs in mountainous or rocky regions as well as in buildings, on the face of rock bluffs and beneath slabs of rock and stones. Hibernation is typically confined to caves and old mines (Best and Jennings, 1997; MECP, 2014a). ESA Protection: Species and general habitat protection	Key roosting habitat requirements (<i>e.g.</i> , rocky areas, bluffs, old suitable anthropogenic structures, caves, old mines) for the species not found on the property or adjacent lands. Hibernation habitat not present. The species would not be expected to occur.
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	SC	THR	Semi-open forests or patchy forests with clearings, such as barrens or forests that are regenerating following major disturbances, are preferred nesting habitats (COSEWIC, 2022b). ESA Protection: Species and general habitat protection	Key habitat requirements for the species (<i>e.g.</i> , semi-open coniferous forest areas with successional forest canopy gaps) are not found on the property or adjacent lands. Species not expected to occur.
Eastern Wood-pewee	<i>Contopus virens</i>	SC	SC	Mostly in mature and intermediate-age deciduous and mixed forests having an open understory. It is often associated with forests dominated by Sugar Maple and oak. Usually associated with forest clearings and edges within the vicinity of its nest (COSEWIC, 2012a). ESA Protection: N/A	Key habitat requirements (<i>e.g.</i> , mixed forests associated with edges) for the species occur within the study area. However, the species was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Grasshopper Sparrow <i>pratensis</i> subspecies	<i>Ammodramus savannarum pratensis</i>	SC	SC	Typically breeds in large human-created grasslands (≥5 ha), such as pastures and hayfields, and natural prairies, such as alvars, characterized by well-drained, often poor soil dominated by low, sparse perennial herbaceous vegetation (COSEWIC, 2013b). ESA Protection: N/A	Key habitat requirements (<i>e.g.</i> , large anthropogenic grasslands) not present on or adjacent to the property. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.

Table 1: Species at Risk Habitat Summary, Chipwoods Park (Melancthon) EIS

AEC23-394

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species ¹	Initial Assessment
Henslow's Sparrow	<i>Centronyx henslowii</i>	END	END	Requires grassland habitat and occurs more frequently and at higher densities in large patches of suitable habitat. Nests in tallgrass prairie, wet meadow, and marsh habitats as well as agricultural grasslands, lightly grazed pasture and grasslands on reclaimed surface mines (COSEWIC, 2011b). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g. , large grassland areas, tallgrass prairies) not present on or adjacent to the property. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Hoary Bat	<i>Lasiurus cinereus</i>	END	Not Listed	Utilize mostly treed habitats (deciduous and coniferous of any age class) for roosting or foraging. Maternity roost trees tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy with southern exposure and sheltered from the wind. Hoary Bats typically roost among the foliage of trees and occasionally shrubs and are typically solitary roosters (COSWIC, 2023). ESA Protection: Species and general habitat protection	Treed areas present. Species with potential to use forest and treed swamp vegetation communities within study area. Considered further in main text.
Least Bittern	<i>Ixobrychus exilis</i>	THR	THR	Breed strictly in marshes of emergents (usually cattails) that have relatively stable water levels and interspersed areas of open water (COSEWIC, 2009a). ESA Protection: Species and general habitat protection	Key habitat requirements for the species (e.g. , large marsh with stable water levels interspersed with open water areas) are not found on the property. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or marsh breeding bird survey program, or incidentally throughout the course of the field program.
Little Brown Myotis	<i>Myotis lucifugus</i>	END	END	Forests and regularly aging human structures as maternity roost sites. Regularly associated with attics of older buildings and barns for summer maternity roost colonies. Overwintering sites are characteristically mines or caves (COSEWIC, 2013c; MECP, 2014b). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g. , forests with large mature trees suitable for roosting) for the species occur on the property. Considered further in main text.
Louisiana Waterthrush	<i>Parkesia motacilla</i>	THR	THR	Occupies specialized habitat, showing a strong preferences for nesting and wintering along relatively pristine headwater streams and wetlands situated in large tracts of mature forest. Prefers running water, but also inhabits heavily wooded swamps and vernal or semi-permanent pools (COSEWIC, 2015). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g. , pristine headwater streams and wetlands in large mature forests) not present on or adjacent to the property. Habitat requirements are specialized. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Monarch	<i>Danaus plexippus</i>	SC	SC	Breeding habitat is confined to sites where milkweeds, the sole food of caterpillars, grow. Milkweeds grow in a variety of environments, including meadows in farmlands, along roadsides and in ditches, open wetlands, dry sandy areas, short and tall grass prairie, river banks, irrigation ditches, arid valleys, and south-facing hills (COSEWIC, 2016). ESA Protection: N/A	Key habitat requirement (e.g. , areas with milkweed) for species occur on the property. Considered further in main text.
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	SC	SC	Inhabits clear, coolwater streams. Adults are found in fast flowing riffles comprised of rock or gravel (MECP, 2023). ESA Protection: N/A	Key habitat requirements (e.g. , clear, coolwater stream) for the species are not found on the property or adjacent lands. The species would not be expected to occur. No fish sampling was completed within the property.
Northern Myotis	<i>Myotis septentrionalis</i>	END	END	Maternity roost sites are generally located within deciduous and mixed forests and focused in snags including loose bark and cavities of trees. Overwintering sites are characteristically mines or caves (COSEWIC, 2013c). ESA Protection: Species and general habitat protection	Key habitat requirement (e.g. , mixed forests with suitable trees for roosting) for species occur on the property. Considered further in main text.

Table 1: Species at Risk Habitat Summary, Chipwoods Park (Melancthon) EIS

AEC23-394

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species ¹	Initial Assessment
Peregrine Falcon	<i>Falco peregrinus</i>	SC	Not at Risk	Most nest on cliff ledges or crevices, but some will use tall buildings or bridges near good foraging areas. Nests are typically close to bodies of water (COSEWIC, 2017b). ESA Protection: N/A	Key habitat requirements (e.g., cliff ledges or crevices) for the species are not found on the property or adjacent lands. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	END	END	Occurs in open deciduous forests, particularly those dominated by oak and beech, groves of dead trees, floodplain forests, orchards, cemeteries, savannas and savanna-like grasslands. Although the species occupies a range of habitat types, key habitat is characteristically composed of woodlands where tall trees are of large circumference (i.e. mature cover) and are at a low density. A high density of snag trees is also an indicator of key habitat types (COSEWIC, 2018c). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g., forest dominated by oak and beech trees) for the species are not found on the property or adjacent lands. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Redside Dace	<i>Clinostomus elongatus</i>	END	END	Found in pools and slow-flowing sections of relatively small, clear headwater streams with both pool and riffle habitats and a moderate to high gradient. These streams typically flow through meadows, pasture or shrub overstory, and have abundant overhanging riparian vegetation (COSEWIC, 2017b). ESA Protection: Species and regulated habitat protection.	Key habitat requirements for the species (e.g. small, clear headwater streams with both pool and riffle habitats and a moderate to high gradient) are not found on the property or adjacent lands. The species would not be expected to occur. No fish sampling was completed within the property.
Short-eared Owl	<i>Asio flammeus</i>	THR	SC	A wide variety of unforested habitats are used, including marshes, grasslands, fallow pastures, and occasionally fields planted with row-crops (COSEWIC 2021b). ESA Protection: N/A	Key habitat requirements (e.g., large open fields or meadows) for the species are not found on the property or adjacent lands. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.
Silver-haired Bat	<i>Lasiorycteris noctivagans</i>	END	Not Listed	Roosting by Silver-haired Bats occurs under bark and in the cavities of trees, therefore, they rely on large, decaying trees (deciduous and coniferous). Deciduous species (<i>Populus</i> spp.) often have characteristics that make them ideal as roost sites, particularly in older forests. Can utilize old woodpecker cavities. May occasionally roost in buildings, especially during migration (COSEWIC, 2023) ESA Protection: Species and general habitat protection.	Key habitat requirement (e.g., mixed and coniferous forests and swamps with suitable trees for roosting) for species occur on the property. Considered further in main text.
Snapping Turtle	<i>Chelydra serpentina</i>	SC	SC	Habitat is characterized by slow-moving water with a soft mud bottom and dense aquatic vegetation. Often located in ponds, sloughs, shallow bays or river edges and slow streams, or areas combining several of these wetland habitats (COSEWIC, 2008). ESA Protection: N/A	Key habitat requirements (e.g., large wetlands with shallow/slow moving water, natural/naturalized ponds) for the species are found on the property and adjacent lands. Further discussed in main text.
Tricolored Bat	<i>Perimyotis subflavus</i>	END	END	Maternity roost sites include forests and modified landscapes (barns or human-made structures). Overwintering sites include mines and caves (COSEWIC, 2013c). ESA Protection: Species and general habitat protection	Key habitat requirement (e.g., woodlands with large mature trees suitable for roosting) for the species occur on the property. Further discussed in main text.
Wood Thrush	<i>Hylocichla mustelina</i>	SC	THR	Found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches (COSEWIC, 2012b). ESA Protection: N/A	Key habitat requirements (e.g., moist mixed stands) for the species occur within the study area. However, the species was not identified during the dawn breeding bird survey program or incidentally throughout the course of the field program.

Table 1: Species at Risk Habitat Summary, Chipwoods Park (Melancthon) EIS

AEC23-394

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species ¹	Initial Assessment
Yellow Rail	<i>Coturnicops noveboracensis</i>	SC	SC	Nest in wet marshy areas of short grass-like vegetation. The habitat must remain wet throughout the breeding season (COSEWIC, 2009b). ESA Protection: N/A	Key habitat requirements (e.g., marsh areas with short vegetation) for the species are not found on the property. The species would not be expected to occur on the property, and was not identified during the dawn breeding bird survey program or the marsh breeding bird survey program, or incidentally throughout the course of the field program.

¹ Habitat as outlined within the MNR's Species at Risk in Ontario website files (<https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>), or Species Specific COSEWIC Reports referenced in this document. Species at Risk in Ontario List (June 13, 2017)

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

COSEWIC. 2009a. COSEWIC assessment and update status report on the Least Bittern *Ixobrychus exilis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 36 pp.

COSEWIC. 2009b. COSEWIC assessment and status report on the Yellow Rail *Coturnicops noveboracensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.

COSEWIC. 2010. COSEWIC assessment and update status report on the Cerulean Warbler *Dendroica cerulea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.

COSEWIC. 2011a. COSEWIC assessment and update status report on the Eastern Meadowlark *Sturnella magna* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.

COSEWIC. 2011b. COSEWIC assessment and update status report on the Henslow's Sparrow *Ammodramus henslowii* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 37 pp.

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

COSEWIC. 2012b. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.

COSEWIC. 2013a. COSEWIC assessment and update status report on the Bank Swallow *Riparia riparia* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp.

COSEWIC. 2013b. COSEWIC assessment and status report on the Grasshopper Sparrow *pratenis* subspecies *Ammodramus savannarum pratensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 36 pp.

COSEWIC. 2013c. COSEWIC assessment and update status report on the Little Brown Myotis *Myotis lucifugus*, Northern Myotis *Myotis septentrionalis* and Tri-colored Bat *Perimyotis subflavus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.

COSEWIC. 2015. COSEWIC assessment and status report on the Louisiana Waterthrush *Parkesia motacilla* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 58 pp.

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COSEWIC. 2017a. COSEWIC assessment and status report on the Butternut *Juglans cinerea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 74 pp.

COSEWIC. 2017b. COSEWIC assessment and update status report on the Redside Dace *Clinostomus elongates* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 63 pp.

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

COSEWIC. 2018b. COSEWIC assessment and status report on the Chimney Swift *Chaetura pelagica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp.

COSEWIC. 2018c. COSEWIC assessment and status report on the Common Nighthawk *Chordeiles minor* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 50 pp.

COSEWIC. 2018d. COSEWIC assessment and status report on the Red-headed Woodpecker *Melanerpes erythrocephalus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 60 pp.

COSEWIC. 2021a. COSEWIC assessment and status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.

COSEWIC. 2021b. COSEWIC assessment and status report on the Short-eared Owl *Asio flammeus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 69 pp.

COSEWIC. 2022a. COSEWIC assessment and status report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 60 pp.

COSEWIC. 2022b. COSEWIC assessment and status report on the Eastern Whip-poor-will *Antrostomus vociferus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 56 pp.

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Table 2: Vascular Plant List, Chipwoods Park (Melancthon) EIS

Surveyor: David d'Entremont

AEC23-394

FAMILY ¹	SCIENTIFIC NAME ¹	COMMON NAME ¹	Vegetation Communities ²								Conservation Rankings ³			
			FOCM4-3	FOMM8-1	FOMM4-3	SWT02-6	SWDM4-5 (incl.)	SWT02-6 (incl.)	SWD/SWC/SWT/MAM Complex	ML	Pond Perimeter	GRANK	SRANK	TRACKED (Y/N)
Apiaceae	<i>Aegopodium podagraria</i>	Goutweed							X	X		GNR	SNA	N
Apiaceae	<i>Daucus carota</i>	Wild Carrot	X							X		GNR	SNA	N
Apiaceae	<i>Sium suave</i>	Common Water-parsnip				X		X	X			G5	S5	N
Apocynaceae	<i>Apocynum androsaemifolium</i>	Spreading Dogbane	X		X			X	X			G5	S5	N
Apocynaceae	<i>Asclepias syriaca</i>	Common Milkweed	X		X			X	X			G5	S5	N
Apocynaceae	<i>Vinca minor</i>	Lesser Periwinkle	X									GNR	SNA	N
Aquifoliaceae	<i>Ilex verticillata</i>	Common Winterberry						X				G5	S5	N
Araceae	<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	X	X		X		X	X			G5	S5	N
Araceae	<i>Lemna minor</i>	Small Duckweed				X		X			X	G5	S5	N
Araceae	<i>Lemna trisulca</i>	Star Duckweed				X						G5	S5	N
Araliaceae	<i>Aralia nudicaulis</i>	Wild Sarsaparilla	X					X				G5	S5	N
Asparagaceae	<i>Convallaria majalis</i>	European Lily-of-the-valley								X		G5	SNA	N
Asparagaceae	<i>Maianthemum canadense</i>	Wild Lily-of-the-valley			X							G5	S5	N
Asparagaceae	<i>Maianthemum racemosum</i>	Large False Solomon's Seal	X		X							G5T5	S5	N
Asphodelaceae	<i>Hemerocallis fulva</i>	Orange Daylily								X		GNA	SNA	N
Asphodelaceae	<i>Hemerocallis sp.</i>	Daylily species						X				-	-	-
Asteraceae	<i>Achillea millefolium</i>	Common Yarrow	X		X			X	X			G5	SNA	N
Asteraceae	<i>Antennaria howellii</i>	Howell's Pussytoes							X			G5	S5	N
Asteraceae	<i>Bidens frondosa</i>	Devil's Beggarticks			X			X				G5	S5	N
Asteraceae	<i>Cirsium arvense</i>	Canada Thistle	X					X				G5	SNA	N
Asteraceae	<i>Cirsium vulgare</i>	Bull Thistle							X			GNR	SNA	N
Asteraceae	<i>Erigeron annuus</i>	Annual Fleabane	X		X				X	X		G5	S5	N
Asteraceae	<i>Erigeron philadelphicus</i>	Philadelphia Fleabane							X			G5	S5	N
Asteraceae	<i>Eupatorium perfoliatum</i>	Common Boneset				X		X		X		G5	S5	N
Asteraceae	<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	X									G5	S5	N
Asteraceae	<i>Eutrochium maculatum</i>	Spotted Joe Pye Weed	X		X	X		X	X	X		G5	S5	N
Asteraceae	<i>Lactuca biennis</i>	Tall Blue Lettuce						X				G5	S5	N
Asteraceae	<i>Lapsana communis</i>	Common Nipplewort			X							GNR	SNA	N
Asteraceae	<i>Leucanthemum vulgare</i>	Oxeye Daisy	X		X			X				GNR	SNA	N
Asteraceae	<i>Mycelis muralis</i>	Wall Lettuce	X					X				GNR	SNA	N
Asteraceae	<i>Pilosella caespitosa</i>	Meadow Hawkweed	X		X			X				GNR	SNA	N
Asteraceae	<i>Pilosella piloselloides</i>	Tall Hawkweed							X			GNR	SNA	N
Asteraceae	<i>Solidago altissima</i>	Tall Goldenrod	X		X			X	X			G5	S5	P
Asteraceae	<i>Solidago gigantea</i>	Giant Goldenrod	X				X	X				G5	S5	P
Asteraceae	<i>Solidago rugosa</i>	Rough-stemmed Goldenrod	X	X	X	X	X	X				G5	S5	N
Asteraceae	<i>Sonchus arvensis</i>	Field Sow-thistle							X			GNR	SNA	N
Asteraceae	<i>Symphyotrichum lanceolatum</i>	Panicled Aster	X			X		X	X	X		G5	S5	P
Asteraceae	<i>Symphyotrichum lateriflorum</i>	Calico Aster	X	X	X	X		X				G5	S5	P
Asteraceae	<i>Symphyotrichum novae-angliae</i>	New England Aster	X									G5	S5	N
Asteraceae	<i>Symphyotrichum puniceum</i>	Purple-stemmed Aster	X				X	X				G5	S5	N
Asteraceae	<i>Symphyotrichum urophyllum</i>	Arrow-leaved Aster							X			G5	S4	N
Asteraceae	<i>Taraxacum officinale</i>	Common Dandelion	X	X	X			X	X			G5	SNA	N

Table 2: Vascular Plant List, Chipwoods Park (Melancthon) EIS

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AEC23-394

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Asteraceae	<i>Tussilago farfara</i>	Coltsfoot	X		X						X		GNR	SNA	N
Athyriaceae	<i>Athyrium filix-femina var. angustum</i>	Northeastern Lady Fern	X		X				X				G5T5	S5	N
Balsaminaceae	<i>Impatiens capensis</i>	Spotted Jewelweed	X		X				X	X	X		G5	S5	N
Betulaceae	<i>Betula alleghaniensis</i>	Yellow Birch							X				G5	S5	N
Betulaceae	<i>Betula papyrifera</i>	Paper Birch	X	X	X	X	X	X	X	X			G5	S5	N
Betulaceae	<i>Corylus cornuta</i>	Beaked Hazelnut	X						X				G5	S5	N
Boraginaceae	<i>Myosotis laxa</i>	Small Forget-me-not				X			X				G5	S5	N
Boraginaceae	<i>Myosotis sylvatica</i>	Woodland Forget-me-not	X										G5	SNA	N
Brassicaceae	<i>Barbarea vulgaris</i>	Bitter Wintercress							X				GNR	SNA	N
Brassicaceae	<i>Nasturtium microphyllum</i>	Small-leaved Watercress				X					X		GNR	SNA	N
Brassicaceae	<i>Nasturtium sp.</i>	Watercress species							X				-	-	-
Campanulaceae	<i>Campanula rapunculoides</i>	Creeping Bellflower								X			GNR	SNA	N
Caprifoliaceae	<i>Lonicera dioica</i>	Limber Honeysuckle							X				G5	S5	N
Caprifoliaceae	<i>Lonicera tatarica</i>	Tatarian Honeysuckle								X			GNR	SNA	N
Caprifoliaceae	<i>Lonicera x bella</i>	(<i>Lonicera morrowii</i> X <i>Lonicera tatarica</i>)					X						GNA	SNA	N
Caprifoliaceae	<i>Valeriana officinalis</i>	Common Valerian	X				X		X	X			GNR	SNA	N
Caryophyllaceae	<i>Cerastium fontanum</i>	Common Mouse-ear Chickweed								X			GNR	SNA	N
Cornaceae	<i>Cornus alternifolia</i>	Alternate-leaved Dogwood	X	X	X	X	X	X		X			G5	S5	N
Cornaceae	<i>Cornus sericea</i>	Red-osier Dogwood	X		X	X	X	X	X	X	X		G5	S5	N
Cupressaceae	<i>Thuja occidentalis</i>	Eastern White Cedar	X	X	X	X	X	X	X	X			G5	S5	N
Cyperaceae	<i>Carex arctata</i>	Drooping Woodland Sedge	X		X								G5	S5	N
Cyperaceae	<i>Carex cristatella</i>	Crested Sedge							X				G5	S5	N
Cyperaceae	<i>Carex flava</i>	Yellow Sedge				X			X				G5	S5	N
Cyperaceae	<i>Carex gracillima</i>	Graceful Sedge		X	X				X				G5	S5	N
Cyperaceae	<i>Carex interior</i>	Inland Sedge							X				G5	S5	N
Cyperaceae	<i>Carex intumescens</i>	Bladder Sedge	X		X								G5	S5	N
Cyperaceae	<i>Carex leptalea</i>	Bristle-stalked Sedge							X				G5	S5	N
Cyperaceae	<i>Carex pedunculata</i>	Long-stalked Sedge	X		X	X		X					G5	S5	N
Cyperaceae	<i>Carex projecta</i>	Necklace Sedge	X						X				G5	S5	N
Cyperaceae	<i>Carex pseudocyperus</i>	Cyperus-like Sedge									X		G5	S5	N
Cyperaceae	<i>Carex retrorsa</i>	Retrorsed Sedge							X				G5	S5	N
Cyperaceae	<i>Carex rosea</i>	Rosy Sedge			X								G5	S5	N
Cyperaceae	<i>Carex stipata</i>	Awl-fruited Sedge							X				G5	S5	N
Cyperaceae	<i>Carex utriculata</i>	Northern Beaked Sedge				X		X			X		G5	S5	N
Cyperaceae	<i>Carex vulpinoidea</i>	Fox Sedge							X				G5	S5	N
Cyperaceae	<i>Eleocharis palustris</i>	Creeping Spikerush				X							G5	S5	N
Cyperaceae	<i>Scirpus atrovirens</i>	Dark-green Bulrush							X				G5	S5	N
Cyperaceae	<i>Scirpus cyperinus</i>	Common Woolly Bulrush				X		X	X				G5	S5	N
Cystopteridaceae	<i>Cystopteris bulbifera</i>	Bulblet Bladder Fern	X						X				G5	S5	N
Cystopteridaceae	<i>Gymnocarpium dryopteris</i>	Common Oak Fern							X				G5	S5	N
Dennstaedtiaceae	<i>Pteridium aquilinum</i>	Bracken Fern	X										G5	S5	N
Dryopteridaceae	<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	X	X	X		X		X				G5	S5	N

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Dryopteridaceae	<i>Dryopteris cristata</i>	Crested Wood Fern									X			G5	S5	N
Dryopteridaceae	<i>Dryopteris intermedia</i>	Evergreen Wood Fern									X			G5	S5	N
Equisetaceae	<i>Equisetum arvense</i>	Field Horsetail	X		X						X	X		G5	S5	N
Ericaceae	<i>Hypopitys monotropa</i>	Pinesap									X			G5	S4	N
Ericaceae	<i>Monotropa uniflora</i>	Indian-pipe	X											G5	S5	N
Fabaceae	<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	X		X									GNR	SNA	N
Fabaceae	<i>Medicago lupulina</i>	Black Medick	X									X		GNR	SNA	N
Fabaceae	<i>Robinia pseudoacacia</i>	Black Locust										X		G5	SNA	N
Fabaceae	<i>Securigera varia</i>	Purple Crown-vetch			X									GNR	SNA	N
Fabaceae	<i>Trifolium pratense</i>	Red Clover	X		X							X		GNR	SNA	N
Fabaceae	<i>Trifolium repens</i>	White Clover										X		GNR	SNA	N
Fabaceae	<i>Vicia cracca</i>	Tufted Vetch	X											GNR	SNA	N
Fagaceae	<i>Quercus rubra</i>	Northern Red Oak										X		G5	S5	N
Geraniaceae	<i>Geranium robertianum</i>	Herb-Robert			X	X		X				X		G5	S5	N
Grossulariaceae	<i>Ribes americanum</i>	American Black Currant				X		X		X		X		G5	S5	N
Grossulariaceae	<i>Ribes cynosbati</i>	Eastern Prickly Gooseberry	X		X					X				G5	S5	N
Grossulariaceae	<i>Ribes rubrum</i>	European Red Currant	X											G4G5	SNA	N
Grossulariaceae	<i>Ribes triste</i>	Swamp Red Currant	X				X			X				G5	S5	N
Hypericaceae	<i>Hypericum perforatum</i>	Common St. John's-wort	X							X	X			GNR	SNA	N
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	X							X	X			G5	S4?	N
Juncaceae	<i>Juncus effusus</i>	Soft Rush								X				G5	S5	N
Lamiaceae	<i>Clinopodium vulgare ssp. vulgare</i>	Wild Basil	X		X									G5T5	S5	N
Lamiaceae	<i>Glechoma hederacea</i>	Ground-ivy								X				GNR	SNA	N
Lamiaceae	<i>Lycopus uniflorus</i>	Northern Water-horehound								X				G5	S5	N
Lamiaceae	<i>Mentha canadensis</i>	Canada Mint				X		X		X				G5	S5	N
Lamiaceae	<i>Prunella vulgaris</i>	Common Self-heal	X	X	X					X				G5	S5	N
Lamiaceae	<i>Scutellaria lateriflora</i>	Mad-dog Skullcap				X	X			X				G5	S5	N
Lythraceae	<i>Lythrum salicaria</i>	Purple Loosestrife	X			X		X			X	X		G5	SNA	N
Malvaceae	<i>Tilia americana</i>	Basswood								X				G5	S5	N
Melanthiaceae	<i>Trillium sp.</i>	Trillium species	X											-	-	-
Oleaceae	<i>Fraxinus americana</i>	White Ash	X	X	X							X		G4	S4	N
Oleaceae	<i>Fraxinus nigra</i>	Black Ash	X	X		X	X	X		X				G5	S4	Y
Oleaceae	<i>Fraxinus pennsylvanica</i>	Red Ash	X	X	X	X	X	X		X				G4	S4	N
Oleaceae	<i>Ligustrum vulgare</i>	European Privet	X		X					X	X			GNR	SNA	N
Oleaceae	<i>Syringa vulgaris</i>	Common Lilac								X	X			GNR	SNA	N
Onagraceae	<i>Circaea alpina</i>	Small Enchanter's Nightshade			X					X				G5	S5	N
Onagraceae	<i>Circaea canadensis</i>	Broad-leaved Enchanter's Nightshade	X	X	X		X				X			G5	S5	N
Onagraceae	<i>Epilobium ciliatum</i>	Northern Willowherb								X				G5	S5	N
Onagraceae	<i>Epilobium coloratum</i>	Purple-veined Willowherb								X				G5	S5	N
Onagraceae	<i>Epilobium sp.</i>	Willowherb species								X				-	-	-
Onagraceae	<i>Oenothera biennis</i>	Common Evening-primrose			X									G5	S5	N
Onocleaceae	<i>Matteuccia struthiopteris</i>	Ostrich Fern	X		X	X		X		X				G5	S5	N

Table 2: Vascular Plant List, Chipwoods Park (Melancthon) EIS

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AEC23-394

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Onocleaceae	<i>Onoclea sensibilis</i>	Sensitive Fern	X		X	X			X	X				G5	S5	N
Orchidaceae	<i>Epipactis helleborine</i>	Broad-leaved Helleborine	X	X	X						X			GNR	SNA	N
Orchidaceae	<i>Platanthera aquilonis</i>	Tall Northern Green Orchid								X				G5	S5	N
Oxalidaceae	<i>Oxalis stricta</i>	Upright Yellow Wood-sorrel	X							X	X			G5	SNA	N
Pinaceae	<i>Abies balsamea</i>	Balsam Fir	X	X	X	X	X	X	X	X	X			G5	S5	N
Pinaceae	<i>Larix decidua</i>	European Larch	X		X						X			G5	SNA	N
Pinaceae	<i>Larix laricina</i>	Tamarack							X					G5	S5	N
Pinaceae	<i>Picea abies</i>	Norway Spruce	X								X			G5	SNA	N
Pinaceae	<i>Picea glauca</i>	White Spruce	X		X	X				X	X			G5	S5	N
Pinaceae	<i>Picea pungens</i>	Blue Spruce									X			G5	SNA	N
Pinaceae	<i>Pinus banksiana</i>	Jack Pine									X			G5	S5	N
Pinaceae	<i>Pinus resinosa</i>	Red Pine			X						X			G5	S5	N
Pinaceae	<i>Pinus strobus</i>	Eastern White Pine			X						X			G5	S5	N
Pinaceae	<i>Pinus sylvestris</i> var. <i>sylovestris</i>	Scots Pine									X			GNRTNR	SNA	N
Pinaceae	<i>Tsuga canadensis</i>	Eastern Hemlock								X				G4G5	S5	N
Plantaginaceae	<i>Plantago lanceolata</i>	English Plantain	X								X			G5	SNA	N
Plantaginaceae	<i>Plantago major</i>	Common Plantain	X								X			G5	SNA	N
Plantaginaceae	<i>Veronica anagallis-aquatica</i>	Water Speedwell				X				X		X		GNR	SNA	N
Plantaginaceae	<i>Veronica officinalis</i>	Common Speedwell	X	X	X		X			X				G5	SNA	N
Plantaginaceae	<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	X							X				G5	SU	N
Poaceae	<i>Agrostis gigantea</i>	Redtop	X							X				G4G5	SNA	N
Poaceae	<i>Agrostis stolonifera</i>	Creeping Bentgrass				X				X				G5	SNA	N
Poaceae	<i>Bromus inermis</i>	Smooth Brome			X						X			G5T5	SNA	N
Poaceae	<i>Dactylis glomerata</i>	Orchard Grass	X		X									GNR	SNA	N
Poaceae	<i>Elymus repens</i>	Quackgrass								X				GNR	SNA	N
Poaceae	<i>Glyceria borealis</i>	Boreal Mannagrass				X								G5	S5	N
Poaceae	<i>Glyceria grandis</i>	Tall Mannagrass								X		X		G5	S5	N
Poaceae	<i>Glyceria striata</i> var. <i>striata</i>	Fowl Mannagrass	X			X		X		X				G5T5	S5	N
Poaceae	<i>Leersia oryzoides</i>	Rice Cutgrass				X				X				G5	S5	N
Poaceae	<i>Panicum capillare</i>	Common Panicgrass			X									G5	S5	N
Poaceae	<i>Phalaris arundinacea</i>	Reed Canarygrass				X		X		X				G5	S5	N
Poaceae	<i>Phleum pratense</i>	Common Timothy	X											GNR	SNA	N
Poaceae	<i>Poa compressa</i>	Canada Bluegrass	X		X						X			GNR	SNA	N
Poaceae	<i>Poa palustris</i>	Fowl Bluegrass								X				G5	S5	N
Poaceae	<i>Poa pratensis</i>	Kentucky Bluegrass									X			G5	S5	P
Polygonaceae	<i>Persicaria amphibia</i>	Water Smartweed				X		X						G5	S5	N
Polygonaceae	<i>Reynoutria japonica</i>	Japanese Knotweed								X				GNR	SNA	N
Polygonaceae	<i>Rumex crispus</i>	Curled Dock									X			GNR	SNA	N
Polygonaceae	<i>Rumex obtusifolius</i>	Bitter Dock								X				GNR	SNA	N
Primulaceae	<i>Lysimachia borealis</i>	Northern Starflower								X				G5	S5	N
Primulaceae	<i>Lysimachia nummularia</i>	Creeping Yellow Loosestrife	X							X				GNR	SNA	N
Ranunculaceae	<i>Actaea rubra</i>	Red Baneberry	X											G5	S5	N

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			FOCM4-3	FOMM8-1	FOMM4-3	SWT02-6	SWDM4-5 (incl.)	SWT02-6 (incl.)	SWD/SWC/SWT/MAM Complex	ML	Pond Perimeter	GRANK	SRANK	TRACKED (Y/N)		
Ranunculaceae	<i>Anemonastrum canadense</i>	Canada Anemone									X			G5	S5	N
Ranunculaceae	<i>Anemone virginiana</i>	Tall Anemone	X		X									G5	S5	N
Ranunculaceae	<i>Caltha palustris</i>	Yellow Marsh Marigold				X					X			G5	S5	N
Ranunculaceae	<i>Clematis virginiana</i>	Virginia Clematis	X				X							G5	S5	N
Ranunculaceae	<i>Ranunculus acris</i>	Common Buttercup				X					X			G5	SNA	N
Ranunculaceae	<i>Ranunculus recurvatus</i>	Hooked Buttercup									X			G5	S5	N
Ranunculaceae	<i>Ranunculus repens</i>	Creeping Buttercup	X								X			GNR	SNA	N
Rhamnaceae	<i>Endotropis alnifolia</i>	Alder-leaved Buckthorn	X	X				X			X			G5	S5	N
Rhamnaceae	<i>Rhamnus cathartica</i>	European Buckthorn	X					X				X		GNR	SNA	N
Rosaceae	<i>Agrimonia gryposepala</i>	Hooked Agrimony	X		X									G5	S5	N
Rosaceae	<i>Crataegus sp.</i>	a Hawthorn	X								X			N/A	N/A	N/A
Rosaceae	<i>Fragaria virginiana</i>	Wild Strawberry	X	X				X			X	X		G5	S5	N
Rosaceae	<i>Geum aleppicum</i>	Yellow Avens	X											G5	S5	N
Rosaceae	<i>Geum canadense</i>	Canada Avens	X								X			G5	S5	N
Rosaceae	<i>Geum rivale</i>	Water Avens									X			G5	S5	N
Rosaceae	<i>Malus pumila</i>	Common Apple	X		X						X	X		G5	SNA	N
Rosaceae	<i>Prunus serotina</i>	Black Cherry	X	X	X						X	X		G5	S5	N
Rosaceae	<i>Prunus virginiana</i>	Chokecherry	X	X	X			X				X		G5	S5	N
Rosaceae	<i>Rosa multiflora</i>	Multiflora Rose										X		GNR	SNA	N
Rosaceae	<i>Rubus idaeus ssp. strigosus</i>	North American Red Raspberry	X		X							X		G5T5	S5	N
Rosaceae	<i>Rubus pubescens</i>	Dwarf Raspberry			X			X			X			G5	S5	N
Rosaceae	<i>Sorbus aucuparia</i>	European Mountain-ash	X		X						X	X		G5	SNA	N
Rosaceae	<i>Spiraea alba</i>	White Meadowsweet									X			G5	S5	N
Rubiaceae	<i>Galium palustre</i>	Common Marsh Bedstraw									X			G5	S5	N
Rubiaceae	<i>Galium triflorum</i>	Three-flowered Bedstraw	X		X									G5	S5	N
Salicaceae	<i>Populus balsamifera</i>	Balsam Poplar				X			X		X			G5	S5	N
Salicaceae	<i>Populus tremuloides</i>	Trembling Aspen	X	X	X	X	X	X	X		X			G5	S5	N
Salicaceae	<i>Populus x canadensis</i>	(Populus deltoides X Populus nigra)	X									X		GNA	SNA	N
Salicaceae	<i>Salix alba</i>	White Willow	X									X		G5	SNA	N
Salicaceae	<i>Salix bebbiana</i>	Bebb's Willow	X			X	X				X		X	G5	S5	N
Salicaceae	<i>Salix discolor</i>	Pussy Willow									X			G5	S5	N
Salicaceae	<i>Salix eriocephala</i>	Cottony Willow				X								G5	S5	N
Salicaceae	<i>Salix lucida</i>	Shining Willow				X								G5T5	S5	N
Salicaceae	<i>Salix petiolaris</i>	Meadow Willow				X		X			X			G5	S5	N
Sapindaceae	<i>Acer ginnala</i>	Amur Maple										X		GNR	SNA	N
Sapindaceae	<i>Acer negundo</i>	Manitoba Maple										X		G5	S5	N
Sapindaceae	<i>Acer platanoides</i>	Norway Maple			X									GNR	SNA	N
Sapindaceae	<i>Acer rubrum</i>	Red Maple	X		X	X			X					G5	S5	N
Sapindaceae	<i>Acer saccharinum</i>	Silver Maple			X						X	X		G5	S5	N
Sapindaceae	<i>Acer saccharum</i>	Sugar Maple	X	X	X						X	X		G5	S5	N
Sapindaceae	<i>Acer spicatum</i>	Mountain Maple									X			G5	S5	N
Sapindaceae	<i>Acer x freemanii</i>	(Acer rubrum X Acer saccharinum)										X		GNA	SNA	N

Table 2: Vascular Plant List, Chipwoods Park (Melancthon) EIS

Surveyor: David d'Entremont

AEC23-394

FAMILY ¹	SCIENTIFIC NAME ¹	COMMON NAME ¹	Vegetation Communities ²									Conservation Rankings ³				
			FOCM4-3	FOMM8-1	FOMM4-3	SWT02-6	SWDM4-5 (incl.)	SWT02-6 (incl.)	SWD/SWC/SWT/MAM Complex	ML	Pond Perimeter	GRANK	SRANK	TRACKED (Y/N)		
Sapindaceae	<i>Aesculus hippocastanum</i>	Horse Chestnut	X											GNR	SNA	N
Saxifragaceae	<i>Chrysosplenium americanum</i>	American Golden-saxifrage								X				G5	S4	N
Saxifragaceae	<i>Mitella nuda</i>	Naked Mitrewort								X				G5	S5	N
Saxifragaceae	<i>Tiarella stolonifera</i>	Heart-leaved Foamflower								X				G5	S5	N
Scrophulariaceae	<i>Verbascum thapsus</i>	Common Mullein			X								X	GNR	SNA	N
Solanaceae	<i>Solanum dulcamara</i>	Bittersweet Nightshade	X			X		X	X		X			GNR	SNA	N
Thelypteridaceae	<i>Thelypteris palustris</i>	Marsh Fern				X			X					G5	S5	N
Typhaceae	<i>Typha angustifolia</i>	Narrow-leaved Cattail							X					G5	SNA	N
Typhaceae	<i>Typha latifolia</i>	Broad-leaved Cattail				X								G5	S5	N
Typhaceae	<i>Typha x glauca</i>	(<i>Typha angustifolia</i> X <i>Typha latifolia</i>)				X								GNA	SNA	N
Typhaceae	<i>Typha sp.</i>	Cattail species							X			X		-	-	-
Ulmaceae	<i>Ulmus americana</i>	White Elm	X	X	X	X	X	X	X	X	X			G4	S5	N
Urticaceae	<i>Urtica gracilis ssp. gracilis</i>	Slender Stinging Nettle							X					G5T5	S5	N
Verbenaceae	<i>Verbena hastata</i>	Blue Vervain							X					G5	S5	N
Viburnaceae	<i>Sambucus canadensis</i>	Common Elderberry				X			X					G5T5	S5	N
Viburnaceae	<i>Viburnum lentago</i>	Nannyberry					X		X	X				G5	S5	N
Viburnaceae	<i>Viburnum opulus</i>	Cranberry Viburnum	X											G5	S5	N
Violaceae	<i>Viola labradorica</i>	Labrador Violet	X	X		X		X	X					G5	S5	N
Violaceae	<i>Viola sp.</i>	a Violet				X		X						N/A	N/A	N/A
Vitaceae	<i>Parthenocissus vitacea</i>	Thicket Creeper			X	X		X	X					G5	S5	N
Vitaceae	<i>Vitis riparia</i>	Riverbank Grape			X	X		X	X	X				G5	S5	N

¹ Nomenclature based on Ministry of Natural Resources and Forestry (MNR) Natural Heritage Information Centre (NHIC, 2025)

² ELC Codes based on Ecological Land Classification for Southern Ontario manual (Lee et al., 1998, 2008)

³ Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (<https://www.ontario.ca/page/natural-heritage-information-centre>)

Ecological Land Classification ¹				Composition	Ground Cover
System	Community Class	Community Series	Ecosite/Vegetation Type		
Terrestrial	N/A	N/A	Maintained Lands	While not a natural community, it was noted that the maintained lands of the campground contained a variety of landscape trees over lawn and maintained garden areas. Canopy-height trees included Scots Pine, Carolina Poplar, Red Pine, Eastern White Cedar, White Spruce, Norway Spruce, Silver Maple, Manitoba Maple, European Larch and others.	-
Terrestrial	Forest	FOCM, Coniferous Forest	FOCM4-3, Fresh - Moist White Cedar - Balsam Fir Coniferous Forest	<p>This community is a large and variable Eastern White Cedar-dominated forest which surrounds much of the campground and borders much of the wetland edge with the SWD/SWC/SWT/MAM complex. While variable, much of this community appears to be somewhat early-mid-aged and is typically low-diversity in any single location, with much of the species diversity originating from near-wetland fringe areas.</p> <p>The canopy is dense, typically dominated by Eastern White Cedar with occasional elements of Balsam Fir, and irregular elements of Paper Birch, Poplar, Spruce and others. The subcanopy is typically relatively sparse, mainly comprised of younger Eastern White Cedar.</p>	The understory is typically sparse, including elements of Poplar, Eastern White Cedar and Bittersweet Nightshade. The ground layer is also typically sparse, including sporadic elements of Broad-leaved Helleborine, Poplar, Bittersweet Nightshade, Coltsfoot, Indian-pipe and others.

Ecological Land Classification ¹					
System	Community Class	Community Series	Ecosite/Vegetation Type	Composition	Ground Cover
Terrestrial	Forest	FOMM, Mixed Forest	FOMM4-3, Dry - Fresh White Cedar - Hardwood Mixed Forest	<p>This community is a very variable community that includes several disturbed areas and may include historically planted elements in combination with naturally regenerating elements.</p> <p>The canopy is typically dense, composed most consistently of Eastern White Cedar with regular elements of White Spruce, Black Cherry, Ash, Trembling aspen, Maples (Red Maple with some Sugar Maple), Paper Birch, Red Pine and others. The subcanopy is somewhat dense, composed of elements of Ash, Cherry, Eastern White Cedar, Alternate-leaved Dogwood, Paper Birch, Trembling Aspen, Sugar maple and others.</p>	<p>The understory is dense, most consistently composed of young Ash, with variable elements of Trembling Aspen, Chokecherry, Spreading Dogbane, Alternate-leaved Dogwood, Sugar Maple, Red Maple and others. The ground layer varied from somewhat dense to dense, composed most consistently of Ash, Graceful Sedge, Wild Lily-of-the-valley, Common Speedwell, and others.</p>
Terrestrial	Forest	FODM, Deciduous Forest	FOMM8-1, Fresh - Moist Poplar Mixed Forest	<p>This community occupies a fresh-moist fringe area between the FOCM4-3 and the large wetland complex to the southeast. This community grades into increasing Eastern White Cedar elements towards its north fringe.</p> <p>The canopy is dense, composed largely of Trembling Aspen, with lesser elements of Eastern White Cedar, Paper Birch, Green Ash, and Sugar Maple. The subcanopy is also dense, typically composed of Green Ash and Eastern White Cedar, with lesser elements of American Elm, Sugar Maple, and sporadic Black Ash.</p>	<p>The understory is somewhat dense, composed largely of Chokecherry and Green Ash with sporadic Black Ash occasional. The ground layer is dense, composed largely of Broad-leaved Enchanter's Nightshade, Alternate-leaved Dogwood, Ash seedlings, Graceful Sedge and others.</p>

Ecological Land Classification ¹				Composition	Ground Cover
System	Community Class	Community Series	Ecosite/Vegetation Type		
Wetland	Swamp	SWTO, Organic Thicket Swamp	SWTO2-6, Mixed Willow Organic Deciduous Thicket Swamp	<p>This community and the nearby inclusion of the same type are similar communities. This community was observed to occupy a clear low point adjacent the campground maintained lands, and is surrounded by slopes on most of its sides. The edges tend towards treed swamp grading up into forest, but overall the polygon is a thicket swamp community dominated by Willow and Dogwood, and has some centrally flooded areas. At its south end, it follows a drainage channel and abuts the north edge of the OAO/pond, where there is a minor fringe of shallow marsh elements.</p> <p>Overall canopy is relatively sparse, composed of Trembling Aspen, Eastern White Cedar, Balsam Poplar and American Elm, with additional elements of Paper Birch, American Elm and Red Maple at its fringes. The subcanopy is somewhat dense, comprised largely of shrub Willows and Red-osier Dogwood with lesser elements of Eastern White Cedar, Ash (including numerous young Black Ash), Riverbank Grape and Trembling Aspen.</p>	<p>The understory is dense, composed largely of Reed Canary Grass and Purple Loosestrife with lesser elements of Red-osier Dogwood, shrub Willows, Northern Beaked Sedge and others. The riparian corridor of the drainage feature includes an elevated component of Cattails. The ground layer is also dense, composed of Reed Canary Grass, <i>Carex</i> sedges, and lesser elements of Sensitive Fern, Bittersweet Nightshade, Mannagrass, and (in flooded areas) Small Duckweed. The riparian corridor of the drainage feature includes elevated components of Yellow Marsh Marigold, Yellow Sedge, Small-leaved Watercress, Water Speedwell and others.</p>

Ecological Land Classification ¹				Composition	Ground Cover
System	Community Class	Community Series	Ecosite/Vegetation Type		
Wetland	Swamp	SWTO, Organic Thicket Swamp	SWTO2-6 (incl.), Mixed Willow Organic Deciduous Thicket Swamp Inclusion	<p>This inclusion was observed to occupy a clear low point adjacent the campground maintained lands, and is surrounded by slopes on all sides. The edges tend towards treed swamp, but overall the polygon is a thicket swamp community dominated by Willow and Dogwood, and has some centrally flooded areas.</p> <p>The canopy is relatively sparse, composed of Trembling Aspen, Eastern White Cedar, Balsam Poplar and American Elm, with additional elements of Paper Birch, American Elm and Red Maple at its fringes. The subcanopy is somewhat dense, comprised largely of shrub Willows and Red-osier Dogwood with lesser elements of Eastern White Cedar, Ash, Riverbank Grape and Trembling Aspen.</p>	<p>The understory is dense, composed largely of Reed Canary Grass and Purple Loosestrife with lesser elements of Red-osier Dogwood, shrub Willows, Northern Beaked Sedge and others. The ground layer is also dense, composed of Reed Canary Grass, <i>Carex</i> sedges, and lesser elements of Sensitive Fern, Bittersweet Nightshade, and (in flooded areas) Small Duckweed.</p>
Wetland	Swamp	SWDM, Mineral Deciduous Swamp	SWDM4-5 (incl.), Poplar Mineral Deciduous Swamp Inclusion	<p>This inclusion occupies a local slight low-lying area within the FOCM4-3 adjacent the FOMM8-1. Short-term surface flow may exit this polygon to the southeast during melt/spring circumstances, however this polygon was not determined to be connected by wetland vegetation to the overall wetland complex to the southwest.</p> <p>The canopy is dense, composed of Trembling Aspen, with lesser elements of Paper Birch and Green Ash. The subcanopy is dense, composed of tall Red-osier Dogwoods with lesser elements of Ash, Trembling Aspen, Willow and American Elm.</p>	<p>The understory is dense, composed primarily of Red-osier Dogwood with lesser elements of Rough-stemmed Goldenrod and occasional young Ash. The ground layer is also dense, most consistently composed of Dwarf Raspberry, with occasional elements of Ash, Red-osier Dogwood, Wild Strawberry and others.</p>

Ecological Land Classification ¹				Composition	Ground Cover
System	Community Class	Community Series	Ecosite/Vegetation Type		
Wetland	Various	SWD/SWC/SWT /MAM, Deciduous Treed Swamp/ Coniferous Treed Swamp/ Thicket Swamp/ Meadow Marsh Complex	-	<p>This community is a large and variable wetland complex including treed swamp, thicket swamp and marsh areas. The community tends towards organic soils in deeper/more central areas but varies to mineral soils towards the fringes. Note: a minor inclusion of this community is depicted near the southwest end of Drainage Feature 3 near the property boundary and entrance driveway; this is separate from the main wetland by historical lawn maintenance but was not described independently of the main wetland complex.</p> <p>Tree cover is variable; tree canopy at the treed fringes tend to be densely established with Eastern White Cedar, while central areas tend towards a somewhat sparse average canopy, composed of Trembling Aspen, Balsam Poplar, Balsam Fir, and Eastern White Cedar. The subcanopy is likewise variable, overall somewhat dense, comprised of Poplar, Dogwood and Willow.</p>	<p>The understory is typically dense, comprised of variable elements of Spotted Joe Pye Weed, Rough-stemmed Goldenrod, Swamp Aster, Reed Canary Grass, Common Elderberry, Red-osier Dogwood, Poplar, Ash and others, with higher proportions of Red-osier Dogwood at its edges. Some more open marsh areas include elevated components of Cattail, Panicked aster, Blue Vervain, Common Woolly Bulrush and others. The ground layer is typically dense, including elements of Marsh Bedstraw, Fowl Mannagrass, Fowl Bluegrass and others, with elevated Sensitive Fern and Field Horsetail towards its near-forest edges.</p>
Aquatic	Open Aquatic	OAD, Open Aquatic	-	<p>While this pond was not identified as wetland due to its open water nature and relatively maintained margins, it was noted that occasional wetland species such as <i>Carex</i> sedges and Cattails occurred occasionally in shoreline areas.</p>	-

¹ ELC Codes based on Ecological Land Classification for Southern Ontario manual (Lee et al., 1998, 2008)

Table 4: Amphibian Breeding Summary, Chipwoods Park (Melancthon) EIS

Observers: A. Pompilio-Grant, L. Moran, J. Wrobel

Date	Sampling Station(s)*	Start Time	Species								Nothing Heard
			Wood Frog	Spring Peeper	Chorus Frog	Northern Leopard Frog	American Toad	Green Frog	Gray Treefrog	Pickereel Frog	
April 23, 2024	1	21:18		3 (beyond plot, on property)							
	2	21:11	1-3 (beyond plot, on property)	3 (beyond plot, on property)							
	3	21:06		3 (Adj. - S)							X (on-site)
	4	21:00		2-5							
	5	20:46									X
	6	20:52	1-1		2-7						
May 15, 2024	1	21:48		2-8 (Adj. - SE)			1-2		2-3 (Adj. - SE)		
	2	21:43		1-3 (Adj. - SE)			2-4 (Adj. - SE)		2-5 (Adj. - SE)		X (on-site)
	3	21:35		3 (Adj. - S)			2-3 (Adj. - S)		2-7 (Adj. - S)		X (on-site)
	4	21:29		2-3			2-4				
	5	21:17		1-2					2-5		
	6	21:19		1-3		1-1 (beyond plot, on property)	1-1 (beyond plot, on property)		1-1		
June 28, 2024	1	22:21						1-1 (Adj. - E)			X (on-site)
	2	22:14									X
	3	21:38						1-1 (Adj. - S)			X (on-site)
	4	22:07						1-3			
	5	21:47									X
	6	21:55									X

*see mapping

*format: call code - estimated # of individuals

Weather Conditions

Date	Air Temperature (°C)	Wind (Beaufort/Direction)	Cloud Cover	Precipitation
April 23, 2024	9	B3	100%	nil
May 15, 2024	13	B1	0%	nil
June 28, 2024	17	B1	100%	nil

¹ Call Code Levels

- 0 = none heard
- 1 = males could be individually counted
- 2 = calls overlap but numbers could be estimated
- 3 = overlapping calls, not possible to estimate numbers involved in chorus.

FAMILY	SCIENTIFIC NAME	COMMON NAME	Location ^{1,2}																Adjacent Lands	Incidental	Conservation Rankings ³									
			Dawn Breeding Bird Surveys												Marsh Breeding Bird Surveys						GRANK	SRANK	ESA	SARA	TRACK					
			1		2		3		4		5		6		7		8									1		2		
Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2	Visit 1	Visit 2									
Turdidae	<i>Turdus migratorius</i>	American Robin	S							CF	CF	S	S	S	S	S									G5	S5				N
Tyrannidae	<i>Empidonax alnorum</i>	Alder Flycatcher				S	S	H									H		S	S	S				G5	S5B				N
Tyrannidae	<i>Myiarchus crinitus</i>	Great Crested Flycatcher		S	H							S					S	H						S	G5	S5B				N
Tyrannidae	<i>Sayornis phoebe</i>	Eastern Phoebe																							G5	S5B				N
Tyrannidae	<i>Tyrannus tyrannus</i>	Eastern Kingbird											P												G5	S4B				N
Vireonidae	<i>Vireo olivaceus</i>	Red-eyed Vireo	S	S								S													G5	S5B				N

¹ Visit 1: June 13, 2024, Observer: A. Pompilio-Grant, Temperature 16°C (initial conditions), 18°C - 20°C (at time of Marsh Breeding Bird Survey), Cloud Cover 80% , Wind: B2, Precipitation: Nil, Search Time 06:33 to 09:27; Visit 2: June 24, 2024, Observer: A. Pompilio-Grant, Temperature 14°C (initial conditions) 16°C - 19°C (at time of Marsh Breeding Bird Survey), Cloud Cover 60% , Wind: B1, Precipitation: Nil, Search Time 06:48 to 09:43.

² Breeding Bird Evidence Codes: X - Species observed, C - Call heard, FO - Flyover (Species presence); H - Species observed in its breeding season in suitable nesting habitat, S - Singing male (Possible Breeding); P - Pair observed , T - Territorial behaviour, A - Agitated behaviour or anxiety calls of adult, V - Visiting a probably nest site, N - Nest building or excavation of nest hole (Probable Breeding); DD - Distraction display or injury feigning, NU - Used Nest or egg shells, FY - Recently fledged young, AE - Adult leaving or entering nest sites, FS - Adult carrying fecal sac, CF - Adult carrying food for young, NE - Nest containing eggs, NY - Nest with young seen or heard (Confirmed Breeding).

³ Conservation Rankings: From Ontario Ministry of Natural Resources and Forestry, Natural Heritage Information Centre (<https://www.ontario.ca/page/natural-heritage-information-centre>)

Table 6: Significant Wildlife Habitat Assessment

Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
<p>Waterfowl Stopover and Staging Areas (Terrestrial)</p> <p>Rationale: Habitat important to migrating waterfowl.</p>	American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall	CUM1 CUT1 Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.	Fields with sheet water during Spring (mid-March to May). <ul style="list-style-type: none"> Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence. Reports and other information available from Conservation Authorities Sites documented through waterfowl planning processes (e.g. EHJV implementation plan) Field Naturalist Clubs Ducks Unlimited Canada Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area 	Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” <ul style="list-style-type: none"> Any mixed species aggregations of 100 or more individuals required. The flooded field ecosite habitat plus a 100-300m radius area, dependant on local site conditions and adjacent land use is the significant wildlife habitat. Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates). SWHMiST Index #7 provides development effects and mitigation measures. 	Fields with sheet water were not observed within the study area during the early spring months. No suitable habitat.
<p>Waterfowl Stopover and Staging Areas (Aquatic)</p> <p>Rationale: Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.</p>	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 White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	<ul style="list-style-type: none"> 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. These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water). <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Environment Canada Naturalist clubs often are aware of staging/stopover areas OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging. Sites documented through waterfowl planning processes (e.g. EHJV implementation plan) Ducks Unlimited projects Element occurrence specification by Nature Serve: http://www.natureserve.org Natural Heritage Information Centre (NHIC) Waterfowl Concentration Areas 	Studies carried out and verified presence of: <ul style="list-style-type: none"> Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days. Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH. The combined area of the ELC ecosites and a 100m radius area is the SWH. Wetland area and shorelines associated with sites identified within the SWHTG Appendix K are significant wildlife habitat. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). SWHMiST Index #7 provides development effects and mitigation measures. 	A pond with a fringe of minor open wetland elements is present within the study area, associated with the existing trailer park area, however this pond is anthropogenic in nature, being connected to a municipal drain, and manages downstream water flow and has a stormwater management function, and is therefore unsuitable to be classified as SWH feature per the Habitat Criteria and Information Sources column. Small natural/naturalized ponds are present adjacent lands to the south, southeast and east, and shallow water marsh areas have potential to occur on adjacent lands to the west and north. There is marginal potential for adjacent lands to provide this SWH function (Figure 2). Considered further in main text.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
<p>Shorebird Migratory Stopover Area</p> <p>Rationale: High quality shorebird stopover habitat is extremely rare and typically has a long history of use.</p>	<p>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</p>	<p>BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5</p>	<ul style="list-style-type: none"> Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Western hemisphere shorebird reserve network Canadian Wildlife Service (CWS) Ontario Shorebird Survey Bird Studies Canada Ontario Nature Local birders and naturalist clubs Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring 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. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. SWHMiST Index #8 provides development effects and mitigation measures. 	<p>Beach areas, seasonally flooded beach bars, and muddy un-vegetated shoreline habitats were not observed within the study area limits. Suitable shorebird foraging areas not observed. No suitable habitat.</p>
<p>Raptor Wintering Area</p> <p>Rationale: Sites used by multiple species of individuals and used annually are most significant</p>	<p>Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl</p> <p>Special Concern: Short-eared Owl Bald Eagle</p>	<p><u>Hawks/Owls:</u> Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC.</p> <p>Upland: CUM; CUT; CUS; CUW.</p> <p><u>Bald Eagle:</u> Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).</p>	<ul style="list-style-type: none"> The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. Raptor wintering sites (hawk/owl) need to be > 20 ha with a combination 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 windswept with limited snow depth or accumulation. Eagle sites have open water, large trees and snags available for roosting. <p><u>Information Sources:</u></p> <ul style="list-style-type: none"> OMNRF Ecologist or Biologist Field Naturalist Clubs Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area Data from Bird Studies Canada Results of Christmas Bird Counts Reports and other information available from Conservation Authorities. 	<p>Studies confirm the use of these habitats by:</p> <ul style="list-style-type: none"> 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. 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. The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. SWHMiST Index #10 and #11 provides development effects and mitigation measures. 	<p>Woodland conditions present, however no large natural meadow/field (>15ha) occurs partially or fully within the study area. No suitable habitat.</p>
<p>Bat Hibernacula</p> <p>Rationale: Bat hibernacula are rare habitats in all Ontario landscapes.</p>	<p>Big Brown Bat Tri-coloured Bat</p>	<p>Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)</p>	<ul style="list-style-type: none"> Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Active mine sites should not be considered as SWH The locations of bat hibernacula are relatively poorly known. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF for possible locations and contact for local experts Natural Heritage Information Center (NHIC) Bat Hibernaculum Ministry of Northern Development and Mines for location of mine shafts. Clubs that explore caves (e.g. Sierra Club) 	<ul style="list-style-type: none"> All sites with confirmed hibernating bats are SWH. The habitat area includes a 200m radius around the entrance of the hibernaculum, for most development types and 1000m for wind farms Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects. SWHMiST Index #1 provides development effects and mitigation measures. 	<p>Caves, mine shafts, karst, cliffs, and rock talus not observed throughout the study area limits. No suitable habitat.</p> <p>Listed ELC Ecosites are not present within the study area.</p>

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
			<ul style="list-style-type: none"> University Biology Departments with bat experts. 		
<p>Bat Maternity Colonies</p> <p>Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.</p>	<p>Big Brown Bat Silver-haired Bat</p>	<p>Maternity colonies considered SWH are found in forested Ecosites.</p> <p>All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM</p>	<ul style="list-style-type: none"> Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). Maternity roosts are not found in caves and mines in Ontario. Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees. Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF for possible locations and contact for local experts University Biology Departments with bat experts. 	<ul style="list-style-type: none"> Maternity Colonies with confirmed use by; <ul style="list-style-type: none"> >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”. SWHMiST Index #12 provides development effects and mitigation measures. 	<p>Key habitat requirements (e.g., forests with large mature trees suitable for roosting) for the species occur on the property. Potential bat snags were frequently observed within woodlands on the property</p> <p>The following listed ELC Ecosites have potential to provide Candidate Bat Maternity Colony Habitat:</p> <ul style="list-style-type: none"> FOMM4-3 FOMM8-1 SWDM4-5 Treed portions of the SWD/SWC/SWT/MAM Wetland Complex <p>Considered further in main text.</p>
<p>Turtle Wintering Areas</p> <p>Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	<p>Midland Painted Turtle</p> <p>Special Concern: Northern Map Turtle Snapping Turtle</p>	<p>Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO</p> <p>Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.</p>	<ul style="list-style-type: none"> For most turtles, 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. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> EIS studies carried out by Conservation Authorities. Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites. OMNRF Ecologist or Biologist Field Naturalist clubs Natural Heritage Information Center (NHIC) 	<ul style="list-style-type: none"> 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. Over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (Sept. – Oct.) or spring (Mar. – May) Congregation of turtles is more common where wintering areas are limited and therefore significant SWHMiST Index #28 provides development effects and mitigation measures for turtle wintering habitat. 	<p>Turtle surveys not completed. While no turtles were observed incidentally, wetlands and ponds within and adjacent to the study area have potential to be used as Turtle Wintering Areas, including:</p> <ul style="list-style-type: none"> SWTO2-6 Suitably deep portions of the SWD/SWC/SWT/MAM Wetland Complex <p>It should be noted that the central pond/OAO community on Figure 2 is a man-made feature; as such, based on the Habitat Criteria and Information Sources column, bullet #3, this feature should not be considered SWH.</p> <p>Considered further in main text.</p>
<p>Reptile Hibernaculum</p> <p>Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	<p>Snakes: Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake</p> <p>Special Concern: Milksnake Eastern Ribbonsnake</p> <p>Lizard: Special Concern</p>	<p>For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats.</p> <p>Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator.</p> <p>For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3</p>	<ul style="list-style-type: none"> For snakes, hibernation takes place in 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 shrubs with sphagnum moss or sedge hummock ground cover. 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. Congregations of a minimum of five individuals of a snake sp. or; individuals of two 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) Note: If there are Special Concern Species present, then site is SWH Note: Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. 	<p>Anthropogenic rock piles or stone fences not observed throughout the study area limits. Rock features with clear fissures going below the frost line not identified on the study area. No mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures within study area. No snakes observed during multiple site visits. No obvious features providing hibernation habitat (fractured rock, stone foundations, etc.) observed. No suitable habitat.</p>

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
	(Southern Shield population): Five-lined Skink		<ul style="list-style-type: none"> Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures. <u>Information Sources</u> <ul style="list-style-type: none"> In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells). Reports and other information available from Conservation Authorities. Field Naturalists clubs University herpetologists Natural Heritage Information Center (NHIC) OMNRF ecologist or biologist may be aware of locations of wintering skinks. 	mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH. <ul style="list-style-type: none"> SWHMiST Index #13 provides development effects and mitigation measures for snake hibernacula. Presence of any active hibernaculum for skink is significant. SWHMiST Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat. 	
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff) <u>Rationale:</u> Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	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. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	<ul style="list-style-type: none"> 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 (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. Does not include a licensed/permitted Mineral Aggregate Operation. <u>Information Sources</u> <ul style="list-style-type: none"> Reports and other information available from Conservation Authorities. Ontario Breeding Bird Atlas Bird Studies Canada; <i>NatureCounts</i> http://www.birdscanada.org/birdmon/ Field Naturalist Clubs. 	Studies confirming: <ul style="list-style-type: none"> 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 50m radius habitat area from the peripheral nests. Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". SWHMiST Index #4 provides development effects and mitigation measures. 	Eroding banks, sandy hills, borrow pits, steep exposed slopes, and other suitable habitats not observed within the study area.
Colonially-Nesting Bird Breeding Habitat (Tree/Shrubs) <u>Rationale:</u> Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	<ul style="list-style-type: none"> 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 to 15 m from ground, near the top of the tree. <u>Information Sources</u> <ul style="list-style-type: none"> Ontario Breeding Bird Atlas, colonial nest records. Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF). Natural Heritage Information Center (NHIC) Mixed Wader Nesting Colony Aerial photographs can help identify large heronries. Reports and other information available from CAs. MNRF District Offices Local naturalist clubs 	Studies confirming: <ul style="list-style-type: none"> Presence of 5 or more active nests of Great Blue Heron or other listed species. The habitat extends from the edge of the colony and a minimum 300m 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 to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells. SWHMiST Index #5 provides development effects and mitigation measures. 	Nesting sites belonging to colonially-nesting bird species (tree/shrubs) not observed throughout the study area limits. None of listed species observed during dawn breeding bird surveys or marsh breeding bird surveys. No evidence of nesting detected.
Colonially-Nesting Bird Breeding Habitat (Ground) <u>Rationale:</u> Colonies are important to local	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1:50,000 NTS map).	<ul style="list-style-type: none"> Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands. <u>Information Sources</u>	Studies confirming: <ul style="list-style-type: none"> 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. 	No islands in open waters providing suitable gull/tern habitat and no Brewers Blackbirds observed. No suitable habitat present in study area.

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
bird population, typically sites are only known colony in area and are used annually.	Brewer's Blackbird	Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM CUT CUS	<ul style="list-style-type: none"> Ontario Breeding Bird Atlas , rare/colonial species records. Canadian Wildlife Service Reports and other information available from CAs. Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area MNRF District Offices Field Naturalist clubs 	<ul style="list-style-type: none"> Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. The edge of the colony and a minimum 150m 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. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". SWHMiST Index #6 provides development effects and mitigation measures. 	
<p>Migratory Butterfly Stopover Areas</p> <p><u>Rationale:</u> Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.</p>	<p>Painted Lady Red Admiral</p> <p><u>Special Concern</u> Monarch</p>	<p>Combination of ELC Community Series; need to have present one Community Series from each land class:</p> <p><u>Field:</u> CUM CUT CUS</p> <p><u>Forest:</u> FOC FOD FOM CUP</p> <p>Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.</p>	<p>A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario.</p> <ul style="list-style-type: none"> The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south. The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF (NHIC) Agriculture Canada in Ottawa may have list of butterfly experts. Field Naturalist Clubs Toronto Entomologists Association Conservation Authorities 	<p>Studies confirm:</p> <ul style="list-style-type: none"> The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur. 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 Admiral's is to be considered significant. SWHMiST Index #16 provides development effects and mitigation measures. 	The property is not located within 5km of Lake Ontario. Study area not suitable for habitat type.
<p>Landbird Migratory Stopover Areas</p> <p><u>Rationale:</u> Sites with a high diversity of species as well as high numbers are most significant.</p>	<p>All migratory songbirds. Canadian Wildlife Service Ontario website.</p> <p>All migratory songbirds. Canadian Wildlife Service Ontario website:</p>	<p>All Ecosites associated with these ELC Community Series;</p> <p>FOC FOM FOD SWC SWM SWD</p>	<p>Woodlots need to be >10 ha in size and within 5 km of Lake Ontario.</p> <ul style="list-style-type: none"> If multiple woodlands are located along the shoreline those Woodlands <2km from Lake Ontario 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 Ontario are Candidate SWH . <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Bird Studies Canada Ontario Nature Local birders and naturalist club Ontario Important Bird Areas (IBA) Program 	<p>Studies confirm:</p> <ul style="list-style-type: none"> 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. This abundance and diversity of migrant bird species is considered above average and significant. Studies should be completed during spring (Apr./May) and fall (Aug/Oct) migration using standardized assessment techniques. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". SWHMiST Index #9 provides development effects. 	The property is not located within 5km of Lake Ontario. Study area not suitable for habitat type.
<p>Deer Yarding Areas</p> <p><u>Rationale:</u> Winter habitat for deer is considered to be the</p>	White-tailed Deer	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard	<ul style="list-style-type: none"> Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum 	<p>No Studies Required:</p> <ul style="list-style-type: none"> Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths > 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. 	Deer Wintering Area (Stratum I) or Deer Wintering Area (Stratum II) not mapped by municipal and provincial resources (Appendix A). The nearest mapped deer wintering areas are located more than 1.5km to the northeast and southeast of the

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Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
main limiting factor for northern deer populations. In winter, deer congregate in "yards" to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.		would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT	<p>It covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter.</p> <ul style="list-style-type: none"> The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual". Woodlots with high densities of deer due to artificial feeding are not significant. 	<ul style="list-style-type: none"> Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via Land Information Ontario (LIO). Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. SWHMIST Index #2 provides development effects and mitigation measures. 	property. No indications that traditional deer yarding function is occurring were observed within the study area limits.
<p>Deer Winter Congregation Areas</p> <p>Rationale: Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.</p>	White-tailed Deer	<p>All Forested Ecosites with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p> <p>Conifer plantations much smaller than 50 ha may also be used.</p>	<ul style="list-style-type: none"> Woodlots will typically be >100 ha in size. Woodlots <100ha may be considered as significant based on MNRF studies or assessment. Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands . If deer are constrained by snow depth refer to the Deer Yarding Area habitat within Table 1.1 of this Schedule. Large woodlots > 100ha and up to 1500 ha 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. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNRF District Offices LIO/NRVIS 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF. Use of the woodlot by white-tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF. Studies should be completed during winter (Jan/Feb) when >20cm of snow is on the ground using aerial survey techniques, ground or road surveys. or a pellet count deer density survey. If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. SWHMIST Index #2 provides development effects and mitigation measures. 	Assessed as Deer Yarding Area above.

Rare Vegetation Communities

Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
<p>Cliffs and Talus Slopes</p> <p>Rationale: Cliffs and Talus Slopes are extremely rare habitats in Ontario.</p>	Any ELC Ecosite within Community Series: TAO TAS TAT CLO CLS CLT	<p>A Cliff is vertical to near vertical bedrock >3m in height.</p> <p>A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris.</p>	<p>Most cliff and talus slopes occur along the Niagara Escarpment.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> The Niagara Escarpment Commission has detailed information on location of these habitats. OMNRF District Natural Heritage Information Center (NHIC) has location information available on their website Field Naturalist clubs 	<ul style="list-style-type: none"> Confirm any ELC Vegetation Type for Cliffs or Talus Slopes SWHMIST Index #21 provides development effects and mitigation measures. 	No cliffs or talus slopes identified within the study area. Listed ELC Ecosites were not identified.

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Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
<p>Sand Barren</p> <p>Rationale: Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry</p>	<p>ELC Ecosites: SBO1 SBS1 SBT1</p> <p>Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always ≤ 60%.</p>	<p>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%.</p>	<ul style="list-style-type: none"> Conservation Authorities <p>A sand barren area >0.5ha in size.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNR Districts Natural Heritage Information Center (NHIC) has location information available on their website. Field Naturalist clubs Conservation Authorities 	<ul style="list-style-type: none"> Confirm any ELC Vegetation Type for Sand Barrens Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.) SWHMIST Index #20 provides development effects and mitigation measures. 	<p>No sand barrens identified within the study area. Listed ELC Ecosites were not identified.</p>
<p>Alvar</p> <p>Rationale: Alvars are extremely rare habitats in Ecoregion 6E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 6E are small and highly localized just north of the Palaeozoic-Precambrian contact.</p>	<p>ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2</p> <p>Five Alvar Species:</p> <ol style="list-style-type: none"> <i>Carex crawei</i> <i>Panicum philadelphicum</i> <i>Eleocharis compressa</i> <i>Scutellaria parvula</i> <i>Trichostema brachiatum</i> <p>These indicator species are very specific to Alvars within Ecoregion 6E.</p>	<p>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 a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover.</p>	<p>An Alvar site > 0.5 ha in size.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Alvars of Ontario (2000), Federation of Ontario Naturalists. Ontario Nature – Conserving Great Lakes Alvars. Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs Conservation Authorities 	<ul style="list-style-type: none"> Field 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. SWHMIST Index #17 provides development effects and mitigation measures. 	<p>No alvars identified within the study area. Listed ELC Ecosites were not identified.</p>
<p>Old Growth Forest</p> <p>Rationale: Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.</p>	<p>Forest Community Series: FOD FOC FOM SWD SWC SWM</p>	<p>Old Growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.</p>	<p>Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF Forest Resource Inventory mapping OMNRF Districts. Field Naturalist clubs Conservation Authorities Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations. Municipal forestry departments 	<p>Field Studies will determine:</p> <ul style="list-style-type: none"> If dominant trees species are >140 years old, then the area containing these trees is Significant Wildlife Habitat. The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present). The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH. Determine ELC vegetation types for the forest area containing the old growth characteristics. SWHMIST Index #23 provides development effects and mitigation measures. 	<p>No old growth forest identified within the study area. Property shows abundant evidence of historical land management and woodland regeneration following previously open/historically logged conditions.</p>
<p>Savannah</p> <p>Rationale: Savannahs are extremely rare habitats in Ontario.</p>	<p>TPS1 TPS2 TPW1 TPW2 CUS2</p>	<p>A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.</p>	<p>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.</p> <p><u>Information Sources</u></p>	<p>Field studies confirm one or more of the Savannah indicator species listed in Appendix N should be present. Note: Savannah plant spp. list from Ecoregion 6E should be used.</p> <ul style="list-style-type: none"> Area of the ELC Ecosite is the SWH. 	<p>No Savannah or native tallgrass habitats identified within the study area. Listed ELC Ecosites were not identified.</p>

Table 6 (23-394)

Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
			<ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs Conservation Authorities 	<ul style="list-style-type: none"> Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). SWHMiST Index #18 provides development effects and mitigation measures. 	
Tallgrass Prairie Rationale: Tallgrass Prairies are extremely rare habitats in Ontario.	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. 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. <u>Information Sources</u> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs Conservation Authorities 	Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 6E should be used. <ul style="list-style-type: none"> Area of the ELC Ecosite is the SWH. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). SWHMiST Index #19 provides development effects and mitigation measures. 	No tallgrass prairie habitats identified within the study area. Listed ELC Ecosites were not identified.
Other Rare Vegetation Communities Rationale: Plant communities that often contain rare species which depend on the habitat for survival.	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M The OMNRF/NHIC will have up to date listing for rare vegetation communities. <u>Information Sources</u> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs Conservation Authorities 	Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG. <ul style="list-style-type: none"> Area of the ELC Vegetation Type polygon is the SWH. SWHMiST Index #37 provides development effects and mitigation measures. 	No provincially rare vegetation communities identified within the study area.

Specialized Habitat for Wildlife

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Nesting Area Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	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	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. <ul style="list-style-type: none"> Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. <u>Information Sources</u> <ul style="list-style-type: none"> Ducks Unlimited staff may know the locations of particularly productive nesting sites. OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat. 	Studies confirmed: <ul style="list-style-type: none"> 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). Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". 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 habitat for waterfowl to successfully nest. SWHMiST Index #25 provides development effects and mitigation measures. 	None of listed species observed during dawn breeding bird surveys, marsh breeding bird surveys, or incidentally during the field program. No paired waterfowl or waterfowl nesting evidence observed on property or adjacent lands. Waterfowl nesting areas not identified within study area.

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
		SWD1 SWD2 SWD3 SWD4 Note: includes adjacency to Provincially Significant Wetlands	<ul style="list-style-type: none"> Reports and other information available from Conservation Authorities. 		
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat Rationale: Nest sites are fairly uncommon in Eco-region 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of 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. <ul style="list-style-type: none"> Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree’s canopy. Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms). Information Sources <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario. MNRF values information (LIO/NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat. Nature Counts, Ontario Nest Records Scheme data. OMNRF Districts Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented Reports and other information available from Conservation Authorities. Field Naturalists clubs 	Studies confirm the use of these nests by: <ul style="list-style-type: none"> 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, maintaining undisturbed shorelines with large trees within this area is important. For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependent on site lines from the nest to the development and inclusion of perching and foraging habitat. 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 mid March to mid August. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. SWHMiST Index #26 provides development effects and mitigation measures. 	Osprey Species not observed during dawn breeding bird surveys, marsh breeding bird surveys, or incidentally during the field program. No conspicuous Osprey stick nests observed. No Osprey nesting, foraging or perching habitat identified. Bald Eagle One (1) Bald Eagle was observed during one (1) site visit (December 11, 2023). This individual was observed as a flyover only, and did not exhibit any interaction with the property or study area. No Bald Eagles were observed during dawn breeding bird surveys or marsh breeding bird surveys, and no conspicuous Bald Eagle stick nests were observed. There is no expectation that the study area was used for nesting, foraging and perching by Bald Eagles.
Woodland Raptor Nesting Habitat Rationale: Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.	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 and CUP3	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer <ul style="list-style-type: none"> Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers Hawk nest along forest edges sometimes on peninsulas or small off-shore islands. In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. Information Sources <ul style="list-style-type: none"> OMNRF Districts. Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. Check data from Bird Studies Canada. Reports and other information available from Conservation Authorities. 	Studies confirm: <ul style="list-style-type: none"> Presence of 1 or more active nests from species list is considered significant. Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. (The 28ha habitat area would be applied where optimal habitat is irregularly shaped around the nest). Barred Owl – A 200m radius around the nest is the SWH. Broad-winged Hawk and Coopers Hawk– A 100m radius around the nest is the SWH. Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. Conduct field investigations from mid-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. SWHMiST Index #27 provides development effects and mitigation measures. 	Dedicated stick nest surveys were not completed as a component of the field program. None of listed species observed during dawn breeding bird surveys, marsh breeding bird surveys, or incidentally during the field program. No raptor stick nests were observed directly, either during bird surveys or incidentally throughout the course of the field program.
Turtle Nesting Areas Rationale: These habitats are rare and when identified will often	Midland Painted Turtle Special Concern Species Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2	<ul style="list-style-type: none"> 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 	Studies confirm: <ul style="list-style-type: none"> 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 30-100m around the nesting 	No turtles, signs of turtle nesting or suitable habitat (i.e., ponds with suitable sand or gravel available for digging) identified within study area.

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
be the only breeding site for local populations of turtles.		MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	<p>the sides of municipal or provincial road embankments and shoulders are not SWH.</p> <ul style="list-style-type: none"> Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). Check the Ontario Herpetofaunal Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them. Natural Heritage Information Center (NHIC) Field Naturalist clubs 	<p>area dependant on slope, riparian vegetation and adjacent land use is the SWH.</p> <ul style="list-style-type: none"> Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m 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. SWHMiST Index #28 provides development effects and mitigation measures for turtle nesting habitat. 	
<p>Seeps and Springs</p> <p><u>Rationale:</u> Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.</p>	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	<p>Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system.</p> <ul style="list-style-type: none"> Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Topographical Map Thermography Hydrological surveys conducted by Conservation Authorities and MOE. Field Naturalists clubs and landowners. Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped. 	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> Presence of a site with 2 or more seeps/springs should be considered SWH. The area of a ELC forest ecosite or an ecoelement 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. SWHMiST Index #30 provides development effects and mitigation measures. 	No evidence of seeps or springs were identified within forested areas within the study area.
<p>Amphibian Breeding Habitat (Woodland).</p> <p><u>Rationale:</u> These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations.</p>	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	<p>All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p> <p>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.</p>	<ul style="list-style-type: none"> Presence of a wetland, pond or woodland pool (including vernal pools) >500m² (about 25m 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. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records. Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. OMNRF District OMNRF wetland evaluations Field Naturalist clubs Canadian Wildlife Service Amphibian Road Call Survey Ontario Vernal Pool Association: http://www.ontariovernalpools.org 	<p>Studies confirm;</p> <ul style="list-style-type: none"> 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 eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3. A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. 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. SWHMiST Index #14 provides development effects and mitigation measures. 	<p>Amphibian breeding surveys completed in spring 2024 documented dense concentrations of Spring Peeper (<i>i.e.</i> L3 call code) within the SWD/SWC/SWT/MAM Wetland Complex, as noted from survey stations 1 and 2 (Table 4, Figure 2). Dense concentrations of Spring Peeper were also documented on adjacent lands south of the property, as noted from survey station 3 (Table 4, Figure 2). The locations of these choruses of Spring Peeper corresponded with suitable wetland habitat for this species.</p> <p>In addition to Spring Peeper, calls of five (5) other species of amphibians were documented (Wood Frog, Northern Leopard Frog, American Toad, Green Frog, and Gray Treefrog), however none of these species exhibited a Call Level Code of 3, either on or off property (Table 4).</p> <p>Given that breeding evidence meeting the threshold of Call Level Code L3 was limited to Spring Peeper, no wetlands within the study</p>

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH Defining Criteria	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources		
					area meet minimum criteria for Amphibian Breeding Habitat (Woodland).
Amphibian Breeding Habitat (Wetlands) Rationale: Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	ELC Community Classes SW, MA, FE, BO, OA and SA. Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	<ul style="list-style-type: none"> Wetlands >500m² (about 25m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could 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. Information Sources <ul style="list-style-type: none"> Ontario Herpetofaunal Summary Atlas (or other similar atlases) Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. OMNRF Districts and wetland evaluations Reports and other information available from Conservation Authorities 	Studies confirm: <ul style="list-style-type: none"> 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 eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3. or; Wetland with confirmed breeding Bullfrogs are significant. The ELC ecosite wetland area and the shoreline are the SWH. A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. SWHMIST Index #15 provides development effects and mitigation measures. 	All wetland habitats within the study area are located within 120m of woodland ecosites and are predominantly characterized as swamp woodland, or open wetlands embedded within swamp and forest. As such, wetlands are more appropriately assessed as potential Amphibian Breeding Habitat (Woodland), above.
Woodland Area-Sensitive Bird Breeding Habitat Rationale: Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.	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 Special Concern: Cerulean Warbler Canada Warbler	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. <ul style="list-style-type: none"> Interior forest habitat is at least 200 m from forest edge habitat. Information Sources <ul style="list-style-type: none"> Local bird clubs. Canadian Wildlife Service (CWS) for the location of forest bird monitoring. Bird Studies Canada conducted a 3-year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species. Reports and other information available from Conservation Authorities. 	Studies confirm: <ul style="list-style-type: none"> Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. Conduct field investigations in spring and early summer when birds are singing and defending their territories. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". SWHMIST Index #34 provides development effects and mitigation measures. 	Four (4) of the listed species were detected during breeding bird surveys, one (1) with possible breeding evidence (Yellow-bellied Sapsucker) and three (3) exhibiting probable breeding evidence (Red-breasted Nuthatch, Veery and Ovenbird; Table 5). Considered further in main text.

1.3 Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH Defining Criteria	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources		
Marsh Breeding Bird Habitat Rationale: Wetlands for these bird species are typically productive	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1	<ul style="list-style-type: none"> 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 marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water. 	Studies confirm: <ul style="list-style-type: none"> Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species. Note: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. Area of the ELC ecosite is the SWH. 	None of the listed species were identified during dedicated marsh breeding bird surveys (Table 5, Figure 2). None of the listed species were identified during dawn breeding bird surveys or incidentally during the field program (Table 5, Figure 2). No

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
and fairly rare in Southern Ontario landscapes.	Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan Special Concern: Black Tern Yellow Rail	SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites.	<u>Information Sources</u> <ul style="list-style-type: none"> • OMNRF District and wetland evaluations. • Field Naturalist clubs • Natural Heritage Information Center (NHIC) Records. • Reports and other information available from Conservation Authorities. • Ontario Breeding Bird Atlas 	<ul style="list-style-type: none"> • Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • SWHMIST Index #35 provides development effects and mitigation measures. 	evidence of nesting by listed species detected within study area.
Open Country Bird Breeding Habitat Sources Defining Criteria Rationale; This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.	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) >30 ha. <ul style="list-style-type: none"> • 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. <u>Information Sources</u> <ul style="list-style-type: none"> • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs. • Ontario Breeding Bird Atlas • Reports and other information available from Conservation Authorities. 	Field Studies confirm: <ul style="list-style-type: none"> • 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. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • SWHMIST Index #32 provides development effects and mitigation measures. 	None of listed species observed during dawn breeding bird surveys, marsh breeding bird surveys, or incidentally during the field program (Table 5, Figure 2). No evidence of nesting by listed species detected within study area. Large grasslands >30ha in size were not documented within the study area.
Shrub/Early Successional Bird Breeding Habitat Rationale; This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.	Indicator Spp: Brown Thrasher Clay-coloured Sparrow Common Spp. Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher Special Concern: Yellow-breasted Chat Golden-winged Warbler	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. <ul style="list-style-type: none"> • Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years). • Shrub thicket habitats (>10 ha) are most likely to 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. <u>Information Sources</u> <ul style="list-style-type: none"> • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs • Ontario Breeding Bird Atlas • Reports and other information available from Conservation Authorities. 	Field Studies confirm: <ul style="list-style-type: none"> • 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 Significant Wildlife Habitat. • 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 defending their territories. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • SWHMIST Index #33 provides development effects and mitigation measures. 	None of listed species observed during dawn breeding bird surveys, marsh breeding bird surveys, or incidentally during the field program (Table 5, Figure 2). No evidence of nesting by listed species detected within study area. Large field areas succeeding to shrubs and early successional thickets exceeding >30ha in size were not documented within the study area.
Terrestrial Crayfish Rationale; Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	Chimney or Digger Crayfish; (<i>Fallicambarus fodiens</i>) Devil Crayfish or Meadow Crayfish; (<i>Cambarus Diogenes</i>)	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. <ul style="list-style-type: none"> • Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. • Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed. <u>Information Sources</u> <ul style="list-style-type: none"> • Information sources from “Conservation Status of Freshwater Crayfishes” by Dr. Premek Hamr for the WWF and CNF March 1998. 	Studies Confirm: <ul style="list-style-type: none"> • 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 ecoelement 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. 	No terrestrial crayfish or terrestrial crayfish burrows were identified within the study area.

Table 6 (23-394)

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
		<p>SWM</p> <p>CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.</p>		<ul style="list-style-type: none"> SWHMIST Index #36 provides development effects and mitigation measures. 	
<p>Special Concern and Rare Wildlife Species</p> <p>Rationale: These species are quite rare or have experienced significant population declines in Ontario.</p>	<p>All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.</p>	<p>All plant and animal element occurrences (EO) within a 1 or 10km grid.</p> <p>Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy.</p>	<p>When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. NHIC Website "Get Information" : http://nhic.mnr.gov.on.ca Ontario Breeding Bird Atlas Expert advice should be sought as many of the rare spp. have little information available about their requirements. 	<p>Studies Confirm:</p> <ul style="list-style-type: none"> Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species <i>e.g.</i> specific nesting habitat or foraging habitat. SWHMIST Index #37 provides development effects and mitigation measures. 	<p>No provincially rare (S-Rank 1-3) species were observed within the study area limits.</p> <p>The following species provincially designated as Special Concern were observed, or are treated as present, based on the results of the field program:</p> <ul style="list-style-type: none"> Monarch; and, Snapping Turtle. <p>In regards to Snapping Turtle, habitat is discussed primarily as associated with wetlands and off-site ponds. A pond with a fringe of minor open wetland elements is present within the property, associated with the existing trailer park area, however this pond is anthropogenic in nature, being highly manipulated and connected to a municipal drain, manages downstream water flow, and has a stormwater management function. Generally speaking, under standard interpretation of Significant Wildlife Habitat within the subsections of this Criteria Schedule, such features are not designated SWH. For example, with regard for Turtle Wintering Areas for Snapping Turtle, "Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH". There is clear direction from the Criteria Schedules to disregard man-made ponds as SWH for turtles. While Snapping Turtle is considered separately under habitat for Special Concern species, this direction outlined above is expected to apply to Special Concern turtle species.</p> <p>Considered further in main text.</p>

Animal Movement Corridors

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
<p>Amphibian Movement Corridors</p> <p><u>Rationale:</u> Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.</p>	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	Corridors may be found in all ecosites associated with water. <ul style="list-style-type: none"> Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1 	Movement corridors between breeding habitat and summer habitat. <ul style="list-style-type: none"> Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule. <u>Information Sources</u> <ul style="list-style-type: none"> MNRF District Office Natural Heritage Information Center (NHIC) Reports and other information available from Conservation Authorities. Field Naturalist Clubs 	<ul style="list-style-type: none"> Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. 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 15m of vegetation on both sides of waterway or be up to 200m 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. SWHMiST Index #40 provides development effects and mitigation measures. 	No SWH Amphibian Breeding Habitat – (Wetland) was documented within the study area. As such, Amphibian Movement Corridors are not anticipated to occur in the study area.
<p>Deer Movement Corridors</p> <p><u>Rationale:</u> Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.</p>	White-tailed Deer	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 of this schedule. <ul style="list-style-type: none"> A deer wintering habitat identified by the OMNRF as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion. Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). <u>Information Sources</u> <ul style="list-style-type: none"> MNRF District Office Natural Heritage Information Center (NHIC). Reports and other information available from Conservation Authorities. Field Naturalist Clubs 	<ul style="list-style-type: none"> Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas. Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway. Shorter corridors are more significant than longer corridors. SWHMiST Index #39 provides development effects and mitigation measures. 	Deer Wintering Area (Stratum I & II) habitat is not present within the study area based on the results of the site investigation and background review.

Exceptions for Ecoregion 6E

EcoDistrict	Wildlife Habitat and Species	Candidate			Confirmed SWH	Assessment
		Ecosites	Habitat Description	Habitat Criteria and Information	Defining Criteria	
<p>6E-14</p> <p>Rationale: The Bruce Peninsula has an isolated and distinct population of black bears. Maintenance of large woodland tracts with mast-producing tree species is important for bears.</p>	<p>Mast Producing Areas</p> <p>Black Bear</p>	<p>All Forested habitat represented by ELC Community Series:</p> <p>FOM FOD</p>	<ul style="list-style-type: none"> Black bears require forested habitat that provides cover, winter hibernation sites, and mast-producing tree species. Forested habitats need to be large enough to provide cover and protection for black bears. 	<p>Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech).</p> <p><u>Information Sources</u> Important forest habitat for black bears may be identified by OMNRF.</p>	<p>All woodlands > 30ha with a 50% composition of these ELC Vegetation Types are considered significant:</p> <p>FOM1-1 FOM2-1 FOM3-1 FOD1-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-4 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5</p> <p>SWHMIST Index #3 provides development effects and mitigation measures.</p>	<p>Not on Bruce Peninsula.</p>
<p>6E- 17</p> <p>Rationale: Sharp-tailed grouse only occur on Manitoulin Island in Eco-region 6E, Leks are an important habitat to maintain their population</p>	<p>Lek</p> <p>Sharp-tailed Grouse</p>	<p>CUM CUS CUT</p>	<ul style="list-style-type: none"> The lek or dancing ground consists of bare, grassy or sparse shrubland. There is often a hill or rise in topography. Leks are typically a grassy field/meadow >15ha with adjacent shrublands and >30ha with adjacent deciduous woodland. Conifer trees within 500m are not tolerated. 	<p>Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland.</p> <ul style="list-style-type: none"> Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying) Leks will be used annually if not destroyed by cultivation or invasion by woody plants or tree planting <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF district office Bird watching clubs Local landowners Ontario Breeding Bird Atlas 	<p>Studies confirming lek habitat are to be completed from late March to June.</p> <ul style="list-style-type: none"> Any site confirmed with sharp-tailed grouse courtship activities is considered significant The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat SWHMIST Index #32 provides development effects and mitigation measures 	<p>Not on Manitoulin Island.</p>



APPENDICES

Appendix A: Municipal and Provincial Background Information

Appendix B: Agency Correspondence

Appendix C: Photographic Record

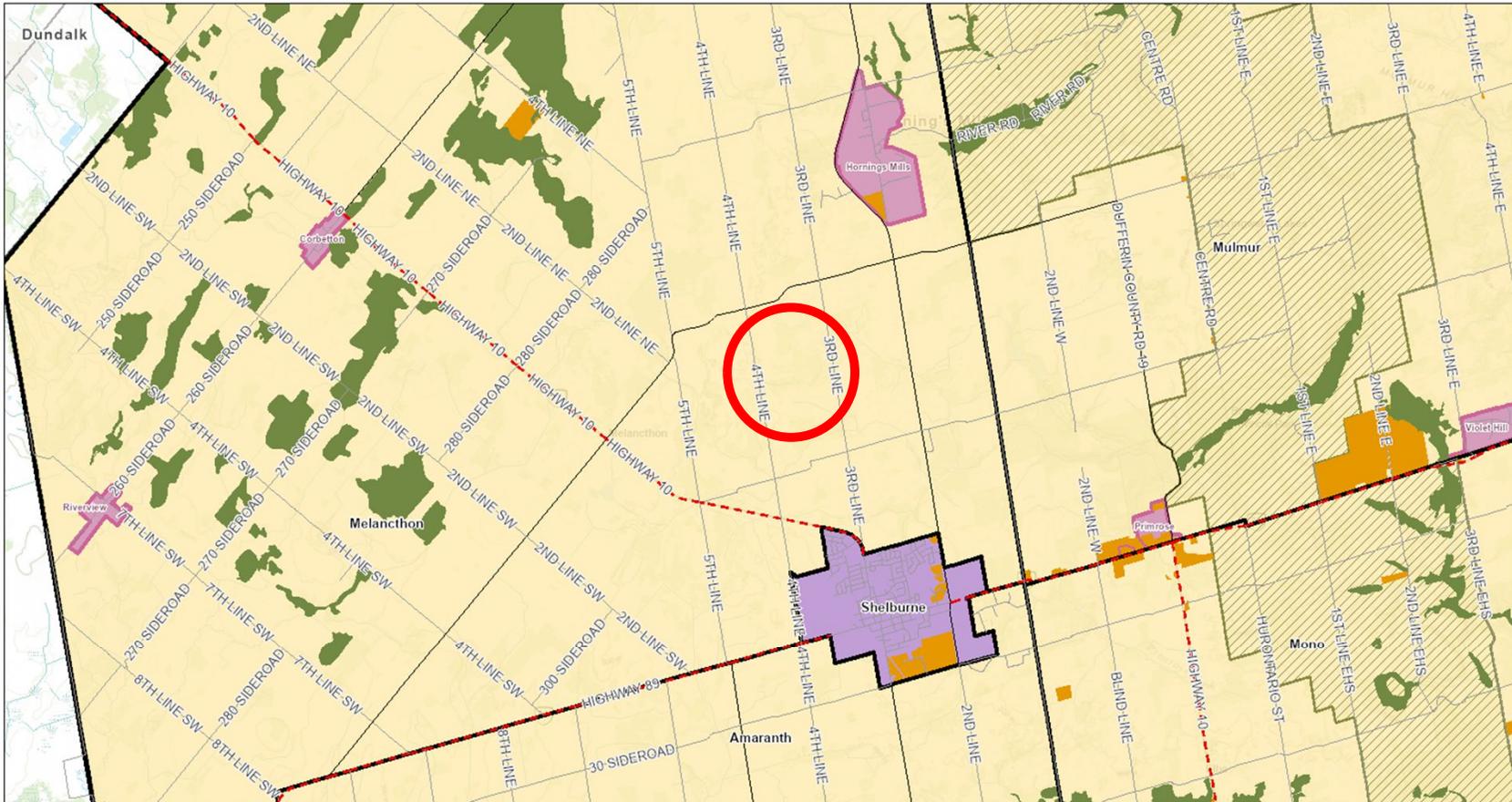
Appendix D: Proposed Redevelopment Concept



APPENDIX A

Municipal and Provincial Background Information

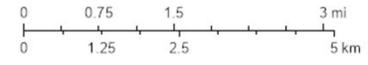
Dufferin County Schedule B – Community Structure and Land Use - ArcGIS Web Map



8/11/2025, 12:00:10 PM

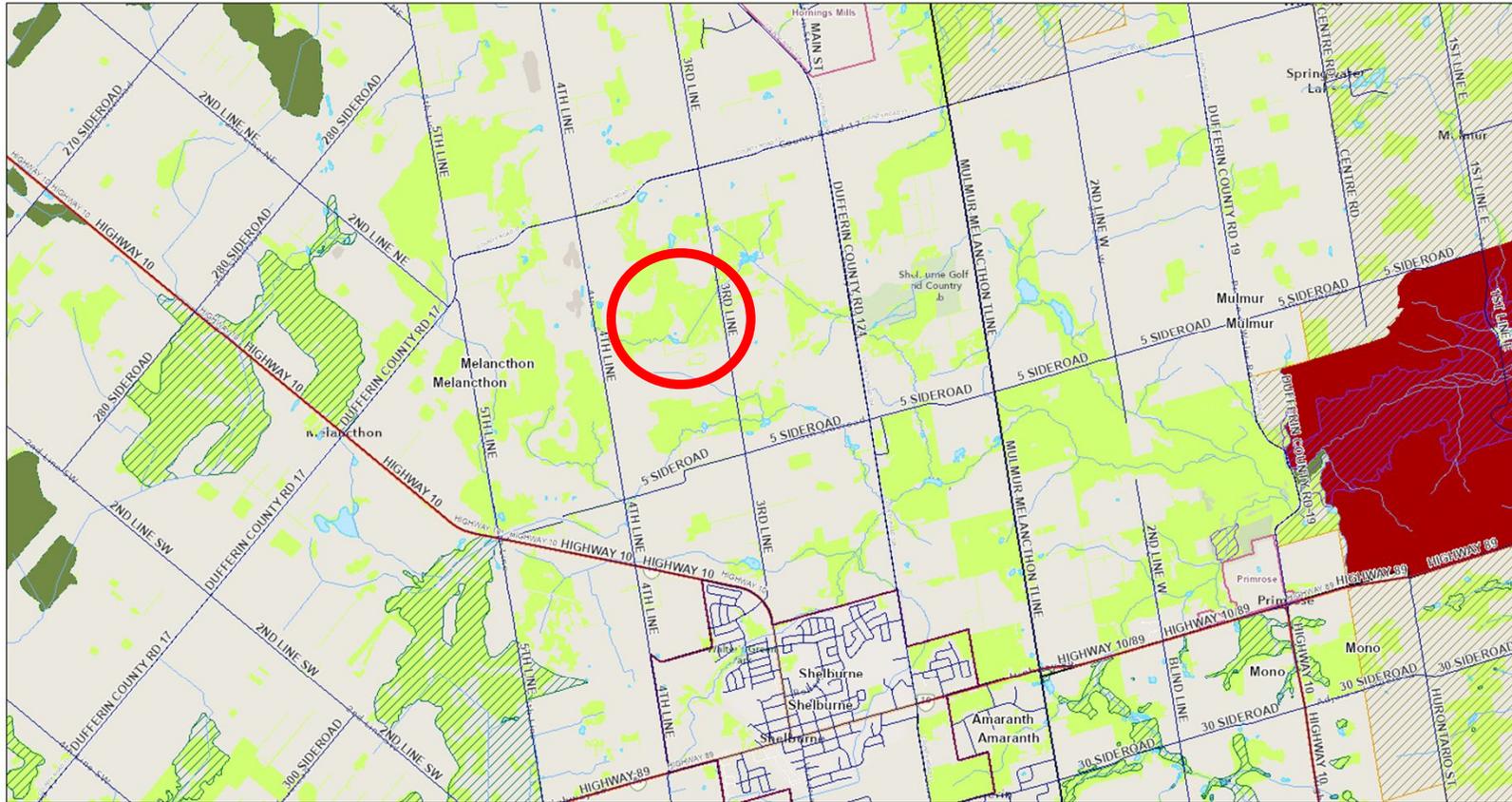
1:92,983

- Road Name Labels
- Community Settlement Area Labels
- Municipal Boundaries (Labels)
- Municipal Boundaries (not including dufferin)
- Provincially Significant Wetlands (S. 5.3.1)
- Urban Settlement Area Fill
- Community Settlement Area Fill
- Countryside Area (S. 4.0)
- Canada_Hillshade
- World_Hillshade



Esri, NASA, NGA, USGS, FEMA, Sources: NRCan, Esri Canada, and Canadian Community Maps contributors.

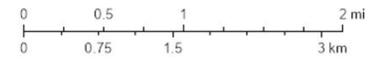
Dufferin County Schedule E – Natural Heritage Features - ArcGIS Web Map



8/11/2025, 12:15:53 PM

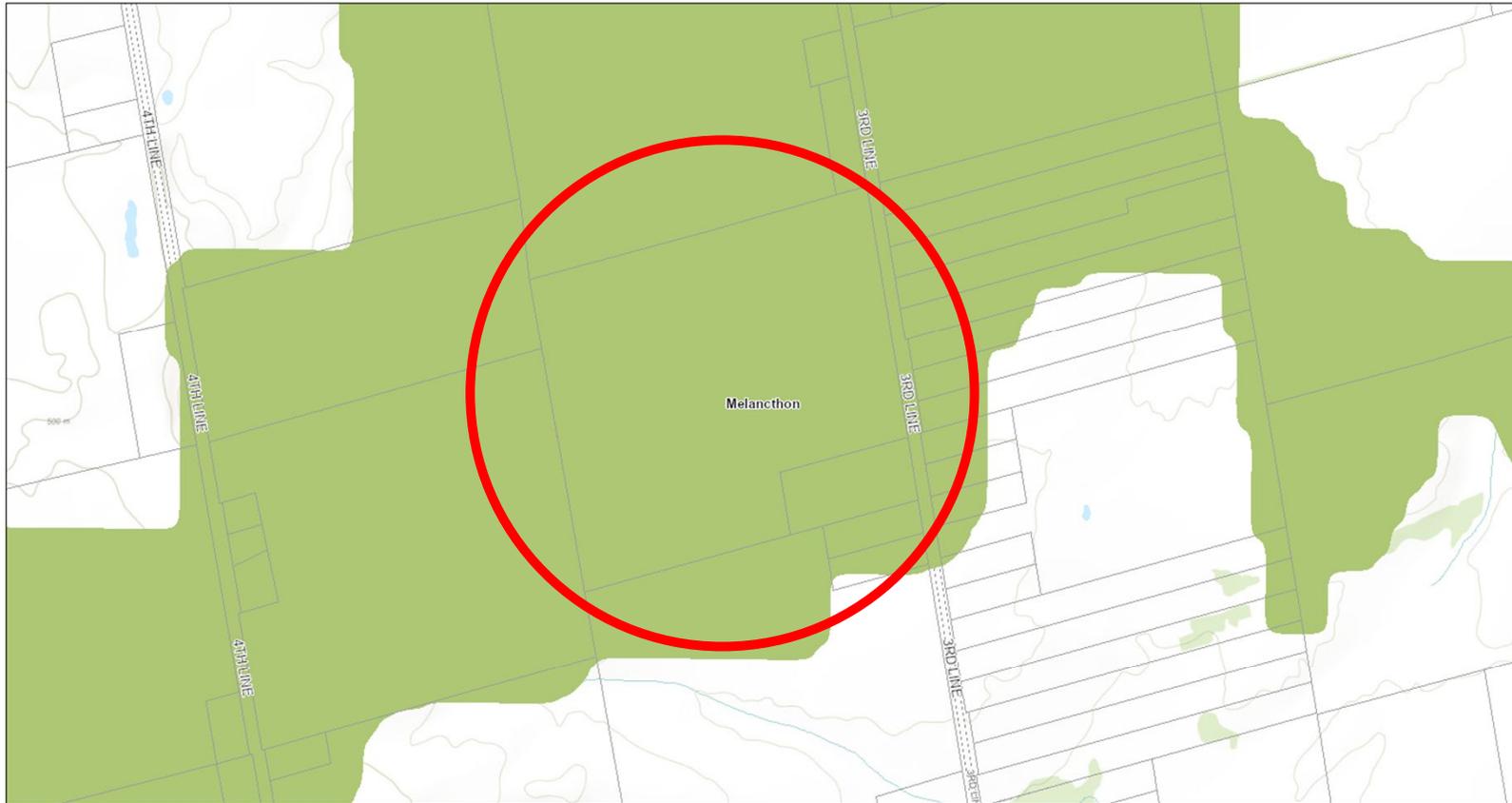
1:55,790

- | | | |
|----------------------------|--|--|
| Urban Settlement Area | Greenbelt Plan Protected Countryside Area (S. 4.2.1) | Provincially Significant Wetlands (S. 5.3.1) |
| Community Settlement Areas | Areas of Natural and Scientific Interest | Waterbodies |
| Road Network | Earth Science ANSI (S. 5.3.3) | Woodlands (S. 5.3.4) |
| Provincial Highway | Life Science ANSI (S. 5.3.3) | Urban Settlement Area |
| County Road | Unevaluated Wetlands (S. 5.3.6) | Community Settlement Area |
| Watercourses (S. 5.3.8) | Provincial Plan Areas (S. 2.0) | |



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

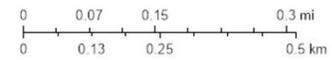
Dufferin County Schedule E1 – Natural Heritage System – ArcGIS Web Map



8/11/2025, 12:20:18 PM

- Road Name Labels
- Dufferin County Boundary
- Assessment Lot Parcels View
- Dufferin County Boundary
- Municipal Boundaries
- County Preliminary Natural Heritage System (S. 5.2)
- Municipal Boundaries (Labels)
- Canada_Hillshade
- World_Hillshade

1:10,164



Esri, NASA, NGA, USGS, FEMA, Sources: NRCan, Esri, Canada, and Canadian Community Maps contributors.

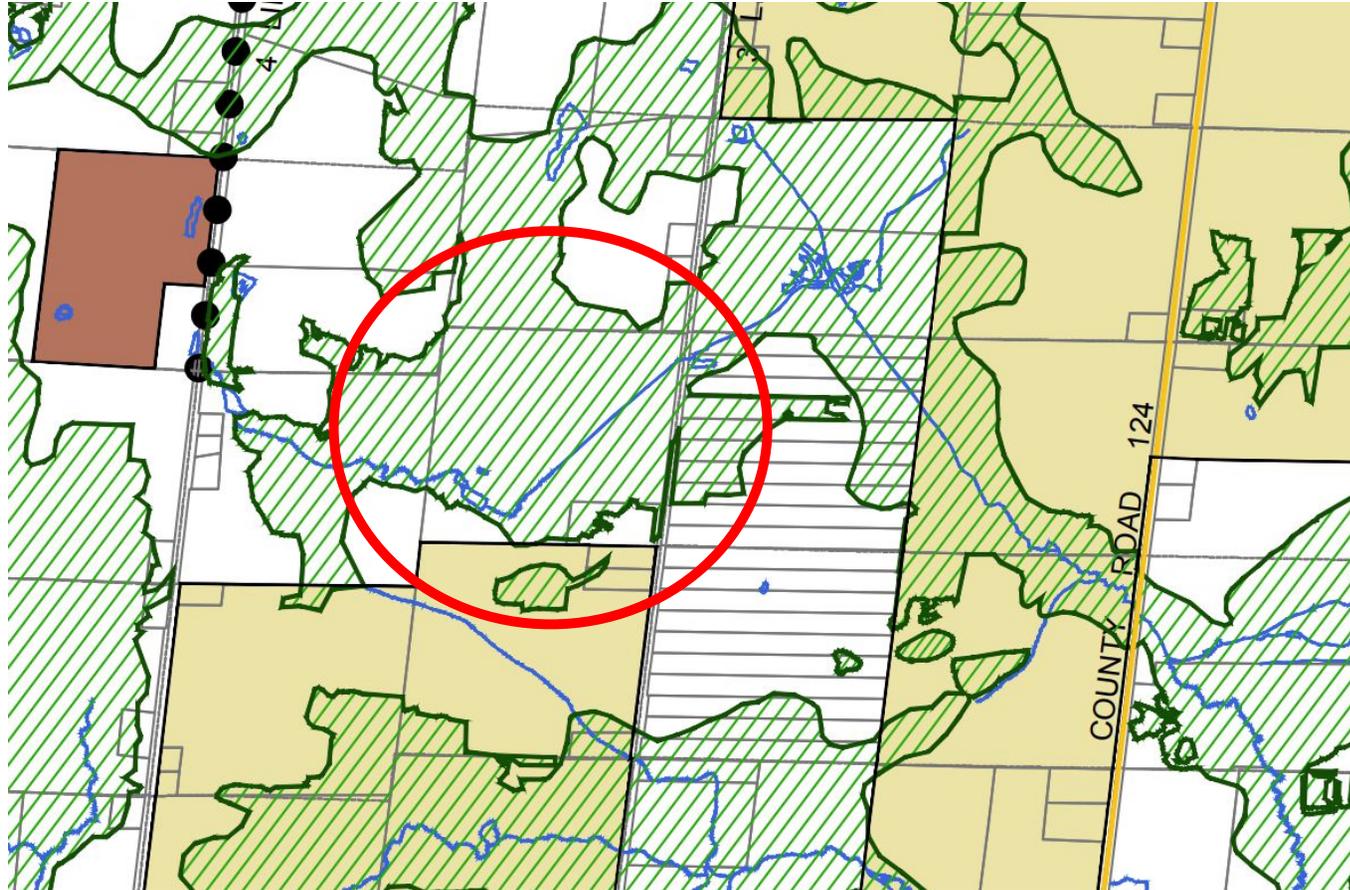
SCHEDULE A-5 LAND USE & ROADS PLAN

OFFICIAL PLAN FOR TOWNSHIP OF MELANCTHON



- AGRICULTURAL
- RURAL
- ENVIRONMENTAL PROTECTION
- ENVIRONMENTAL CONSERVATION
(Also see Section 5.5.3 (g))
- EXTRACTIVE INDUSTRIAL
- LIGHT INDUSTRIAL
- NIAGARA ESCARPMENT DEVELOPMENT CONTROL AREA
- PROVINCIAL HIGHWAY
- ARTERIAL ROAD
- LOCAL ROAD
- EXISTING MINERAL AGGREGATE HAUL ROUTE
- RAIL LINE RIGHT-OF-WAY

This schedule must be read in conjunction with the Official Plan's policies and Schedules D to H.



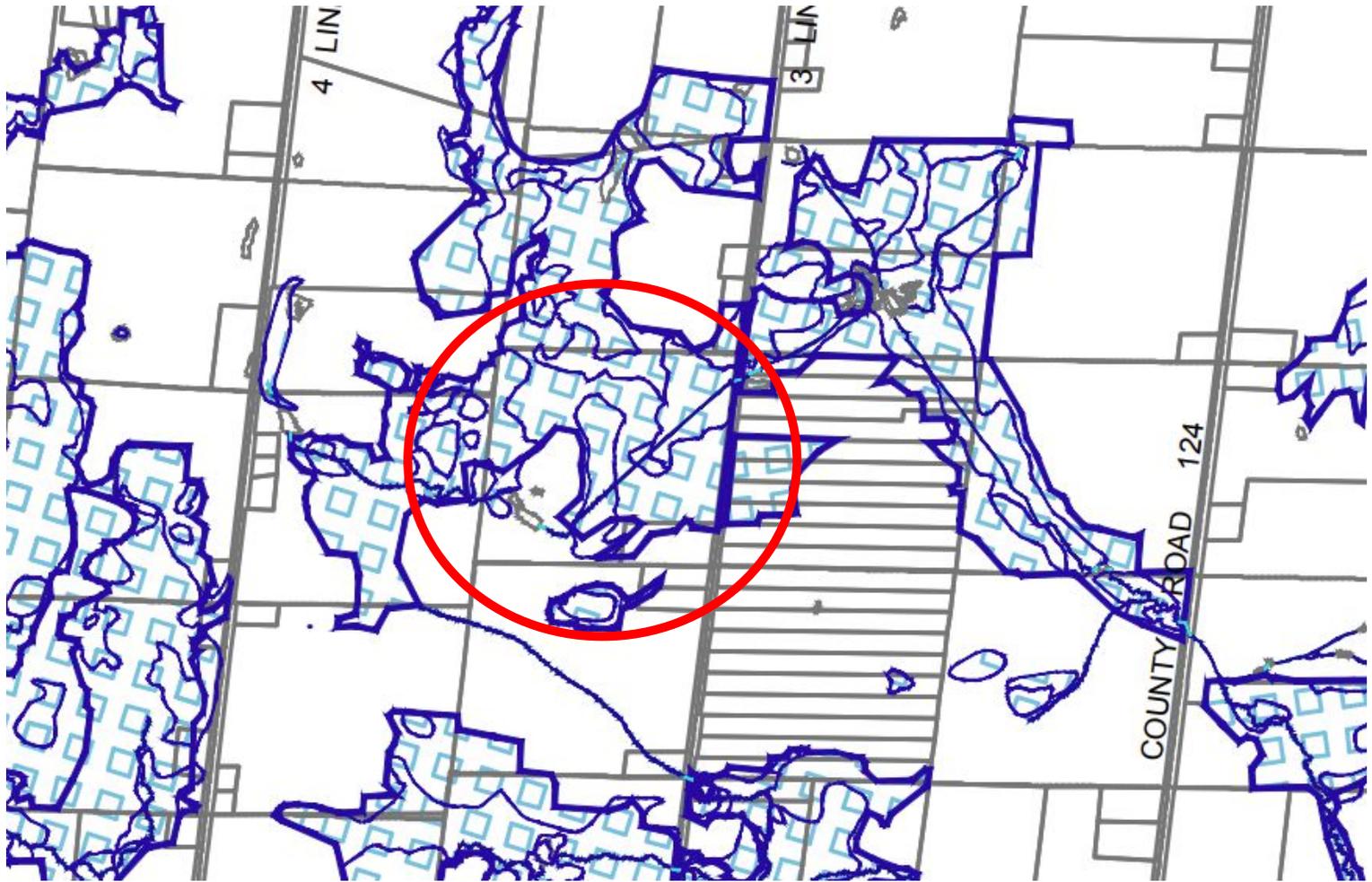
**SCHEDULE D
NATURAL HERITAGE 1
WETLANDS**

OFFICIAL PLAN
FOR
TOWNSHIP OF
MELANCTHON



-  PROVINCIALY SIGNIFICANT WETLANDS
-  LOCALLY SIGNIFICANT AND UNEVALUATED WETLANDS

 NIAGARA ESCARPMENT DEVELOPMENT CONTROL AREA

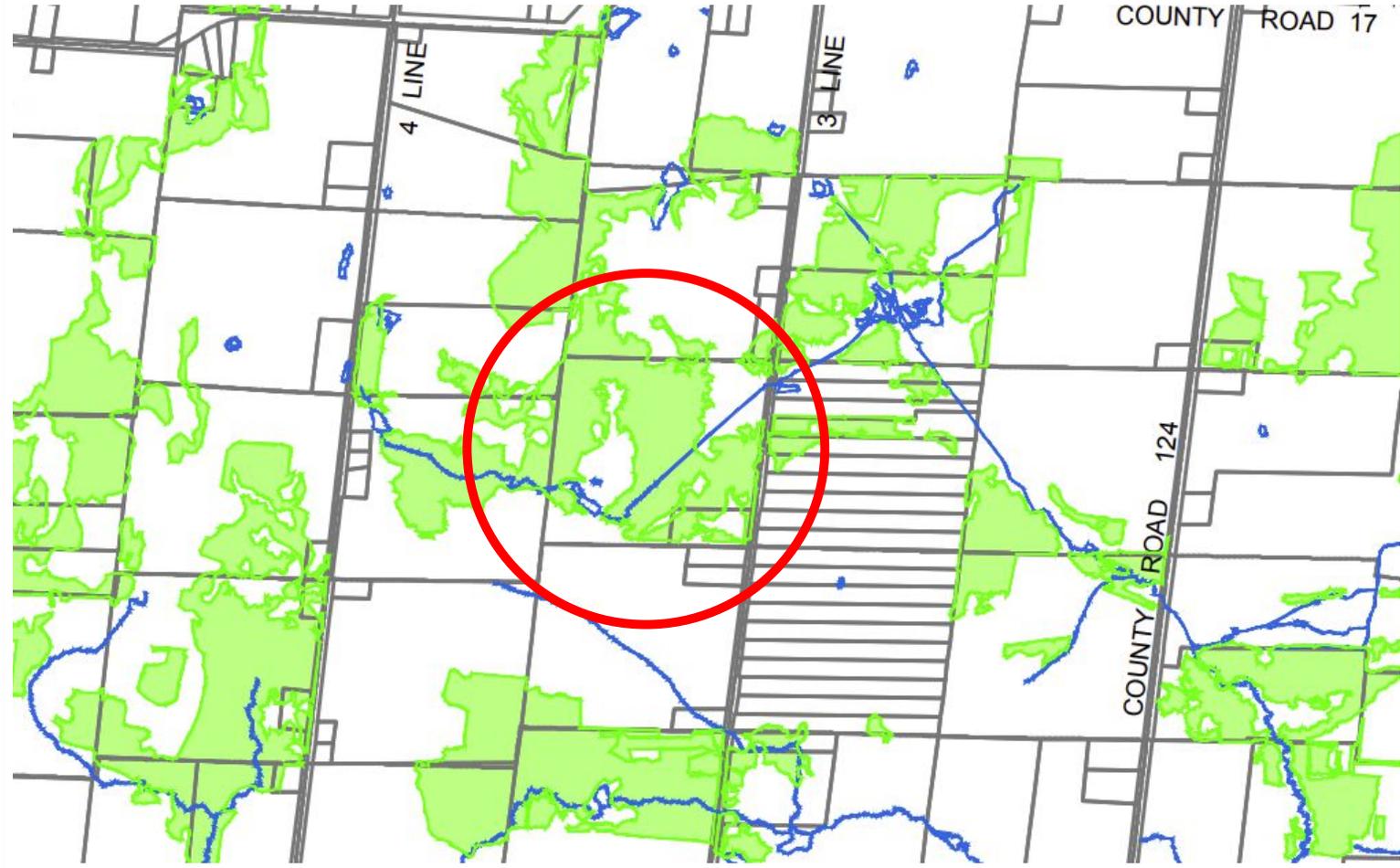


**SCHEDULE E
NATURAL HERITAGE 2
WOODLANDS, WILDLIFE
HABITAT AND ANSI**

OFFICIAL PLAN
FOR
TOWNSHIP OF
MELANCTHON



-  SIGNIFICANT WOODLANDS
- PRIMARILY 20+ HECTARES
-  SIGNIFICANT WILDLIFE HABITAT
- DEER WINTERING AREAS
-  SIGNIFICANT WILDLIFE HABITAT
- DEER WINTERING YARDS
-  SIGNIFICANT ANSI
-  WATERCOURSES
-  NIAGARA ESCARPMENT
DEVELOPMENT CONTROL AREA





Ministry of Natural Resources
Make-a-Map: Natural Heritage Areas

NHIC (MNR) Make a Map

Map created: 2/28/2025



Notes:



Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.
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GTA 2005 / SWOOP 2006 / Simcoe-Muskoka-Dufferin © FirstBase Solutions, 2005 / 2006 / 2008
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Legend

- Assessment Parcel
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland
- Woodland
- Conservation Reserve
- Provincial Park

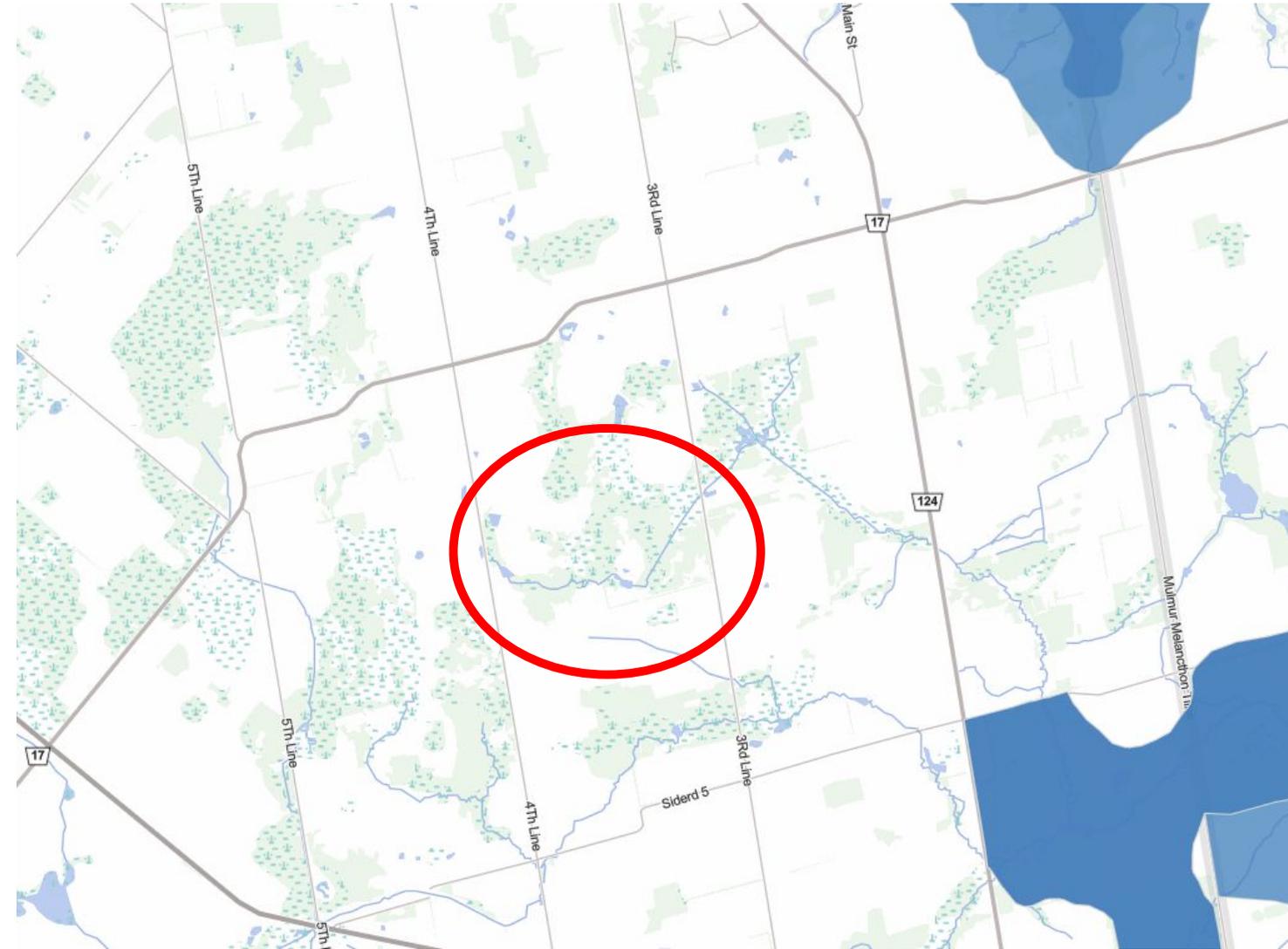


Ontario GeoHub – Wildlife Values Area – ArcGIS Web Map



Deer Wintering Areas
– Stratum II

Deer Wintering Areas
– Stratum I



Nottawasaga Valley Conservation Authority – Interactive Data Viewer



 Regulated Extent



APPENDIX B

Agency Correspondence



June 18, 2024

Via: Email

Silva Yousif, PMP, RPP, MCIP
Senior Planner
Township of Melancthon
157101 Highway 10
Melancthon ON L9V 2E6

Dear Silva:

**Re: Peer Review Comments: Environmental Impact Study Terms of Reference,
Chipwoods Park
Project No.: 300056814.2000**

R.J. Burnside & Associates Limited (Burnside) have reviewed the terms of reference for an Environmental Impact Study in support of a development application at 47620 3rd Line, also known as Chipwoods Park. Our comments are as follows:

1. There are a number of significant and potentially significant natural features on the property which will limit redevelopment options. The EIS should include a detailed policy review and clearly demonstrate how the application conforms to all applicable policies, plans and regulations.
2. The Township and/or Burnside should be present during the woodland staking process.
3. Given the accuracy limitations of GPS units in heavily wooded areas, we recommend that any woodland or wetland boundary located within 35 m of the proposed development should be staked and surveyed. Woodland or wetland boundaries beyond that can be marked with GPS.
4. Please ensure that all wildlife surveys are conducted in appropriate whether conditions, using standard methodology, e.g. Marsh Monitoring Protocol, Breeding Bird Atlas Protocol etc.
5. Include surveys for turtle overwintering and nesting, unless it can be demonstrated that any suitable habitat and lands adjacent to habitat will not be affected by the development.
6. Include surveys for raptor nests in the vicinity of the development.
7. Please include a review of any ancillary features such as trails that may currently exist or may be developed within the woodland/wetland areas.
8. The terms of reference state that a strategy will be developed to avoid, mitigate or offset potential impacts to natural features. We note that offsetting may be permitted in certain circumstances under certain acts, such as the Fisheries Act and Endangered Species

- Act. If offsetting of impacts is proposed, please include a description of the specific policy/regulation that permits it and how it will be applied.
9. We concur with the terms of reference which state that restoration opportunities will be included. Please identify opportunities for clean-up, restoration and enhancement.
 10. Additional plant or wildlife surveys may be required subject to the findings of background reviews, initial field studies and the scope of the development. For example, if portions of the woodland will be removed, bat roosting surveys and acoustic monitoring may be warranted. Similarly, if background reviews indicate that particular species at risk may be present, targeted surveys may also be required. Please feel free to contact us during the EIS process should the need for further discussions arise.

Please reach out to the undersigned if you have any questions or need any clarification about these comments.

Yours truly,

R.J. Burnside & Associates Limited



Tricia Radburn, M.Sc. (PI), MCIP, RPP
Senior Environmental Planner
TR:af

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

From: Silva Yousif <syousif@melancthontownship.ca>
Sent: June 25, 2024 11:36 AM
To: Josh Blokhuis; Alexa Pompilio-Grant
Cc: Tricia Radburn; Denise Holmes; Liam Morgan; Diksha Marwaha
Subject: Fw: AEC23-394 Chipwoods Park, Township of Melancthon - EIS TOR
Attachments: 240618_Yousif_Peer Reviewe Comments_EIS TOR_056814.pdf

Josh & Alexa

Find attached with regards to EIS ToR related to the subject line file.

S



Silva Yousif | Sr.Planner | Township of Melancthon |
syousif@melancthontownship.ca | www.melancthontownship.ca |

Please consider the environment before printing this e-mail This message (including attachments, if any) is intended to be confidential and solely for the addressee. If you received this e-mail in error, please delete it and advise me immediately. E-mail transmission cannot be guaranteed to be secure or error-free and the sender does not accept liability for errors or omissions.

From: Tricia Radburn <Tricia.Radburn@rjburnside.com>
Sent: Tuesday, June 18, 2024 4:26 PM
To: Silva Yousif <syousif@melancthontownship.ca>
Cc: Diksha Marwaha <dmarwaha@melancthontownship.ca>; Liam Morgan <lmorgan@melancthontownship.ca>; Denise Holmes <dholmes@melancthontownship.ca>
Subject: RE: AEC23-394 Chipwoods Park, Township of Melancthon - EIS TOR

Silva,

Our comments on the terms of reference for the EIS are attached. Please let me know if you have any questions.

Kind Regards,



Tricia Radburn, MCIP, RPP
Senior Environmental Planner

R.J. Burnside & Associates Limited
292 Speedvale Ave. W, Unit 20 Guelph ON
Office: [800-265-9662](tel:800-265-9662) Direct: 226-486-1778 www.rjburnside.com

From: Silva Yousif <syousif@melancthontownship.ca>

Sent: Tuesday, June 11, 2024 11:19 AM

To: Tricia Radburn <Tricia.Radburn@rjburnside.com>

Cc: Diksha Marwaha <dmarwaha@melancthontownship.ca>; Liam Morgan <lmorgan@melancthontownship.ca>; Denise Holmes <dholmes@melancthontownship.ca>

Subject: Re: AEC23-394 Chipwoods Park, Township of Melancthon - EIS TOR

Tricia

Kindly review below and let me know if you have any additional questions or comments

S



Silva Yousif | Sr.Planner | Township of Melancthon |
syousif@melancthontownship.ca | www.melancthontownship.ca |

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From: Diksha Marwaha <dmarwaha@melancthontownship.ca>

Sent: Tuesday, June 11, 2024 11:04 AM

To: josh@sheldoncreek.com <josh@sheldoncreek.com>

Cc: Alexa Pompilio-Grant <apompilio@azimuthenvironmental.com>; Silva Yousif <syousif@melancthontownship.ca>

Subject: RE: AEC23-394 Chipwoods Park, Township of Melancthon - EIS TOR

Hi Josh,

Apologies for the delay; I was away without access to my email. I will forward this to the NVCA for their review and inform you of their feedback.

Thanks,



Diksha Marwaha | Planning Coordinator | Township of Melancthon | dmarwaha@melancthontownship.ca | FX: 519-925-1110 | www.melancthontownship.ca |

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From: Josh Blokhuis <Josh@sheldoncreek.com>
Sent: Thursday, June 6, 2024 1:53 PM
To: Alexa Pompilio-Grant <apompilio@azimuthenvironmental.com>; Diksha Marwaha <dmarwaha@melancthontownship.ca>; Silva Youisif <syousif@melancthontownship.ca>
Subject: Re: AEC23-394 Chipwoods Park, Township of Melancthon - EIS TOR

I'm just copying Silva on this as well.

Josh Blokhuis
Project Manager
Sheldon Creek Developments
343-551-9470



From: Alexa Pompilio-Grant <apompilio@azimuthenvironmental.com>
Sent: Thursday, June 6, 2024 1:51 PM
To: dmarwaha@melancthontownship.ca <dmarwaha@melancthontownship.ca>
Cc: Josh Blokhuis <Josh@sheldoncreek.com>
Subject: RE: AEC23-394 Chipwoods Park, Township of Melancthon - EIS TOR

Good afternoon Diksha,

I wanted to follow up regarding the Terms of Reference for the proposed redevelopment at Chipwoods Park located at 476420 3rd Line in the Township of Melancthon (Township), County of Dufferin (County).

Thanks in advance,

Regards,



Alexa Pompilio-Grant, H.B.Sc.
Terrestrial Ecologist
Azimuth Environmental Consulting, Inc.
642 Welham Road Barrie, ON L4N 9A1
Office: 705-721-8451 x225
Cell: 705-794-2233
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology, environmental engineering, and arborist assessments.

From: Alexa Pompilio-Grant
Sent: Friday, April 26, 2024 2:49 PM
To: 'dmarwaha@melancthontownship.ca' <dmarwaha@melancthontownship.ca>
Cc: Josh Blokhuis <Josh@sheldoncreek.com>
Subject: AEC23-304 Chipwoods Park, Township of Melancthon - EIS TOR

Good afternoon Diksha,

Azimuth Environmental Consulting, Inc. (Azimuth) has been retained to prepare an Environmental Impact Study (EIS) report for the proposed redevelopment at Chipwoods Park located at 476420 3rd Line in the Township of Melancthon (Township), County of Dufferin (County). Based on background mapping and a winter site visit, the property contains Significant Woodlands, locally significant and unevaluated wetlands, unnamed watercourses, a pond, and potential for Significant Wildlife Habitat and Habitat for Endangered and Threatened species. Due to the presence of these features, an EIS is required. The property is entirely regulated by the Nottawasaga Valley Conservation Authority (NVCA) and therefore a permit is required to proceed with a future redevelopment application.

It is our understanding that the proposed development plan for the property includes a land lease community with small, affordable houses.

The purpose of the EIS will be to identify natural heritage features and functions including, but not limited to, watercourses, woodlands, valleylands, wetlands, rare vegetation communities, Significant Wildlife Habitat, and potential habitat of Species at Risk (SAR) listed under the Ontario's *Endangered Species Act, 2007* (ESA) associated with the property and/or adjacent lands. Where sensitive environmental features are identified, a strategy will be developed relative to the proposed development concept to avoid, mitigate, or offset potential impacts to natural heritage features and functions to the extent possible.

The study area for the EIS will include lands within the development area in addition to lands within 120m. Based on this information, Azimuth proposes the following for inclusion within the EIS report:

- Initiate consultation with the Township to confirm a Terms of Reference for the scope of the EIS;
- Conduct field studies to document existing natural heritage features, functions, and species. Surveys include:
 - Map vegetation community types using Ecological Land Classification methods (spring & summer 2024);
 - Conduct one (1) wetland delineation exercise to determine limits of wetlands within the study area (spring-summer 2024). The wetland delineation would be completed with GPS hardware (Garmin Montana; estimated accuracy 0.5-2.0m) and would not involve physical staking of the limit;
 - One (1) site visit with the NVCA to confirm the limits of the wetland should development be proposed within 30m of the wetland boundary (summer 2024);
 - Conduct a woodland delineation exercise to determine the woodland boundary (spring-summer 2024);
 - Two (2) vascular plant inventories (spring & summer 2024);
 - Three (3) evening amphibian breeding surveys (April, May, & June 2024);
 - Two (2) dawn breeding bird surveys (June 2024);
 - Two (2) marsh breeding bird surveys (June 2024);
 - Conduct two (2) aquatic site visits to confirm the presence of aquatic/fish habitat on the property and document any sensitive fish habitat features (spring-summer 2024); and,
 - Record all incidental wildlife observations during the field program;
- Complete an assessment of potential SAR and their habitats that could be present within the study area;
- Assess the potential direct and indirect impacts of the proposed works on the natural heritage features and functions identified on or adjacent to the property; and,
- Prepare one version of a draft EIS report. The EIS will include information on impact mitigation/avoidance/restoration where required.

At this time, we request that the Township's peer reviewer, RJ Burnside, please review the proposed Terms of Reference for the EIS and confirm that the scope of work is appropriate and addresses all concerns of the Township.

Please do not hesitate to reach out to discuss.

Thanks in advance,

Alexa Pompilio-Grant, H.B.Sc.
Terrestrial Ecologist

Azimuth Environmental Consulting, Inc.
642 Welham Road
Barrie, Ontario, L4N 9A1
Office: 705-721-8451 x225
Fax: 705-721-8926
Cell: 705-794-2233
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology, environmental engineering, and arborist assessment

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Comments - Nottawasaga Valley Conservation Authority

Nottawasaga Valley

Conservation Authority

October 3, 2023

SENT BY EMAIL

Township of Melancthon
157101 Highway 10
Melancthon, ON
L9V 2E6

Attn: Diksha Marwaha
Planning Coordinator

Dear Diksha,

RE: Pre-consultation Comments for "Chipwoods Park"
Town File No. MPC23-801
476420 3rd Line, Melancthon
NVCA ID #56676

Nottawasaga Valley Conservation Authority [NVCA] staff has reviewed the above noted pre-consultation application for a proposed redevelopment of the site for residential purposes. The applicant proposes to upgrade the existing sanitary and potable water systems to current standards and construct permanent residences.

Staff has reviewed this application as per our delegated responsibility from the Province to represent provincial interests regarding natural hazards identified in Section 3.1 of the Provincial Policy Statement (PPS, 2020) and as a regulatory authority under Ontario Regulation 172/06. The application has also been reviewed through our role as a public body under the Planning Act as per our CA Board approved policies. Finally, NVCA has provided comments as per our Municipal Partnership and Service Agreement with the Township of Melancthon.

Ontario Regulation 172/06

1. The property falls entirely within an area affected by Ontario Regulation 172/06 (the Authority's Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation) where a permit is required from the NVCA under the Conservation Authorities Act prior to development.
2. The property is affected by the regulation due to unevaluated wetland, floodplain and erosion hazard areas.
3. The current proposal to replace the trailers with new permanent residences, for year-round use with connections to a water and sewage disposal system and hydro is regarded by the NVCA as a fully habitable use requiring a permit under the Conservation Authorities Act. Section 28 (25) (a) states "development" means the construction or reconstruction, erection or placing a building or structure of any kind. Section 28(25) (b) states "development" means any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the

Nottawasaga Valley Conservation Authority

8195 8th Line, Utopia, ON L0M 1T0

T: 705-424-1479 F: 705-424-2115

admin@nvca.on.ca • nvca.on.ca

A member of Conservation Ontario

Comments - Nottawasaga Valley Conservation Authority

Pre-consultation Comments for "Chipwoods Park"

Town File No. MPC23-801

476420 3rd Line, Melancthon

NVCA ID #56676

October 3, 2023

size of the building or structure or increasing the number of dwelling units in the building or structure.

4. Section 4.3.4.5 of NVCA's Planning and Regulations Guidelines do not permit development associated with new and/or expansion of existing trailer parks/campgrounds in the regulatory floodplain. The existing trailer park is traversed by a watercourse which could pose significant risk to people and property in the event of flooding, erosion hazards or unforeseen emergencies. NVCA does not support the placement of portable or mobile buildings within the floodplain on a permanent basis since these structures are highly susceptible to flood damages.
5. It is also noted that safe ingress/egress during a flood event may not be available to many of these units and the inhabitants. We believe the proposal increases the risk to public safety including first responders who have to provide emergency services during a flood or erosion hazard event. If not already established, there should be an emergency plan in place for the existing campground.

Natural Hazard - Regulatory Comments

6. Policies contained within the PPS restrict development to areas outside of hazardous lands adjacent to shorelines and large inland lakes as well as river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards.
7. A natural hazard study should be completed in support of the proposed development.
8. A geotechnical study will be required in support of the development application which outlines the following;
 - a. On-Site Soils;
 - b. The feasibility of the use of low impact development measures;
 - c. The feasibility of the stormwater detention design as per Section 2.3 of the NVCA SWM standards;
 - d. Confirmation as to whether there are any hazardous soils on site and any mitigation measures that may be required;
 - e. Identify the stable top-of-bank and confirmation of stable slopes.
9. In general, NVCA's Planning and Regulations Guidelines requires a 6 metre access allowance from natural hazard limits and valleylands top of bank.
10. Due to the presence of confirmed and candidate significant natural heritage features within proximity to the proposed development, an EIS will be required to assess the potential impacts of development on such features, and the natural hazard concerns. The applicant will be required to retain a qualified ecologist to prepare this submission, at which point the consultant shall contact NVCA planning staff to discuss the appropriate scope of required studies.

Stormwater Management:

11. A stormwater management report and associated plans will be required to current standards. More information can be found in the NVCA engineering guidelines available on our website at nvca.on.ca.

Hydrogeology

12. The applicant is encouraged to complete the Hydrogeological Assessment check List intended to support development applications, Found on Table 1 (page 6 and 7) of the document entitled "Hydrogeological Assessment Submissions, Conservation Authority Guidelines for Development Applications" June 2013 which is attached for reference.

Land Use Planning

13. In order to accurately determine the appropriate limits to development, NVCA staff request that a *scaleable* drawing be provided which illustrates the following items (as applicable):
 - i. The wetland boundaries and width of buffers
 - ii. All applicable hazard limits (shoreline, erosion etc.) plus the 6 metre access allowance);
 - iii. The floodplain limit plus the 6 metre access allowance;
 - iv. The proposed site plan fabric.

This information should be accompanied by an appropriate and complete legend. Constraint lines, access allowances, and buffer setbacks should be labelled. Please confirm that all works are outside of the limits of development. (i.e. all natural hazards, access allowances, natural heritage features and associated buffers and setbacks).

The limits to development will be determined by the furthest extent of the hazard plus the required access allowance or the natural heritage feature and appropriate buffer; whichever is the greatest constraint.

Submission Requirements

14. NVCA staff request that all submissions materials be provided in digital format only.

Fees

15. NVCA will provide a formal request for fees upon submission and circulation of a Planning Act application.

Conclusion

In summary, the proposal has some significant challenges due to the presence of multiple Natural Hazards on site which we believe conflict with guiding policies under the *Provincial Policy Statement*. Furthermore, the establishment of these habitable structures requires a permit under the Conservation Authorities Act.

While this is an existing trailer park, the NVCA is not in support of making the units non-mobile and permanently habitable (as noted above) unless it can be determined that the structures are located outside of natural hazards and safe access/egress can be achieved.

Comments - Nottawasaga Valley Conservation Authority

Pre-consultation Comments for "Chipwoods Park"
Town File No. MPC23-801
476420 3rd Line, Melancthon
NVCA ID #56676

October 3, 2023

Technical studies will be required to determine the hazard extent and areas affected by them. Staff advise that engineered studies are at the applicant's expense and may not yield positive results.

NVCA staff appreciates the opportunity to comment at this stage in the process. These comments should be considered valid at the time of issuance and preliminary in nature. The information presented herein is based on a preliminary concept plan and should not be considered NVCA final comments at this time. We will require additional information (full application submission) in order to complete our review and additional comments may be provided in the future. The NVCA may at any point change our comments should new information become available which raises concerns pertaining to the NVCA core mandate.

Should you require any further information, please feel free to contact the undersigned.

Sincerely,



Davin Metheral
Planner I



APPENDIX C

Photographic Record



Photo 1: Boyne River Tributary, culvert inlet at 3rd Line, watercress patches near inlet (May 22, 2024).



Photo 2: Boyne River Tributary, looking upstream from 3rd Line at straight morphology (May 22, 2024).



Photo 3: Boyne River Tributary, downstream of pond, meandering segment in forested lands (May 22, 2024).



Photo 4: Boyne River Tributary, online pond – pond outlet overflow drop structure (May 22, 2024).



Photo 5: Boyne River Tributary, shallow western section of pond (May 22, 2024).



Photo 6: Boyne River Tributary, looking upstream from 3rd Line, overgrown summer vegetation (August 22, 2024).



Photo 7: DF1, straight morphology along northern limits of property (May 22, 2024).



Photo 8: DF1, upstream limits of feature, no defined channel, grass and cattail vegetation (May 22, 2024).



Photo 9: DF1, downstream limits of feature near outlet to Boyne River tributary (May 22, 2024).



Photo 10: DF1, standing water during summer investigation at downstream limits of feature (May 22, 2024).



Photo 11: DF2, upstream limits of feature, no defined channel (May 22, 2024).



Photo 12: DF2, poorly defined channel with trickly flow draining north towards DF1 (May 22, 2024).



Photo 13: DF3, dry swale feature with segments of moist/standing water (August 22, 2024).



Photo 14: DF3, dry swale feature at laneway crossing along entrance to trailer park (August 22, 2024).



Photo 15: DF4, standing water in lowland area. No flow, no substrate sorting, no defined banks (May 22, 2024).



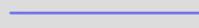
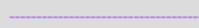
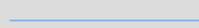
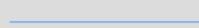
Photo 16: DF5, drainage path of pond to the south – dry soils, no substrate sorting, no defined channel (August 22, 2024).



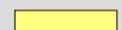
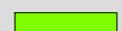
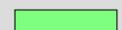
APPENDIX D

Proposed Redevelopment Concept

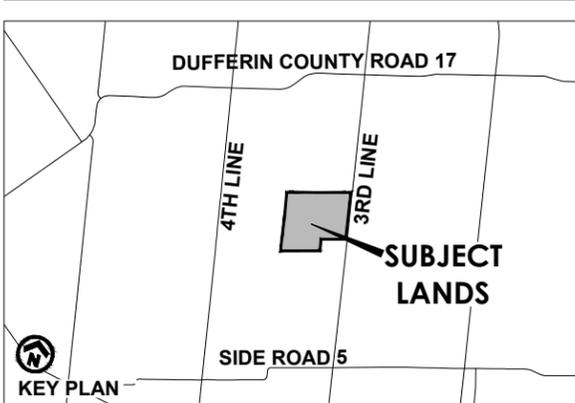
LEGEND

-  EXISTING WATERCOURSE
-  EXISTING WATER FEATURE (AZIMUTH)
-  ESTIMATED EX. REGIONAL FLOOD LINE (NVCA)
-  EX. REGIONAL FLOOD LINE BUFFER (6m)
-  WETLAND CONSTRAINT (AZIMUTH AUG)
-  WETLAND CONSTRAINT BUFFER (15m)
-  EXISTING DEVELOPED AREA
-  PERMANENT WATERCOURSE/DIRECT FISH HABITAT
-  WATERCOURSE/DIRECT FISH HABITAT BUFFER
-  DRAINAGE FEATURE/INDIRECT FISH HABITAT
-  20m MEANDER BELT (GEOMORPHIX, 2025)

SITE STATISTICS - PROPOSED

	TOTAL SITE AREA (GROSS):	37.38ha (92.37ac)
	NET SITE AREA*:	11.42ha (28.22ac) (30.5%)
	RESIDENTIAL AREA:	6.26ha (15.47ac)
	ROADS / SIDEWALKS:	2.06ha (5.09ac)
	AMENITY REC. AREAS / PARKETTES:	0.72ha (1.78ac)
	LANDSCAPE OPEN SPACE:	0.82ha (2.03ac)
	ADVANCED TREATMENT SYSTEM BLOCK:	0.13ha (0.32ac)
	SWM BLOCKS:	1.38ha (3.41ac)
	NATURAL HERITAGE SYSTEM:	26.01ha (64.27ac) (69.6%)

*NOTE: NET SITE AREA EXCLUDES NATURAL HERITAGE SYSTEM AREAS



**CONCEPT PLAN
CHIPWOODS**

476420 3RD LINE, PART OF LOT 8, CONCESSION 3, OLD SURVEY,
TOWNSHIP OF MELANCTHON, COUNTY OF DUFFERIN

ADDITIONAL SITE STATISTICS

UNIT COUNTS:	224 UNITS (9.14m x 27.5m)
AMENITY AREA / RECREATION AREA / PARKETTES:	7,145m² (6.26% OF NET SITE AREA)
VISITOR PARKING PROVIDED:	43 SPACES (0.19 SPACES / UNIT)



SCALE 1:3000
JUNE 20, 2025

