

# Scoped Environmental Impact Study

214838 Baseline Rd.  
Township of West Grey

June 2025



Prepared For:	Ed Verkaik
Prepared By:	Aster Environmental Services Ltd.
Date:	June 10, 2025
Project ID:	AES-24048

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**Project ID:** AES-24048

**Ed Verkaik**

Sent to: [ed@cloudwise.net](mailto:ed@cloudwise.net)

**Technical Report: Scoped Environmental Impact Study, 214838 Baseline Rd., Township of West Grey**

Dear Ed:

Aster Environmental Services Ltd. has prepared the attached report to address applicable submission requirements for your development application(s).

We trust that the enclosed addresses the scope of work agreed upon in our contract and/or as established through consultation with the approval agency.

**For the benefit of the reviewing authority, all applicable and actionable recommendations are provided under Section 5 of the report. Recommended development constraints are displayed on Figure 3.** These key items should be reviewed in detail to ensure an understanding of proponent's requirements to demonstrate due diligence and compliance with respect to environmental policies and regulations.

Best regards,

Aster Environmental Services Ltd.

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## 1) **INTRODUCTORY CONTEXT & BACKGROUND**

Aster Environmental Services Inc. (hereafter 'Aster Environmental' or 'AES') was retained by Ed Verkaik (hereafter 'proponent') to prepare an Environmental Impact Study (EIS) for proposed development on a property described as 214818 Baseline Rd. in the Township of West Grey, County of Grey (the 'subject property'; see **Figure 1**). The property measures approximately 56 ha and is located in a rural area represented by agricultural lands, rural residential properties, and areas of natural cover.

To provide a summary of planning context, AES has reviewed various land use planning schedules applicable to the local jurisdiction. According to the Township of West Grey Zoning Bylaw, the subject property is zoned a combination of '*Rural*', '*Natural Environment*', and '*Natural Environment 2*'. It is our understanding that planning decisions within this portion of the municipality are administered by the County of Grey through the County's Official Plan (2024 consolidation; OP). According to Schedule A of the County OP, the subject property supports multiple land use designations, including '*Rural*', '*Hazard Lands*', and '*Provincially Significant Wetlands and Significant Coastal Lands*'. Per Schedule B to the County OP, the property contains no areas identified as natural heritage '*Core Area*' or '*Linkage*'. Appendix B to the OP identifies areas of '*Significant Woodlands*' as occurring across various portions of the property. Portions of the subject property are regulated by the Saugeen Valley Conservation Authority (SVCA) under Ontario Regulation 41/24 of the *Conservation Authorities Act*. For convenient reference, various applicable land-use schedules are provided in **Appendix 1**, with the property location highlighted.

From a natural heritage perspective, the subject property contains an assortment of natural features that are typical of the local landscape. Portions of the property support a branch of the Styx River and its associated riparian corridor. The property also contains areas of provincially significant wetlands (PSW) and other areas of mapped 'unevaluated' wetlands. Woodland areas are scattered across the property, including both naturally occurring forest ecosites and managed plantations. The remainder of the property contains mixed agricultural land cover. All land cover types on the property have the potential to support wildlife habitat functions, including potential habitat for species protected under the provincial *Endangered Species Act*.

It is our understanding that this report has been requested by the Township and/or County to accompany an application for consent to create a single new residential building lot. At this stage, there are no specific plans to develop structures (dwellings or otherwise) on the created lot; however, creation of the lot would set precedent for future development or a new residential dwelling. Any new development on the created lot would require private servicing and installation of an access driveway from Concession 12 NDR, the roadway that borders the northern limit of the subject property. While no specific plans are available on which to base an impact assessment, conceptual/preferred building locations have been identified as a result of this review.

The initial goal of this assessment is to determine the presence, extent, and function of natural heritage features distributed throughout a portion of the property, defined as the 'study area'. This allows for a review of application conformity with various local and provincial policies that support protection of natural heritage. The EIS also includes consideration for compliance with commonly applicable environmental regulations, including the provincial *Endangered Species Act*, federal *Fisheries Act*, and federal *Migratory Birds Convention Act*. Based on this review, the report offers a review of any anticipated impacts resulting from future development of the proposed lot, and offers recommended measures to mitigate such potential impacts.



## 2) **ASSESSMENT APPROACH**

The approach and methods used to carry out this assessment include the following general stages:

1. Confirm an understanding of key project context, including the trigger and purpose for conducting the study and the nature of proposed development (as outlined in **Section 1**).
2. Identify a study area in which to focus assessment efforts.
3. Gather background biophysical information for the study area to become familiar with existing natural heritage feature mapping and records of features and species of conservation interest.
4. Conduct a comprehensive site investigation and targeted survey methods (where necessary/appropriate) to further support an assessment of the presence or absence of natural heritage features that are considered significant and requiring protection, *e.g.*, wetlands, fish habitat, habitat for endangered or threatened species, etc.
5. Determine whether implementation of the proposed development plan will result in negative impacts to significant/key natural heritage features, and to identify ways in which such impacts can be mitigated via avoidance, minimization, and/or compensation measures.
6. Provide an assessment of consistency and conformity of the proposed development plan with applicable municipal, provincial, and federal environmental policies and regulations.

### 2.1 **Identification of Study Area**

The primary focus of this assessment is the subject property on which development is proposed (see **Figure 1** and **Figure 2**). The study area is further defined by a 120 m radius around the limits of the proposed new parcel. The 120 m assessment radius is a measure that is intended to ensure appropriate consideration for natural heritage features and functions of adjacent lands, consistent with direction in the Natural Heritage Reference Manual (NHRM) under the Provincial Policy Statement (PPS).

Importantly, there are limitations to the extent of investigations that can (or need to) take place within a 120 m radius. For example, assessment of portions of the study area not owned by the applicant are typically limited to a desktop review and only discussed if/where relevant. Additionally, in some cases, the presence of roadways (or other anthropogenic infrastructure) may represent a logical break in the continuous extent of the study area. Such physical separation often serves as functional (physical, ecological, and hydrologic) separation between development and natural features that would otherwise be considered relevant.

### 2.2 **Review of Background Information Sources**

Various sources of background information were referenced in preparing this assessment, including the following:

- **County of Grey Official Plan & Schedules** (2024 Consolidation)
- **Ministry of Natural Resources and Forestry (MNR) Natural Heritage Areas and Natural Heritage Information Centre (NHIC)** database regarding information on occurrences of SAR and provincially tracked species (squares: 17NK0703 and adjoining squares); accessed June 2025, at: [http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR\\_NHLUPS\\_NaturalHeritage&viewer=NaturalHeritage&locale=en-US](http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US)).
- **Ontario Breeding Bird Atlas (OBBA) database and the Atlas of the Breeding Birds of Ontario, 2001–2005** (Cadman et al. 2007) regarding birds that were documented to be



breeding in the vicinity of the study area during the 2001–2005 period (accessed June 2025 at: <http://www.birdsontario.org/atlas/squareinfo.jsp>).

- **Ontario Reptile and Amphibian Atlas (ORAA)** database regarding records of reptiles and amphibians that have been observed within the vicinity of the study area (accessed June 2025 at: [http://www.ontarioinsects.org/herpatlas/herp\\_online.html](http://www.ontarioinsects.org/herpatlas/herp_online.html)).
- **Department of Fisheries and Oceans – Aquatic Species at Risk Mapping:** <https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html>
- **Department of Fisheries and Oceans – Fish and Fish Habitat Protection Program Website:** <https://www.dfo-mpo.gc.ca/pnw-ppe/ffhfp-ppph-eng.html>
- **Atlas of the Mammals of Ontario** (Dobbyn 1994) regarding mammal records within and adjacent to the study area.
- **Species at Risk (SAR) range maps** (accessed June 2025 at: <http://www.ontario.ca/environment-and-energy/species-risk-ontario-list>).
- **iNaturalist** (accessed June 2025 at: <https://www.inaturalist.org>).
- **Physiography of Southern Ontario** (Chapman and Putnam 2007) for information pertaining to the physiography and soils of the study area and adjacent lands.
- Digital Ontario base maps and aerial photography resources.

## 2.3 **Site Assessment Methods**

The sections below outline the various methods used to characterize and assess potential natural heritage features and associated functions within the subject property.

### 2.3.1 **Functional Habitat Assessment**

One of the key elements of any environmental/natural heritage assessment is a review of wildlife habitat functions. In conducting such a review, Aster Environmental relies foremost on a functional assessment approach. This involves the identification of potential habitat based on the characterization of the biophysical conditions of a site, including classifying vegetation communities, identifying hydrologic features (wetlands, watercourses), and characterizing other physical characteristics of a specified study area.

The process begins with an initial review of existing background mapping to determine if significant features have been previously identified within the study area, or if the planning authority has already undertaken a comprehensive review of natural heritage features. We then consider the potential for significant species within an area of interest based on general habitat requirements, background occurrence records, etc. If conditions are suitable within the study area for a species that may be known to occur in a local area, it is often simplest to assume that such a species is present, rather than undertake targeted assessments to demonstrate absence. Species-specific habitat preferences and/or affinities may be determined from published reports, unpublished documents, and direct experience.

The above method is considered far more practical than immediately deferring to targeted biophysical surveys that may be superfluous in achieving the goal of the study. For example, if a wetland feature is present within 120 m from a proposed development, we would first determine if the development can demonstrate functional avoidance of the feature before undertaking detailed assessments to characterize biological functions of the wetland (e.g., undertaking turtle and/or amphibian surveys, etc.). This approach is suitable to apply to most small-scale, low-risk development applications.



### **2.3.2 Targeted Wildlife Assessment**

In certain circumstances, Aster Environmental completes further species-specific or otherwise targeted assessments in accordance with applicable standard methods and protocols (or modified versions thereof). Targeted survey efforts may be undertaken due to one or more triggers, such as a specific request from an approval authority. In some cases, when a species of conservation concern may occur in conflict with a development proposal, it may become critical to confirm presence/absence to inform mitigation planning or potential authorization requirements.

Given the scoped nature of this study, a robust targeted survey program was not considered necessary to inform an impact assessment. This is because the nature and context of the proposal presents a relatively minor opportunity for risk to areas that represent wildlife habitat. While significant species may be expected to occur within the local landscape, it is our opinion that presence/absence of most species/guilds can be reasonably interpreted from habitat context. Therefore, it is our opinion that further in-season, targeted survey effort (beyond the completed spring-season surveys) is not necessary to draw reasonable conclusions regarding the potential for negative impacts. Conservation assumptions have been applied in our estimate of which species could occur.

### **2.3.3 Physical Assessment (Topography, Surficial Geology, & Drainage)**

The geophysical setting of the study area was determined using various background resources, including topographic maps, provincial soil survey data, and aerial imagery. On-site investigations further characterize general physical conditions, describing notable features such as steeply sloping land, micro-topographical conditions, exposed bedrock, etc. While soil conditions are not always analysed, soil sampling may be undertaken where determination of specific soil conditions would influence other ecological characterization of the site, e.g., determining the presence/absence of hydric soils to inform wetland mapping. No specific soil sampling was undertaken to support this assessment. The potential for drainage features was determined through the review of background mapping resources and further assessed during the on-site investigation.

### **2.3.4 Vegetation Assessment**

Natural vegetation communities within the study area were reviewed in accordance with applicable Ecological Land Classification (ELC) community tables (Lee et al 1998), which is generally intended for use in Ecoregion 6E. ELC defines ecological units or communities based on bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect), and corresponding vegetation. Use of the system permits biologists and other land managers to use a common language to describe vegetation communities that in turn facilitates the identification of communities likely to support certain natural heritage features or functions.

In our experience, the ELC classification key is not comprehensive, and improvised classifications are occasionally used to describe communities, e.g., anthropogenic features. Vegetation communities were first delineated via aerial photo interpretation and subsequently confirmed and refined in the field using a general wandering survey approach. The boundaries of any identified wetland features were delineated in accordance with the “50% wetland vegetation rule” as directed by the Ontario Wetland Evaluation System (OWES), where feasible.

Vascular plants are typically inventoried during vegetation community classification efforts and other on-site surveys (where applicable). Additional observations may be recorded incidentally as part of any other field data collection efforts. Where applicable, AES may maintain a working list of observed vascular plant species and collect field samples of unidentified species for future verification. A summarized vegetation list is prepared and reviewed to determine if any observed species are identified as having a conservation status that is relevant within the jurisdiction. Conservation status may include a listing as special concern, threatened, or endangered under the provincial ESA and/or





a sub-national conservation rank of S1-S3, as administered by the provincial Natural Heritage Information Center (NHIC).

### **2.3.5 On-Site Investigation**

The background review of biophysical information and general preliminary assessment informed the scoping of the primary field investigation undertaken on May 20, 2025. Conditions during the primary on-site investigation were described as full sun, low wind, with temperatures ranging from 10-12 degrees. Approximately 6 hours were spent conducting this survey, beginning at approximately 8:30 am. A supplemental survey was undertaken on June 3<sup>rd</sup> to conduct an additional vegetation and general wildlife survey. This supplemental survey occurred in the morning hours (~8-11 am) to maximize detection of potential bird species of conservation concern. Conditions during this second visit were described as full sun, low wind, with temperatures ranging from 17-20 degrees.

The site investigations were undertaken by a qualified ecologist, focused on characterizing and (where applicable) delineating natural heritage features that are considered relevant within the jurisdiction, e.g., watercourses, fish habitat, wetlands, and wildlife habitat, including potential habitat for threatened or endangered species. Site investigations were timed appropriately to assess presence/absence of constraining species, including potential rare or at-risk wildlife or vascular plants.

Overall, the level of on-site data collection effort was considered appropriate given the location and natural heritage context of the study area. Any discrete feature boundaries were delineated with a high-accuracy GPS, and all relevant features were photographed and catalogued for inclusion in this report (**Appendix 2**). Existing conditions, as characterized through our on-site investigations, are described in **Section 3**.

## **2.4 Significant Natural Heritage Feature Assessment**

Provincial and local planning policies employ varying terms for natural heritage features and designations that have recognized 'statuses' within the applicable planning jurisdiction. Although located within the municipal jurisdiction of the Township of West Grey, it is our understanding that planning in this portion of the municipality is administered by the County of Grey, under the County Official Plan. Therefore, the terminology used in this report is consistent with those significant natural heritage features receiving protections under the County's OP, including the following:

- Core Areas & Linkages
- Wetlands (including provincially significant wetlands)
- Fish Habitat
- Areas of Natural and Scientific Interest (Life Science)
- Significant Woodlands
- Significant Valleylands
- Significant Wildlife Habitat
- Habitat of Endangered and Threatened Species

While the OP identifies additional features including Karst, Hazard Lands, and 'Hazardous Forest Types for Wildland Fire', these features are not assessed with this report. This report is focused on natural heritage features, while the noted excluded features may require review by other technical professionals if determined to be of interest to the County in this specific application. The listed applicable features are assessed in accordance with standard technical guidance documents, including the following:



- *County of Grey Official Plan*
- *Ontario Wetland Evaluation System – Southern Manual (2022)*
- *Natural Heritage Reference Manual (NHRM) for the Natural Heritage Policies of the Provincial Policy Statement (MNRF 2010)*
- *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF 2015).*
- *General habitat descriptions, recovery strategies, and other official technical documents related to species listed as endangered or threatened under the Endangered Species Act.*

The potential presence/absence of relevant species of conservation interest, such as endangered and threatened species, are assessed using a combination of the background information review outlined in **Section 2.2** and the habitat-based approach outlined in **Section 2.3.1**. Our assessment of significant natural heritage features is provided in **Section 4** of this report.

## **2.5 Impact Assessment and Mitigation Planning**

The impact assessment process is a systematic evaluation of the potential environmental consequences and risks of a proposed project or development. It is typically predictive and interpretative, relying on a melding of hard data and professional judgement. Once a specific site is sufficiently characterized through an existing conditions assessment, site characteristics are defined for their significance and sensitivities. The impact assessment then focuses on predicting how significant and sensitive features may be subject to change, degradation, or outright elimination through the life of a development. It is further determined whether such impacts may occur through direct or indirect means.

Where negative impacts to a feature may be expected, a review is undertaken to determine the potential scale of impacts and opportunities for mitigation. The ultimate goal is to outline a mitigation plan that allows for avoidance or compensation of anticipated impacts, thereby achieving a scenario of 'no negative impacts' and/or 'no net negative impacts'. Site-specific mitigation can take any of the following forms:

- **Avoidance:** identifying an alternative approach that avoids the predicted impact.
- **Minimization:** refining the proposal to reflect a scenario where predicted impacts are either negligible or acceptable.
- **Active Mitigation:** developing a plan to mitigate various impact pathways through the development process, the successful implementation of which will avoid impacts.
- **Offsetting:** undertaking one or more measures to compensate for unavoidable impacts, thereby pursuing a scenario of no *net* negative impacts.

Aster Environmental's impact assessment and recommended mitigation measures/plan are provided in **Section 5**.

## **2.6 Conformity & Compliance Review**

There are several environmental policies (e.g., statutes, regulations, plans, guidance documents, etc.) that may apply to the study area and proposed development, which are listed below. A general assessment of the proposed development's consistency and conformity with these environmental policies is offered in **Section 6**.

- *Federal Fisheries Act*, R.S.C. 1985
- *Federal Migratory Birds Convention Act*, S.C. 1994, c. 22



- Provincial Planning Statement, 2024, pursuant to the *Planning Act*, R.S.O. 1990, c. P.13
  - Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2010.
  - Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E.
- Provincial *Endangered Species Act*, S.O. 2007, c. 6
- Ontario Regulation 41/24 under the Conservation Authorities Act, R.S.O. 1990, c. C.27
- County of Grey Official Plan (2023 Consolidation)
- Township of West Grey Zoning Bylaw (2017 Consolidation)

### 3) **EXISTING CONDITIONS – STUDY AREA CHARACTERIZATION**

#### 3.1 **General Site Conditions & Land Uses**

The subject property measures approximately 56 ha and is located in a rural area represented by agricultural lands, rural residential properties, and mixed natural cover, including various drainage corridors. The property supports frontage on two year-round roadways, Baseline Rd. to the east and Concession 12 NDR to the north. The western parcel limit is bounded by 30<sup>th</sup> Sideroad, which consists of a rough, seasonal access path.

The property is used for a variety of purposes, including active agricultural production, various recreational uses, and active timber harvest. There is an existing residential dwelling accessed from Baseline Rd. that serves as a permanent residence. The parcel has been subject to considerable reforestation efforts in recent decades, with coniferous plantations prominent surrounding the existing dwelling. It is our understanding that there has been one lot previously severed by the current owners from the northwestern corner of the original lot, which now supports a residential dwelling.

From a landscape perspective, the property is proximate to a variety of common land uses. The local landscape supports primarily agricultural uses and managed forest, both public and private. The nearest local settlement is Dornoch, located ~5 km to the northeast, while the nearest major settlement area is Durham, located ~13 km to the southeast.

#### 3.2 **Physiography, Topography, and Drainage**

##### 3.2.1 **Physiographic Context**

The study area is contained within the broader physiographic region known as the Horseshoe Moraines (Chapman and Putnam 1984). The property is situated along the slopes of multiple small drumlins within an area characterized as drumlinized till plain. These small drumlin features are evenly dispersed across the local landscape in a north-south orientation. Lands to the west, south, and east of the property are characterized as part of a broad-spanning 'spillway', i.e., a series of relict glacial meltwater channels that today support networks of watercourses within the rolling landscape.

##### 3.2.2 **Topographic Context**

The property is characterized by moderate slopes towards its center from both the southeast and northwest, both high points on the property of approximately equal elevation. There is also a gentler slope towards the south which leads into the Styx River corridor. The northeast portion of the property is a flat/depressed area supporting minimal grade change. There are no dramatic or steep slopes on the parcel; however, except for the noted flat area in the northeast, elevation changes are continuous. Elevations across the property range between approximately 355 m (above sea level) to 335 m.



### 3.2.3 Drainage Context

Background mapping resources depict the presence of two high-order streams crossing the property (see **Figure 1 & Figure 2**), both tributaries of the Styx River. The main branch of the Styx River occurs a short distance south of the property, collecting input from several small feeder streams originating from local recharge areas (drumlins) and broad headwater wetlands. Only one of the drainage features mapped as occurring within the subject property is overlapped by the study area limit. This is a poorly defined feature that is mapped as traversing the broad wetland area along the eastern boundary of the study area.

Based on our scoped assessment, the single mapped feature within the study area exhibits no definition and is likely represented by relatively diffuse seasonal flows through the wetland. We did observe evidence of a poorly defined 'ephemeral' flow pathway through the study area that is not currently mapped. This flow path originates from a culvert under Concession 12, conveying seasonal stormwater flows onto the subject property and down the slope in southerly direction (see **Figure 2**). There is evidence of erosion scarring and substrate sorting along this flow path, but no defined channel or signs of regular base flow. It is assumed that this feature is essentially capturing road overflow and directing it down the slope into adjacent wetland areas. All other drainage within the study area is assumed to be a combination of diffuse overland flow and on-site infiltration.

### 3.3 Vegetation Conditions

Existing vegetation communities within the subject property were assessed through a combination of background review and on-site investigation. A desktop exercise was undertaken to map vegetation community boundaries using background information sources and current aerial photographs; the mapped vegetation communities were then ground-truthed to a high level and refined where necessary during the site investigation.

Given the successional/anthropogenic nature of some encountered vegetation assemblages, the assigned ELC codes/descriptions may be improvised, generalized, 'complexed', or otherwise not strictly conforming to the ELC guide. Vegetation community mapping with classifications generally based on Lee et al (1998) is provided on **Figure 2**, and descriptions are provided below. Each description includes a list of representative plant species within each community. **Appendix 3** provides a consolidated list of all plant species documented within the study area.

#### 3.3.1 ANTH/CU: Anthropogenic/Cultural

This portion of the study area includes an existing residential dwelling and associated cultural/amenity area, including maintained grassed lawn and a small area of successional meadow. This occurs on an adjacent parcel at the corner of Concession 12 and 30<sup>th</sup> Sideroad, not owned by the proponent. Therefore, more specific characteristics of the polygon were not documented.

#### 3.3.2 AG: Agricultural Field

This portion of the study area is represented by two large agricultural fields. These fields presumably support cash cropping, as the soil was bare and recently tilled at the time of our on-site assessment.

#### 3.3.3 FOC2: Dry – Fresh Cedar Coniferous Forest

This ecosite is represented entirely by dense, monocultural White Cedar (*Thuja occidentalis*) on a gentle to moderate, east-facing slope. The canopy cover is even-aged and of moderate maturity. There is essentially no regenerating vegetation or groundcover due to dense shading of the Cedar canopy.



### 3.3.4 CUW/FO (Hedgerow/Field Edge)

This ecosite captures a variable portion of the study area, including the edges of agricultural fields and an intervening section of deciduous hedgerow. The field edge communities represent narrow transition zones between the fields and adjacent wetlands. The delineated polygon is very diverse, but consistently reflective of disturbed conditions/areas that are influenced by adjacent open edges.

The canopy assemblage includes some patches of dense, successional White Cedar (similar to FOC2 ecosite above), along with patchy swaths of cultural thicket vegetation. Common species along the field edge include Ninebark (*Physocarpus opulifolius*), Apple (*Malus sp.*), American Elm (*Ulmus americana*), Willow (*Salix spp.*), and White Cedar. Other portions are more reflective of natural mixed/deciduous forest, with some large White Ash (*Fraxinus americana*), Sugar Maple (*Acer saccharum*), Eastern Hemlock (*Tsuga canadensis*), and some larger scattered Bitternut Hickory (*Carya cordiformis*).

The groundcover composition in this ecosite varies between cultural meadow flora along the direct field edge and generic forest herbs, with common species including mixed woodland sedges (*Carex gracillima*, *C. pedunculata*), Trout Lily (*Erythronium americanum*), Mayflower (*Maianthemum canadensis*), Strawberry (*Fragaria virginiana*), Canada Goldenrod (*Solidago canadensis*), Raspberry (*Rubus strigosus*), and occasional Christmas Fern (*Polystichum acrostichoides*).

### 3.3.5 FOD5: Dry – Fresh Sugar Maple Deciduous Forest

This ecosite occurs in the northern portion of the study area along the Concession 12 frontage. This is a variable hardwood ecosite stretching down a broad southeast-facing slope. The predominant canopy cover is Sugar Maple and White Ash (*Fraxinus americana*); however, it is apparent that most mature trees have been harvested in recent years. There are some remnant larger Sugar Maple, but the canopy is generally composed of young individual trees, with widespread evidence of larger cut stumps. Other associate canopy species include American Elm, Yellow Birch (*Betula alleghaniensis*), and a variable component of mature Black Walnut (*Juglans nigra*). This latter species, along with trace coverage of European Larch (*Larix decidua*) and Carolina Poplar (*Populus x canadensis*), indicate some former reforestation efforts here, as none of these species represent natural occurrences on the local landscape.

Sub-canopy layers include Sugar Maple, Ash, and Elm regeneration, along with sparse components of White Cedar, Eastern Hemlock, and Ironwood (*Ostrya virginiana*). Shrub-height layers also consist of hardwood regeneration, along with prominent coverage of Alternate-leaved Dogwood (*Cornus alternifolia*). Common groundcover species include Trout Lily, woodland sedges (*Carex gracillima*, *C. plantaginea*, *C. pedunculata*, *C. peckii*), False Melic Grass (*Schizachne purpurascens*), Hooked Crowsfoot (*Ranunculus recurvatus*), and isolated patches of Bloodroot (*Sanguinaria canadensis*) and Blue Cohosh (*Caulophyllum thalictroides*). There is also an abundance of adventive species associated with disturbed forestry trails, including Goldenrod, Self-heal (*Prunella vulgaris*), Strawberry, Basil (*Clinopodium vulgare*), Dandelion (*Taraxacum officinale*). Some of the vehicle tracks have left ruts that appear to collect surface runoff and host isolated wetter pockets, with species such as Sensitive Fern (*Onoclea sensibilis*) and addition sedge diversity.

This ecosite borders and intergrades with an adjacent mixed forest ecosite, and the exact boundary delineated on **Figure 2** is approximate. The hardwood community is most prominent on the upper and middle slopes, whereas the mixed ecosite becomes dominant on the lower slopes and along the interface with wetland ecosites, described below.





### 3.3.6 FOM7: Fresh – Moist White Cedar – Hardwood Mixed Forest

This ecosite borders the FOD5 ecosite and contains many of the same overstory canopy components, including Sugar Maple and White Ash, as well as some Black Cherry (*Prunus serotina*) and Trembling Aspen (*Populus tremuloides*). In general, these hardwood components are less dense and not being replaced in the sub-canopy, which contains a more dense layer of coniferous cover, primarily White Cedar and Hemlock, with a lesser component of Balsam Fir (*Abies balsamea*). There is variability in the canopy, with some areas having more or less upper hardwood canopy, and notable areas of near complete White Cedar dominance.

This ecosite has similarly been subject to some intensive harvest in recent years, with many larger White Cedar, Hemlock, and White Ash having been removed. Low regeneration layers are generally sparse but dominated by lower growth of coniferous species. Common groundcover species include Trout Lily, mixed woodland sedges, White Trillium (*Trillium grandiflorum*), and Hepatica (*Hepatica acutiloba*). The groundcover density is highly variable based on shade and soil moisture, with this ecosite representing a transition zone into a forested wetland at the bottom of the associated slope.

### 3.3.7 SWM1: White Cedar Mineral Mixed Swamp

This swamp ecosite begins at or just above the base of a broad slope that hosts the hardwood and mixed forest ecosites described above. The dominant cover is mature White Cedar; however, areas along the community edge have also been subject to harvest of the most mature Cedar trees. There is a prominent association of Black Ash (*Fraxinus nigra*), although most observed individuals are in a poor state of health due to insect infestation. Other secondary associate species including Red Maple (*Acer rubrum*), Balsam Fir, and Yellow Birch. The sub-canopy layer is similarly structured, being predominantly a mix of suppressed White Cedar and Black Ash.

Lower layers include a mix of both hardwood and conifer regeneration, with Ash seedlings and saplings being very prominent. Other low shrubs are present such as Poison Ivy (*Toxicodendron rydbergii*), Smooth Honeysuckle (*Lonicera dioica*), and mixed Currant (*Ribes triste*, *R. cynosbati*). Common groundcover species include Manna Grass (*Glyceria striata*), Dwarf Raspberry (*Rubus pubescens*), Bishop's Cap (*Mitella nuda*, *M. diphylla*), Mayflower, Sarsaparilla (*Aralia nudicaulis*), Royal Fern (*Osmunda regalis*), Sensitive Fern, Foamflower (*Tiarella cordifolia*), and Interior Sedge (*Carex interior*).

Groundcover is a highly variable mix depending on the substrate and terrain, which is a mosaic of mossy hummocks interspersed by pockets of shallow, saturated surface muck. Muck pockets generally support dense carpets of Manna Grass. There are shallow pockets of standing water throughout this ecosite, but no major pooling that would support sufficient cover for most wetland-dependent wildlife.

### 3.3.8 SWD3: Maple Mineral Deciduous Swamp

This ecosite is part of a mosaic of swamp cover in the eastern portion of the study area, with hardwood-dominant swamp becoming more prominent in wetter areas to the east. The coniferous component begins to thin, and the canopy is dominated largely by a relatively immature mix of Red Maple or Swamp Maple (*Acer x freemanii*), Black Ash, and some Balsam Poplar (*Populus balsamifera*). There is still some coniferous component, but this is mostly limited to lower sub-canopy components of Cedar and Fir regeneration, along with prominent lower layers of young Elm. The groundcover mix is generally similar to SWM1, with Manna Grass and Sensitive Fern being the most common species. Surface pooling becomes increasingly common and widespread in this ecosite, although the depth is generally still limited to a shallow 'veneer' of <5 cm by mid spring.



### 3.3.9 SWD4: Poplar Mineral Deciduous Swamp

This small ecosite occurs west of an agricultural field, bordered to the west by a slope with successional upland Cedar forest (FOC1). This is a marginal, successional swamp dominated by a mix of Trembling Aspen and Balsam Poplar, with lesser components of Elm and White Ash. There is a thick layer of mixed-height Nannyberry (*Viburnum lentago*), and prominent lower coverage of Alder-leaved Buckthorn (*Rhamnus alnifolia*), Red-Osier Dogwood (*Cornus sericea*), and Ash regeneration. Common groundcover species include sedges (*Carex gracillima*), Canada Anemone (*Anemone canadensis*), Rough-leaved Goldenrod (*Solidago rugosa*), and Trout Lily.

This ecosite differs from other swamps in the study area in that surface pooling appears very short-lived and there is no evidence of surficial organic accumulation. Soils in this area likely straddle a line between moist and very moist, with all vegetation being facultative. Further investigations (i.e., soil review) may determine that portions of this ecosite do not technically support hydric soils; however, we have conservatively described this area as wetland. This may be a former portion of the adjacent field that was abandoned due to poor soil conditions.

## 3.4 Fish & Wildlife Habitat Conditions

The combined results of Aster Environmental's background review and on-site assessment indicate that the subject property and/or adjacent lands have the potential to support a range of fish and/or wildlife habitat functions.

### 3.4.1 Fish Habitat

As discussed under **Section 3.2.3**, there is a stream mapped as occurring along the eastern boundary of the study area. Based on our observations, this mapped stream either does not occur or too poorly defined to support a channel. An additional small ephemeral drainage pathway was documented and depicted on **Figure 2**. Neither feature appears to have any capacity to support fish habitat. In general, there is no fish habitat present within the study area.

### 3.4.2 Wildlife Habitat

Regarding wildlife habitat, the extent and diversity of natural land cover on the local landscape has inherent potential to support various habitat functions for local wildlife. The local landscape contains large patches of continuous natural cover, including a mosaic of woodlands, wetlands, and drainage corridors. These areas can be expected to support a diverse range of common and sensitive wildlife species.

#### 3.4.2.1 Mammals

No targeted survey efforts were undertaken with respect to general mammalian diversity; however, all incidental species observations were documented during our on-site investigation, which included White-tailed Deer (*Odocoileus virginianus*), Red Squirrel (*Tamiasciurus hudsonicus*), Eastern Coyote (*Canis latrans*), and Raccoon (*Procyon lotor lotor*). We expect there is potential for various other mammalian species to occur on the property or surrounding landscape, such as Black Bear (*Ursus americanus*), and a variety of smaller rodent species, etc. Additionally, the property has some potential to support one or more bat species. Potentially significant habitat functions related to mammals are discussed under **Section 4**.

#### 3.4.2.2 Birds

In addition to mammals, we expect that the subject property and adjacent lands has the potential to support various migratory and resident bird species. While no targeted point count surveys were undertaken with respect to birds, the on-site investigations included a general/passive inventory of



breeding birds. On-site investigations were undertaken in the early and core portion of the breeding bird season and overlapping the appropriate time of day for maximizing detection of bird species (*i.e.*, morning).

All observed species were documented while on site, which included Northern Cardinal (*Cardinal cardinalis*), American Goldfinch (*Spinus tristis*), Song Sparrow (*Melospiza melodia*), Nashville Warbler (*Leiothlypis ruficapilla*), Northern Flicker (*Colaptes auratus*), Common Yellowthroat (*Geothlypis trichas*), Canada Goose (*Branta canadensis*), Rose-breasted Grosbeak (*Pheucticus ludovicianus*), Great Crested Flycatcher (*Myiarchus crinitus*), American Robin (*Turdus migratorius*), Winter Wren (*Troglodytes hiemalis*), White-Breasted Nuthatch (*Sitta carolinensis*), Black-capped Chickadee (*Poecile atricapillus*), Blue Jay (*Cyanocitta cristata*), American Crow (*Corvus brachyrhynchos*), Red-Eyed Vireo (*Vireo olivaceus*), Black-Throated Green Warbler (*Setophaga virens*), Black-and-White Warbler (*Mniotilta varia*), Ovenbird (*Seiurus aurocapilla*), and Red-winged Blackbird (*Agelaius phoeniceus*). The species documented during this survey are all considered common locally. Where applicable, potential occurrences of bird species of conservation concern are assessed in **Section 4** based on a combination of habitat assessment and review of background databases.

#### 3.4.2.3 Herptiles

Targeted reptile and/or amphibian surveys were not considered necessary to inform this scoped review; however, our site visit was undertaken at a time of year that would allow for documentation of suitable habitat and incidental observation of species. Importantly, the study area contains some potential important habitat for herptiles, specifically the areas of wetland discussed in **Section 3.3** and depicted on **Figure 2**. The remainder of the property does not appear to provide structural cover that would otherwise be important in supporting life processes for most herptiles. Regardless, it is possible that various common species could occur on the local landscape during the course of regular seasonal movements.

#### 3.4.2.4 Species at Risk

We note that the subject property and/or surrounding landscape may represent habitat for one or more species protected under the ESA, as evidenced by existing records within the NHIC database, as well as indicative habitat features observed by Aster Environmental staff during the assessment. All relevant observations of wildlife species and/or habitat features, including individuals of species at risk, are discussed in **Section 4** of this report within the context of significant natural heritage features.

## 4) **SIGNIFICANT NATURAL HERITAGE FEATURE ASSESSMENT**

Based on review of the biophysical information collected during background information gathering, and analysis of the existing conditions of the subject property as described above, the following applicable Significant Natural Heritage Features (SNHFs) are present (or potentially present) within the study area.

- Wetlands
- Significant Woodlands
- Habitat of Endangered & Threatened Species
- Significant Wildlife Habitat

All potentially relevant SNHFs of the County's OP are listed in the section below, with rationale provided regarding the conclusion of presence/absence of each feature.



#### **4.1 Core Areas & Linkages**

It is our understanding that this category refers to features/areas identified as either a 'core area' or 'linkage' within Schedule C to the County's OP. Based on our review of Schedule C (see **Appendix 1**), the study area is not contained within either a core area or linkage. No further assessment undertaken.

#### **4.2 Wetlands (Including PSWs)**

Wetlands are commonplace across the local and regional landscape in which the study area is located. The eastern portion of the study area contains a portion of a large wetland ecosite/complex, represented primarily by mixed and deciduous swamp (see **Section 3.3**). A portion of this wetland feature has been evaluated under OWES as a PSW, part of the 'Mountain Creek' complex (see **Figure 1**). Other portions of wetland in the study area are considered 'unevaluated'. The limits of wetland ecosites were delineated during our on-site investigation, which differ in several locations from existing background mapping (**Figure 2**).

On-site wetlands appear to be influenced hydrologically by a combination of diffuse surface flows and groundwater emergence from surrounding slopes. Various significant functions can be attributed to on-site wetlands, both ecological and hydrological. For example, given the setting of the feature on the landscape, this wetland contributes headwater drainage into a tributary to the Styx River, a major watercourse in the Saugeen River watershed. The feature also supports a provincially endangered tree species, Black Ash, though observed specimens are in poor condition as discussed elsewhere in this report. The direct ecological functionality of on-site wetland features appears limited by the lack of standing water that may otherwise support more significant, wetland-specific habitat functions (e.g., habitat for turtles, anurans, marsh birds, etc.).

Additional discussion, including a review of potential impacts to wetlands resulting from implementation of the proposed plan, is provided in **Section 5.1**.

#### **4.3 Areas of Natural and Scientific Interest (Life Science)**

It is the responsibility of the Ministry of Natural Resources and Forestry (MNRF) to designate and administer mapping for areas of natural and scientific interest (ANSIs). Based on available background mapping, the nearest life science ANSI occurs over 2 km west of the subject property. No further assessment undertaken.

#### **4.4 Fish Habitat**

An assessment of potential fish habitat functions within the study area is provided under **Section 3.4.1**. To summarize, it is estimated no features with potential to support fish habitat are present within the study area. No further assessment undertaken.

#### **4.5 Significant Valleylands**

Significant valleylands represent valleys or other landform depressions with recognized significant attributes, such as supporting natural vegetation cover with associated ecological linkages and corridors. Valleylands are typically associated with a watercourse feature. Designation of significant valleylands is ultimately the responsibility of the relevant planning authority; however, site-specific designation of these feature can be undertaken using standardized criteria endorsed by the province and/or the planning authority.

Applicable OP documents or other resources do not appear to designate lands within the study area as significant valleylands. The study area supports areas of sloping topography; however, these are associated with landscape physiographic features (i.e., drumlins) and not a major watercourse



corridor. No features indicative of valleylands (significant or otherwise) were identified during on-site investigations. No further assessment undertaken.

#### **4.6 Significant Woodlands**

Significant woodland features represent areas of forested cover with recognized significant attributes, such as large contiguous blocks of woodland, woodlands with unique characteristics, and/or woodlands that support economic values, cultural values, or other ecosystem services. It is generally the responsibility of the applicable planning authority to designate significant woodland on a comprehensive basis; however, where appropriate, identification of candidate significant woodland can be undertaken on a site-specific basis using standardized criteria endorsed by the province and/or the planning authority.

Based on our background review, the local planning authority (i.e., County of Grey) has undertaken a comprehensive exercise to identify select significant natural heritage features within the local jurisdiction, including significant woodland. Specifically, Appendix B – Map 3 to the County OP provides an overlay for significant woodland that covers forested portions of the study area and large swaths of the surrounding landscape (see **Appendix 1**). The total area of continuous woodland overlapping the study area is >100 ha, which is further contiguous with other larger woodland patches across the landscape, separated only by local concession roads. In general, the extent of woodland in West Grey and broader Grey County is very high in comparison to other southern Ontario jurisdictions.

Additional discussion, including a review of potential impacts to woodland resulting from implementation of the proposed plan, is provided in **Section 5.2**.

#### **4.7 Habitat of Endangered and Threatened Species**

To assess the potential presence of individuals and/or habitat for endangered and threatened species within the study area, Aster Environmental staff conducted the following:

- Review the range maps for all species designated as endangered and threatened in Ontario, as per Schedules 2 and 3 of Ontario Regulation 230/08 [(Species at Risk in Ontario List (SARO List)], located here: <https://www.ontario.ca/laws/regulation/080230>. In our experience, the potential presence of most provincially endangered and/or threatened species can be ruled out based on their limited geographical ranges in the province and/or a lack of specific habitat conditions that are required to carry out key life processes.
- Reviewed the NHIC database for existing records of element occurrences for endangered or threatened species (17NK0703 and adjoining squares). Databases of iNaturalist, OBBA, and ORAA were also reviewed as of Jun 2025.
- On-site investigation undertaken in 2025, during which vegetation conditions were characterized for habitat-based assessment.

Information from the above assessment process was used to inform a site-specific screening, as contained in **Appendix 4**. The screening is based on a list of species that are known to occur within the upper-tier municipal jurisdiction (i.e., Grey County). Through this screening, the species discussed below were identified as having the potential to be present within the study area. Where relevant, potential impacts to these species are discussed further in **Section 5.3**.

##### **4.7.1 Black Ash (*Fraxinus nigra*; Endangered)**

Black Ash is most frequently found in wetlands but can also be located in upland settings on sheltered valley slopes or in otherwise moist, cool locations where a local seed source is present. Populations





of Black Ash in most of southern Ontario have been largely eliminated in recent years by infestation of Emerald Ash Borer, though populations do continue to persist on the local landscape.

Black Ash was added to the SARO List as of January 27, 2022. The province enacted two regulations in January of 2024 to clarify how Section 9 (species protections) and Section 10 (habitat protections) apply specifically to Black Ash. These regulations (O. Reg. 6/24 & O. Reg 7/24) could be interpreted as species-specific exemptions to how the Act applies to most other species. The new regulations are summarized as follows:

#### O. Reg. 6/24

- The “species protection” prohibitions in subsection 9 (1) (a) of the ESA only apply to trees meeting all of the following:
  - **healthy** Black Ash trees (i.e., the prohibitions would not apply to persons impacting trees assessed as unhealthy)
  - with a stem diameter at breast height of **at least 8 centimetres**
  - **located on lands within the boundaries of the municipalities listed in the regulation**

#### O. Reg 7/24

- the “habitat protection” prohibitions in subsection 10 (1) of the ESA apply to a **radial distance of 30 metres** around Black Ash trees protected under clause 9 (1) (a) of the ESA

Based on our on-site investigation, multiple Black Ash trees were documented in the study area, representing prominent components of SWM1 and SWD3 ecosites. Most of the observed trees were in varying states of decline, and any apparently healthy individuals were generally limited to smaller saplings. No comprehensive inventory of individual Black Ash trees was undertaken, noting that all observed individuals are contained within the above-noted wetland ecosites (see **Figure 2**). Some of these trees would be expected to receive protection under the ESA per the above-cited regulations.

An assessment of potential impacts to this protected species resulting from implementation of the development plan is provided in **Section 5.3**.

#### **4.7.2 Endangered Bat Species (*Myotis lucifugus*, *M. septentrionalis*, *Lasiurus borealis*, *L. cinereus*, *Lasionycteris noctivagans*)**

These species, assessed as a species guild (related species with similar habitat characteristics), include several bat species listed as endangered in Ontario. Bats are highly mobile; however, individuals and groups of the noted bat species are also recognized as having some degree of fidelity to suitable local sites for daily and seasonal ‘roosting’ activities. While some species (i.e., *Myotis lucifugus*) exhibit a preference for roosting in anthropogenic structures, natural roosting sites are also important. Natural roosting sites are generally associated with mature forests containing a sufficient density of large trees in various stages of decay, otherwise known as ‘snags’. Snags can provide features such as cavities and/or loose bark, on which bats rely for shelter and thermoregulation throughout the active season.

Most of the study area supports established tree cover as described in **Section 3.3**. Tree cover within the study area occurs in various stages of maturity, with limited large canopy trees present. Much of the study area is represented by second-growth tree cover that is relatively young to mid-aged. With respect potential bat habitat, we focused our review specifically on the area where development is proposed, i.e., the proposed new parcel and areas where future development may occur on this parcel.



Notably, upland portions of the proposed new parcel have been subject to recent timber harvest, which appears to have extracted the largest trees, leaving a mix of mostly younger, predominantly healthy trees. We surveyed ecosites FOD5 and FOM7 and documented any trees exhibiting characteristics that could support bat roosting habitat (e.g., holes, cracks, loose bark), which are displayed on **Figure 2** as 'Potential Wildlife Habitat Trees'. Observed potential snags were mostly marginal in quality, with no 'high-quality' snag trees observed, such as those with an abundance of holes and clear internal cavities.

To summarize, on the basis of our site-specific review, it is unknown if the study area is supporting significant habitat for endangered bat species; however, our site observations suggest this is unlikely. Regardless, it is likely that some bat habitat does occur, and it is always the case that *individuals* of endangered bat species (or other bat species) can be present within a forested area during the active season. Further discussion, including an assessment of potential impacts to individuals and habitat of endangered bat species resulting from implementation of the proposed development plan, is provided in **Section 5.3**.

#### **4.8 Significant Wildlife Habitat**

Significant wildlife habitat (SWH) represents a range of habitat features that are recognized as providing specialized or otherwise important functions for various forms of wildlife. Designation of confirmed SWH is ultimately the responsibility of the relevant planning authority, and it is our understanding that no specific SWH designations have been applied to the study area. Notwithstanding, candidate SWH can be identified on a site-specific basis, often triggered through a proposed change in land use or a large-scale development application.

To ensure due diligence in this regard, Aster Environmental has reviewed applicable technical guidance for the identification of specific SWH features and functions as contained in the SWH Criteria Schedules for Ecoregion 6E (MNRF 2015). A preliminary screening and assessment of the criteria schedules is contained within **Appendix 5**. As detailed in this assessment, the results of Aster's field program and background review indicate that the following SWH features/functions have the potential to occur within the subject property and/or adjacent lands. An impact assessment is provided for potential SWH features in **Section 5.4**.

##### **4.8.1 Bat Maternity Colonies**

This function may occur in association with forests across the local and regional landscape, including on and adjacent to the property. Refer to **Section 4.7.2** for discussion regarding the potential for bat maternity habitat to be present on the subject property. While the discussion in **Section 4.7.2** is provided specifically for endangered bat species, the assessment and conclusions are comparable to species that are not protected under the ESA.

##### **4.8.2 Seeps & Springs**

Multiple likely seepage zones were observed within the study area. These occur along the toe of the east/southeast-facing slope associated with the interface of ecosites FOM7/FOD5 and SWM1. Observed seepage is described as 'diffuse', lacking any discrete 'upwellings', 'springs', or other sign of strong groundwater emergence. Instead, these features present as areas of damp/wet soils along the base of the slope that intergrade with the adjacent wetland boundary.

##### **4.8.3 Amphibian Breeding Habitat & Movement Corridors**

Portions of the broad wetland area overlapping the study area are reasonably expected to support amphibian breeding habitat, likely limited to anurans. The significance of this habitat is unknown but



may be limited by an apparent lack of large standing water areas. The local landscape would also be expected to support movement corridors for anurans between areas of suitable habitat.

#### 4.8.4 Special Concern & Rare Wildlife Species

AES conducted a review of the list of species designated as special concern or identified as rare (S1-S3) in Ontario, as per Schedule 4 of Ontario Regulation 230/08, located here: <https://www.ontario.ca/laws/regulation/080230>. We further reviewed several biodiversity databases for existing records of element occurrences for special concern or rare species, including: NHIC, iNaturalist, OBBA, and ORAA. The primary basis for this review is the NHIC database, and we include discussion on all observations of relevant species within the overlapping 1km<sup>2</sup> data square, as well as records from all adjoining squares (*i.e.*, within 1-2 km radius of the site). The species listed under **Table 1** have been recorded locally or otherwise have the potential to occur based on observed habitat conditions.

**Table 1. Special Concern & Rare Species with potential to occur in the study area.**

Species	Status	Discussion
Snapping Turtle ( <i>Chelydra serpentina</i> )	Special Concern	There are NHIC and iNaturalist records for Snapping Turtle and Midland Painted Turtle on the local landscape. Both species rely on open water wetlands and exposed mineral substrates to carry out key life process such as basking, nesting, and overwintering. In general, we expect that there is potential for either species to be present in association with on-site wetlands. However, portions of this wetland within the study area do not offer ideal conditions for supporting key life processes, at it lacks areas of standing water or exposed basking areas.
Midland Painted Turtle ( <i>Chrysemys picta marginata</i> )	Special Concern [SARA, but not ESA]	
Eastern Wood-Pewee ( <i>Contopus virens</i> )	Special Concern	There are NHIC records for Wood Thrush on the local landscape, and we generally expect there is high potential for Eastern Wood-Pewee to occur. Both species are common woodland birds that are ubiquitous in many areas of woodland cover on the local landscape. Though classified as Special Concern in Ontario, this is mostly relevant in the less forested areas of the southern Ontario landscape. Notably, neither species was documented calling during our on-site investigations; however, woodland on the subject property and surrounding landscape could be expected to provide the habitat conditions preferred by either species.
Wood Thrush ( <i>Hylocichla mustellina</i> )	Special Concern	

In general, there is potential for one or more special concern and/or rare plant and wildlife species to occur in association with the study area. Additional discussion, including a review of potential impacts to habitat functions for one or more these species resulting from implementation of the proposed plan, is provided in **Section 5.4**.

## 5) IMPACT ASSESSMENT & RECOMMENDATIONS

It is our understanding that this EIS has been requested by the Township and/or County to accompany an application to sever the subject property, with the intent of creating one (1) new residential building lot and one (1) retained lot. The new lot would be located in the northern portion of the existing parcel and would be accessed via driveway from Concession 12 NDR. The retained lot would contain the existing dwelling, amenities, and agricultural areas, and would continue to be accessed via Baseline Rd. The general location of the proposed parcel in relation to natural features



is displayed on **Figure 3**. We note that report figures should not be considered survey grade (*i.e.*, for reference purpose only). Actual parcel configurations (existing and proposed) require confirmation by an Ontario Land Surveyor.

Importantly, the proposal involves no application for a change in land use and does not involve any specific application for development of the created lot at this time. The lot may theoretically be retained by the proponent for future construction of a residence OR sold at market for the same purpose. Therefore, there is no specific timeline or design for prospective future construction of a dwelling on the proposed lot. This means that recommendations provided herein may be general in nature and may need to be applied through site-specific conditions of approval.

Aster Environmental's impact assessment below is intended to inform a review of the proposal by the appropriate approval authority. Our assessment is based on a review of existing conditions at the time of site investigation, as illustrated on **Figure 2** and in the photo record contained in **Appendix 2**. As discussed in **Section 4**, one or more Significant Natural Heritage Features are confirmed or have the potential to occur within the study area. The primary purpose of this report is to assess impacts and support impact mitigation for all features that receive protections under applicable environmental planning policies and regulations. The potential for negative impacts on all identified features is discussed in the sections below, and several recommendations are listed to support a scenario of no net negative impacts.

In assessing and identifying potential negative impacts through any development or related process, it is important to highlight how the PPS defines negative impacts, *i.e.*:

*"...degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities"*

Importantly, as stated in Section 13.2 of the Natural Heritage Reference Manual (for Natural Heritage Policies of the PPS):

*The PPS definition for "negative impacts" does not state that all impacts are negative, nor does it preclude the use of mitigation to prevent, modify or alleviate the impacts to the significant natural heritage feature or area"*.

Our impact assessment is intended to be reflective of the above guidance, with consideration for the integrity and function of each feature, and in acknowledgement that not all development and site alteration represents a negative impact.

## **5.1 Wetlands**

Wetland features were confirmed to occur within the study area, representing a complex of ecosites within one continuous area of wetland. All wetlands within the study area appear to be influenced by a combination of diffuse groundwater and surface inputs. Evidence of seepage into the wetland is apparent along the toe of slope where wetland ecosites SWM1 and SWD3 begin. A single consolidated surface flow path is also apparent through upland portions of the property, contributing some minor consolidated inputs to these wetlands.

In general, development and/or site alteration activities that occur proximate to streams and wetlands have the potential to cause negative impacts via the following pathways:

- Alterations of surface water and/or groundwater contributions that may result from:
  - Construction staging requirements (*e.g.*, dewatering, etc.);



- Increased post-construction coverage of impervious surfaces (e.g., roads, roofs, etc.); and,
- Permanent modifications to existing topography or drainage alignments;
- Increased sediment and/or nutrient loadings to features via runoff exiting the development area from construction to post-completion of the project. This may adversely affect water quality via increased turbidity, nutrient enrichment, contamination by toxic substances, changes in pH, etc.;
- Long-term disruption, degradation, and/or loss of habitat for fish and/or wetland-dependent wildlife, as well as impacts to same during the construction process; and,
- Increased human activity/encroachment within streams/wetlands post construction, which may result in increased soil compaction, channel alterations, dumping, vandalism, or other disturbances.

A key impact mitigation measure for wetlands is provision of a physical/spatial setback from development and disturbance. Such a setback should generally be vegetated so as to intercept, slow down, and infiltrate surface runoff from the local landscape. This is especially important where development would introduce impervious surfaces upgradient from these features.

In this scenario, the proposed new parcel would overlap with portions of one wetland ecosite, SWM1. Notably, this overlap occurs in an area regarded as 'unevaluated wetland' and not designated PSW areas, which occur further east. We provide the baseline recommendation that any future development on the created lot should maintain a minimum setback of 30 m from the wetland limit (see **Figure 3**). This 30 m setback should remain fully vegetated and not become part of any future cleared amenity space. Additionally, we recommend that future development maintain the general alignment of the identified ephemeral flow path (see **Figure 3**), with a 5 m buffer where feasible. While this feature does not represent a stream and supports no definable natural heritage function, it does contribute to the hydrology of the wetland area. Therefore, continued seasonal flow should be maintained where feasible. It is expected that the recommended buffer distance is functional and sufficient to avoid direct negative anthropogenic influences on wetland ecology.

As discussed, wetland hydrology is both influenced by a combination of localized surficial drainage and groundwater contributions. Installation of impervious surfaces has the potential to increase surficial flows and decrease infiltration. However, groundwater inputs to the wetland are a result of broad-spanning groundwater tables and not directly reliant on localized infiltration. In general, the proposal scale of development is minor and would not be expected to significantly impact the water balance to these features.

Any minor disruption of stabilized surface soils for development purposes has the potential to expose mineral soils and increase erosion. Therefore, construction activities may have the potential to result in migration of sediment toward the wetland. Additionally, the use of machinery on site has the potential to introduce pollutants/contaminants and seed sources of non-native species, both of which have the potential to degrade the quality and function of these features. These potential issues should be mitigated through construction best management practises, as discussed below.

Provided that the proposed development adheres to recommended minimum buffers and construction mitigation measures, there is no expectation that the proposal will result in a negative impact to the wetland feature. The following general measures are recommended to avoid future negative impacts through the various pathways identified above.





- Development should maintain a minimum of 30 m distance from the delineated limits of wetland ecosites (Figure 3). This buffer should be maintained in its existing natural condition.
- Maintain a 5 m distance, where feasible, from the delineated Ephemeral Drainage Flow Path (Figure 3), in order to maintain existing hydrologic contributions to on-site wetlands.
- Any future construction on the created parcel should be supported by a construction mitigation plan. At a minimum, this should include:
  - Installation of heavy-duty silt fence barriers immediately downgradient of any proposed clearing/grading areas per provincial standard.
  - Ensuring that all machinery arrives to site washed and in good working order, inspected for fuel or fluid leaks prior to entering the site.
  - Ensuring that all machinery arrives free of invasive plant materials per the Ontario Invasive Plant Council Clean Equipment Protocol for Industry: [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/07/Clean-Equipment-Protocol\\_June2016\\_D3\\_WEB-1.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/07/Clean-Equipment-Protocol_June2016_D3_WEB-1.pdf)
  - Machinery must be refueled, washed, and serviced within a pre-designated area isolated by sediment fencing.
  - Locate all fuel and other potentially deleterious substances within the area isolated by sediment fencing.
  - Offloading of construction and aggregate/fill materials (where required) should be completed during fair weather conditions.
  - Temporary storage locations of aggregate/fill material (where required) should be located within the area isolated by sediment fencing. All stockpiled topsoil/overburden (where required) should be maintained in low piles and stabilized as quickly as possible (e.g., erosion-prone areas covered with textile) to minimize the potential for runoff.
  - Construction contractor must maintain all machinery in proper working order, with daily monitoring to occur, including daily start-up checks for fuel leaks. Re-fueling and maintenance works should occur within the designated machinery and material storage area.

## 5.2 Significant Woodland

Woodland areas encompassing the study area are representative of significant woodland, as indicated by an existing overlay in Appendix B to the County OP. Examples of direct impacts to woodlands from development or related activities can include removal of individual trees, fragmentation of canopy coverage, and direct loss of woodland-dependent wildlife habitat. Indirect impacts may include new anthropogenic influences (e.g., trails, garbage dumping), introduction of invasive species, requirements for removal of hazard trees, etc.

Future development of a dwelling and amenities on the created lot would inherently require some extent of tree removal. The exact extent of tree removals is unknown as there is no specific plan for development at this time; however, we can estimate the general location where development would be expected to occur, and provide a conservative estimate of the potential extent of tree removals.

**Figure 3** provides an overlay of 'Conceptual Options for Future Development Envelope', provided to highlight two areas that are outside of key constraints identified during on-site investigations. The



recommended envelopes each represent an area of approximately 0.25 ha, in an area that is outside of wetland buffers and within an area that has been subject to recent disturbance from timber harvest. The location is adjacent to the existing access roadway, avoiding any creation of a new forest edge. This inherently avoids any area that would constitute 'interior' woodland, meaning that the proposal will not result in the loss of any interior woodland. The on-site forest cover is a common and generic vegetation type, meaning that the proposal will not result in the loss of any rare ecosites. Similarly, the recommended envelopes would avoid removal of sensitive woodland features, such as identified cavity trees, rare plants, or the delineated ephemeral drainage flow path (see **Figure 3**).

Based on the above considerations, we provide the opinion that the proposed development can avoid negative impacts to the function of woodlands within the study area. While the proposal will require some extent of tree removals, this is regarded as minor and capable of avoiding sensitive woodland features and functions. The following general measures are recommended specifically with respect to woodland mitigation. Additional measures are recommended under the sections below pertaining to wildlife habitat impact mitigation, including functions associated with woodlands.

- **To maximize tree retention, tree removal limits should be flagged or otherwise marked in the field prior to start of construction. Trees should be removed in advance of construction implementation, and all trees being retained (adjacent to working areas) should be clearly marked (e.g., with fluorescent flagging tape).**
- **Any post-construction landscaping should utilize native, site-appropriate species only, avoiding any species known to be invasive in Ontario.**

### **5.3 Habitat of Endangered & Threatened Species**

As per Section 10 of the ESA, areas of identified habitat for any endangered or threatened species are protected from destruction, unless otherwise authorized. Additionally, Section 9 of the ESA protects individuals of endangered or threatened species, prohibiting individuals from being killed, harmed, or harassed without appropriate authorizations. In many cases, mitigation planning is sufficient to promote consistency with the above provisions. The following section(s) provide an assessment of potential impacts to any endangered or threatened species considered relevant to the development application, as determined through our screening exercise (**Appendix 4**) and subsequent assessment in **Section 4.7**.

#### **5.3.1 Black Ash**

Regulations under the ESA prescribe protections for individual Black Ash trees meeting certain physical specifications (i.e., minimum size, minimum health condition), as well as a 30 m buffer surrounding those trees. All Black Ash trees documented within the study area are located within the on-site wetland ecosites, for which we have recommended a minimum future development setback of 30 m (see **Figure 3**). Provided that future development maintain tree clearing and site alteration outside of this buffer, there is no expectation that the activity will result in a negative impact to Black Ash trees, and no additional measures are expected to be required.

#### **5.3.2 Endangered Bats**

Forested ecosites within the subject property may be expected to support some level of seasonal bat activity, which may include endangered bat species. It is noted that this is a generic conclusion that would be drawn for any area containing tree cover and is not the result of any specific features or attributes identified within the subject property.

Based on a qualitative review and scoped inventory of potential 'snag' trees, we observed several trees with low to moderate potential to support roosting bats (see **Figure 3**). The density of such trees is considered low, reiterating that most large trees within upland ecosites have been removed as part



of managed timber harvest. The 'Conceptual Options for Future Development Envelope' depicted on **Figure 3** has regard for the location of observed snags.

In recent years, MECP staff have distributed a summary guidance memo (Species at Risk Bats Survey Note 2022) pertaining to 'bat survey standards'. This memo provides clear notes on when targeted survey efforts may be warranted, implying discretion on the part of the proponent, as follows:

*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 / May 1 to August 31 in Northern Ontario), then there is no need to conduct species at risk bat surveys of treed habitats. The damage and destruction assessment may vary geographically as the availability of other nearby maternity and day roost trees differs across the province of Ontario.*

Per the guidance above, factors such as scale of development and forested landscape context are critical in determining whether further action regarding endangered bat habitat is necessary. In this scenario, the scale of potential snag removal is negligible, as the density of snags is considered low and the recommended development envelopes can avoid most or all snags that were observed. While proposed activities will require removal of a portion of the existing tree canopy, potentially including one or more snags, this would be considered proportionally negligible on a landscape basis. The local landscape contains extensive forest cover, meaning that roosting habitat is locally abundant and unlikely to represent a limiting factor to local bat populations.

In general, it is expected that proposed development can avoid a negative impact to local bat populations (endangered species and otherwise). The following mitigation measures are recommended with respect to avoiding impacts to individual bats that may occur on site during the active season:

- **Tree clearing for the purposes of future development should only occur in the fall, winter, and early spring (from October 1 to April 15). This timeframe is outside of the typical maternal roosting period.**
- **If tree clearing must occur between April 15 and October 1, additional studies may need to be completed to confirm the presence or absence of SAR bats. These studies may include assessments of trees on an individual basis to determine if bats may be present. Should bat habitat features be detected in trees that are proposed to be removed during the active season, it may be necessary to contact MECP to determine if a permit would be required to proceed.**

## **5.4 Significant Wildlife Habitat**

**Section 4.8** describes one or more significant wildlife habitat functions that have the potential to occur within the study area based on a review of applicable criteria and background information sources. A discussion of potential impacts to each of these functions is provided in the following sections, while **Section 5.4.5** provides a list recommended wildlife impact mitigation measures that are applicable to the proposed development.

### **5.4.1 Bat Maternity Colonies**

As discussed with respect to endangered bat species, the form and function of on-site tree cover is unlikely to support significant roosting habitat for bats; however, there is some potential for occurrences of individual bats during the active season. Provided that mitigation measures outlined in



this report with respect to endangered bats are followed, there is no expectation that the development would result in a negative impact to local bat populations.

#### **5.4.2 Seeps & Springs**

On-site wetland ecosites appears to be hydrologically influenced to some extent by diffuse groundwater emergence. Seepage zones are influenced by complex hydrogeological processes, including groundwater inputs from across the broader landscape in which the study area is located. The future development of a small residential footprint would not be expected to influence or impact the processes that support local groundwater dynamics.

#### **5.4.3 Amphibian Breeding Habitat (Woodland)**

Wetland ecosites within the study area may support breeding habitat for woodland anurans. If amphibian breeding habitat does occur in association with on-site wetlands, we do not expect that the proposal will result in any negative impacts to local hydrology that supports stability of the wetlands. A recommended minimum wetland buffer will ensure that any future development is located a substantial distance from the wetland boundary. Various additional measures have been recommended in **Section 5.1** to avoid potential indirect impacts related to construction practises. Provided that these measures are implemented, any breeding activity within the wetland would be expected to continue, while ample upland forest would be retained on the property to continue to support anurans outside of the breeding season.

#### **5.4.4 Habitat for Special Concern and Rare Wildlife Species**

Based on review of background natural heritage databases, the following special concern/rare species were identified as potentially occurring in the local area: Snapping Turtle, Midland Painted Turtle, Eastern Wood-Pewee, and Wood Thrush.

There is low potential for any turtles to be present within the study area; however, if any do occur, it would be in association with wetland ecosites. As discussed, recommendations are provided in this report to ensure that any future development avoids impacts to wetland functions.

The noted bird species are relatively common in areas of suitable habitat on the local landscape. While Wood-Pewee and Wood Thrush could be expected to occur within the upland forest areas where development is proposed, neither was documented during on-site investigations. Some of the on-site tree canopy would be removed to accommodate future development; however, the vast majority would be expected to be retained, thereby retaining areas on site for continued breeding by these species, if they occur. Perhaps more important is the consideration of landscape forest cover context. The local and regional landscape supports abundant opportunities for each of these species. The proposed development does not risk impacting the local availability of breeding territories and suitable nesting habitat.

#### **5.4.5 General Wildlife Mitigation**

In addition to the other wildlife habitat features discussed above, there may be other functions supported on the property that are not significant but do otherwise warrant consideration to demonstrate compliance with protective regulations. For example, most breeding migratory birds receive protection under the federal *Migratory Birds Convention Act*, and many wildlife species receive general protections under the provincial *Fish & Wildlife Conservation Act*.

Several standard mitigation recommendations are provided below to ensure that any future development adhere to provincial/federal requirements for wildlife protection and to provide an overview of best management practices pertaining to construction isolation and vegetation removals.



- **Avoid any removal of vegetation, including residential/ornamental plantings, between April – August of any given year. If vegetation removals must occur during this period, a nest survey should be conducted by a qualified avian biologist prior to commencement of construction activities to identify and locate active nests of migratory bird species covered by the MBCA or FWCA. If a nest is located or evidence of breeding noted, then a mitigation plan should be developed to address any potential impacts on migratory birds or their active nests. Mitigation may require establishing appropriate buffers around active nests or delaying construction activities until the conclusion of the nesting season. Note: the recommended tree removal timing window for nesting migratory birds should be compared with the recommended timing window pertaining to bats, which extends for a longer period (see Section 5.3).**
- **Wildlife should be excluded from the entering the future construction work site wherever feasible. Where individual animals (birds, mammals, herptiles) are identified within the work site, these should be gently encouraged to move from the site. In the case of non-Species at Risk wildlife, individuals may be contained and re-located to an area beyond the isolated construction envelope.**
- **All new structures on the property should utilize wildlife-friendly design practices, including:**
  - **Post-construction landscaping utilize native, site-appropriate species only.**
  - **Exterior lighting should be designed with motion-sensors and downward-facing directional lighting to avoid negative impacts to nocturnal wildlife.**
  - **Design of structures should consider installation of wildlife-window collision deterrents.**
  - **Waste disposal and storage areas on the created lot should be designed and located to discourage wildlife scavenging and avoid human/wildlife conflict.**

## **6) COMPLIANCE WITH ENVIRONMENTAL LEGISLATION AND POLICIES**

The following sections outline the federal, provincial, and municipal environmental legislation, including plans, regulations, and/or bylaws that are understood to be applicable to the proposal. Aster Environmental provides a list of policies and provisions and summarizes how the proposal can demonstrate conformity and consistency. Where potential conformity issues exist, we cite recommended mitigation strategies that are intended to guide the proposal toward meeting the intent of relevant requirements. Our interpretations regarding planning policy conformity are provided for consideration and verification by the applicable approval authority.

### **6.1 Federal Fisheries Act, R.S.C. 1985**

The Federal Fisheries Act states that:

34.4 (1) No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish.

35. (1) No person shall carry on any work, undertaking or activity that results in harmful alteration, disruption or destruction of fish habitat.

DFO further states that “under subsection 35(1) a person may carry on such works, undertakings or activities without contravening this prohibition, provided that they are carried on under the authority of one of the exceptions listed in subsection 35(2), and in accordance with the requirements of the





appropriate exception. In most cases, this exception would be Ministerial authorizations granted to proponents in accordance with the *Authorizations Concerning Fish and Fish Habitat Protection Regulations*.”

Provided that recommended mitigation measures are adhered to, it is our understanding that the proposal will not result in the death of fish or the harmful alteration, disruption, or destruction of fish habitat.

## **6.2 Federal Migratory Birds Convention Act (1994)**

Part 1, Section 5 of the Migratory Birds Regulations under the *Migratory Birds Convention Act, 1994* (MBCA) prohibits the disturbance or destruction of nests, eggs, or nest shelters of a migratory bird. The provincial *Fish and Wildlife Conservation Act, 1997* (FWCA) extends the protection of bird nests and eggs to species that are not listed under the Migratory Birds Regulations (e.g., Corvids).

For most migratory bird species, nest protections under the MBCA apply for the duration of time that a nest is occupied; however, protections extend beyond the period of occupation for several species that may be common locally, including Pileated Woodpecker, Green Heron, and Great Blue Heron, amongst others (see Schedule 1 under the Act for full list). For the species listed under Schedule 1, specific conditions must be met in order to damage/remove a nest, including providing notice to the minister in charge, and demonstrating that the nest has not been occupied by an applicable species for a time period specified under Schedule 1.

Based on our assessment, there does not appear to be any potential conflict between the proposed development and suitable nesting habitat of any species listed under Schedule 1 to the MBCA. Where vegetation removals within the study area are determined to be required, restricting clearing of vegetation to times outside of the period of April 1 to August 31 inclusive, will avoid destruction of other species’ nests and prevent contravention of Section 5 of the regulations. If vegetation removal must occur during this period, a nest survey should be conducted by a qualified avian biologist prior to commencement of construction activities to identify and locate active nests of migratory bird species covered by the MBCA or FWCA. If a nest is located or evidence of breeding noted, then a mitigation plan should be developed to address any potential impacts on migratory birds or their active nests. Mitigation may require establishing appropriate buffers around active nests or delaying activities until the conclusion of the nesting season.

## **6.3 Provincial Endangered Species Act, S.O. 2007, c. 6**

The ESA protects designated endangered and threatened species in Ontario from being killed, harmed, or harassed (s. 9) or having their habitat damaged or destroyed (s. 10). **Section 4.7** identified one or more species or its habitat having the potential to occur within or adjacent to the study area. **Section 5.3** provided a subsequent discussion of potential impacts to such species and/or associated habitat features, should those species be present within or adjacent to the study area.

Based on this assessment, and assuming full implementation of mitigation measures (if/where recommended), it is our understanding that no endangered or threatened species or their habitat are expected to be negatively impacted by implementation of the proposed development. On this basis, there is no expectation that the proposed development will result in a contravention of the ESA. It is noted that this assessment does not represent ‘clearance’ with respect to ESA compliance. It remains a proponent’s continued and sole responsibility to ensure that a project does not result in a contravention of the ESA.



## **6.4 Provincial Planning Statement, pursuant to the *Planning Act*, 2024**

The Provincial Planning Statement (PPS) is promulgated under the *Planning Act* and provides direction to municipalities on matters of provincial interest related to land-use planning. The PPS was most recently updated in October 2024. Municipal OP's must be consistent with the PPS. Key natural heritage-related provisions of the PPS, as assessed in this report, are listed below:

**4.1.4** Development and site alteration shall not be permitted in:

- a) significant wetlands in Ecoregions 5E, 6E, and 7E1; and
- b) significant coastal wetlands.

**4.1.5** Development and site alteration shall not be permitted in:

- a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E<sup>1</sup>;
- 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<sup>1</sup> that are not subject to policy 2.1.4(b)

unless it has been demonstrated that there will be *no negative impacts on the natural features or their ecological functions*.

**4.1.6** Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

**4.1.7** Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

**4.1.8** Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

Based on the results of the impact assessment contained herein, and contingent on the implementation of the recommendations outlined in **Section 5**, it is our understanding that the development can be accomplished in a manner that is consistent with Sections 4.1.4 to 4.1.8 of the PPS.

## **6.5 Saugeen Valley Conservation Authority Regulation 41/24, pursuant to the *Conservation Authorities Act*, R.S.O. 1990**

SVCA's regulatory jurisdiction extends to areas within and adjacent to valley and stream corridors, shorelines, hazard lands (*i.e.*, floodplains, valley slopes), watercourses, and wetlands as provided for under O. Reg. 41/24 of the *Conservation Authorities Act*, 1990. SVCA's current mapped regulated area does overlap with a portion of the study area, associated with areas mapped as wetland. Based on our assessment herein, the proposal can be accomplished without resulting in adverse impacts to regulated natural heritage features (*i.e.*, wetlands). As future development activities can be located >30 m from the wetland (the regulated setback distance from wetland), a permit from SVCA may not be required. The details contained in this report are intended to facilitate review by SVCA staff, if/as required.



## 6.6 County of Grey Official Plan (2024 Consolidation)

It is our understanding that planning decisions within this portion of the municipality are administered by the County of Grey through the County's Official Plan (2024 consolidation; OP). According to Schedule A of the County OP, the subject property supports multiple land use designations, including 'Rural', 'Hazard Lands', and 'Provincially Significant Wetlands and Significant Coastal Lands'. Per Schedule B to the County OP, the property contains no areas identified as natural heritage 'Core Area' or 'Linkage'. Appendix B to the OP identifies area of 'Significant Woodlands' as occurring across various portions of the property.

The following applicable policies from the OP are highlighted (italicized) below, with general interpretation provided accordingly.

### 7.2 Hazard Lands

*Hazard Lands include floodplains, steep or erosion prone slopes, organic or unstable soils, poorly drained areas, and lands along the Georgian Bay shoreline. These lands can be impacted by flooding, erosion, and/or dynamic beach hazards or have poor drainage, or any other physical condition that is severe enough to pose a risk for the occupant, property damage, or social disruption if developed. While these lands are intended to be regulated so as to avoid natural hazards, they also contribute to the natural environment within the County.*

*New development shall generally be directed away from Hazard lands. The policies of this section of the Plan work together with MNRF Natural Hazards Technical Guidelines, as well as conservation authority regulations, and policies.*

**Interpretation:** It is our understanding that development is generally not permitted within the Hazard Lands designation. Based on a site-specific review, it appears that the proposed new parcel would overlap with areas that may constitute hazard lands; however, there is ample opportunity for development on the created lot to remain outside of the hazard limits.

### 7.3 Wetlands

*The County generally encourages development be setback from Wetlands by at least 30 metres. In some cases this 30 metres distance can be reduced based on site specific circumstances, or through the completion of an EIS...*

*No development or site alteration may occur within the adjacent lands of the Provincially Significant Wetlands and Significant Coastal Wetlands land use type unless it has been demonstrated through an environmental impact study, as per Section 7.11 of this Plan, that there will be no negative impacts on the natural features or their ecological functions.*

**Interpretation:** This EIS has been prepared to address the requirements of policies pertaining to development within lands adjacent to wetlands and significant wetlands. While the proposed created parcel would remain outside of the designated limits of any PSW, the new parcel would overlap with the limits of other, unevaluated wetlands. As noted above with respect to hazards, there is ample opportunity for development on the created lot to remain outside of any identified wetland area. It is recommended in this report that future development on the created lot remain a minimum of 30 m from delineated limits of wetlands. In general, and provided that development adhere to all mitigation measures outlined in this report, there is no expectation that the proposal will result in a negative impact to wetlands, including PSW.



## 7.4 Significant Woodlands

*1) No development or site alteration may occur within Significant Woodlands or their adjacent lands unless it has been demonstrated through an environmental impact study, as per Section 7.11 of this Plan, that there will be no negative impacts on the natural features or their ecological functions. Adjacent lands are defined in Section 7 and 9.18 of this Plan.*

**Interpretation:** This EIS has been prepared to address the requirements of policies pertaining to development within significant woodlands. While the proposed development would occur within an identified significant woodland, it is expected that future development on the proposed parcel can be accomplished in a manner that is minor and non-impactful. Development would occur along a prominent existing woodland edge and in an area recently disturbed by timber harvest. The recommended future development area does not overlap with any interior woodland, rare vegetation communities, rare woodland plants, or sensitive woodland wildlife functions. In general, and provided that development adhere to all mitigation measures outlined in this report, there is no expectation that the proposal will result in a negative impact to the function of the local significant woodland complex.

## 7.10 Other Natural Features

*The policies in this Section address specific significant natural areas within the County for which mapping is generally not available or is incomplete at present, including Habitat of Threatened and Endangered Species, and Significant Wildlife Habitat.*

*1) Development and site alteration is not permitted within, Significant Wildlife Habitat (including Deer Wintering Yards), and their adjacent lands, unless it has been demonstrated through an acceptable environmental impact study, completed in accordance with Section 7.11 of this Plan, that there will be no negative impacts on the natural features or their ecological functions.*

*2) No development or site alteration will be permitted within the Habitat of Threatened / Endangered Species adjacent lands except in accordance with provincial and federal requirements. No development or site alteration will be permitted within the adjacent lands to these areas unless it has been demonstrated through an environmental impact study that there will be no negative impacts on the natural features or their ecological functions. The adjacent lands are defined in Section 9.18 of this Plan and through provincial and federal requirements.*

**Interpretation:** This EIS has been prepared to address the requirements of policies pertaining to development within or adjacent to significant wildlife habitat and/or habitat for endangered and threatened species. In general, and provided that development adhere to all mitigation measures outlined in this report, there is no expectation that the proposal will result in a negative impact to these features, should they occur on the local landscape. It is our opinion that no further action is required with respect to provincial/federal regulation pertaining to species at risk.

## 6.7 Township of West Grey Zoning Bylaw (2017 Consolidation)

According to the Township of West Grey Zoning Bylaw, the subject property is zoned a combination of 'Rural', 'Natural Environment', and 'Natural Environment 2'. The following provisions from the bylaw are considered applicable, with interpretation provided accordingly.

### 2.6 [Bylaw Interpretation Section]

*The Natural Environment (NE) Zone boundaries identified on the schedules to this By-law are intended to generally identify the location of potentially hazardous environmental features. During review of development applications and building permit applications, if necessary, the boundaries*



*of the NE zone shall be more precisely determined in consultation with the Conservation Authority or other agencies having jurisdiction in the area. Where detailed resource mapping and/or site inspection occurs, this may result in a re-interpretation of the limits of the NE zone boundary. Additionally, a technical evaluation, approved by the Conservation Authority may be used to further delineate the limits of the Natural Environment (N.E.) Zone.*

**Interpretation:** It is our understanding that any future development on the created lot can remain outside of the boundaries of any features or areas that constitute hazard lands.

#### **6.20.1 Natural Environmental Zone Setbacks**

*a) No building or structure, including a private sewage treatment system and any associated tile weeping bed, shall be constructed closer than a setback distance approved by the Conservation Authority from the limit of a Natural Environment NE zone.*

*b) Notwithstanding the required setbacks in subsection (a) above:*

*i) Accessory buildings/structures to existing residential dwellings, enlargements of existing buildings/structures and reconstruction of existing buildings/structures including improvements to manure storage systems associated with an existing livestock facility but not a hobby barn are permitted, provided that a setback of 3 m (9.8 ft) from the NE zone boundary is maintained.*

*ii) Where a vacant building lot was existing on the date of passage of this By-law, a building permit may be issued for permitted buildings or structures provided:*

- That there is no other suitable location on the lot outside of the determined setback in (a) above, and*
- That a setback of at least 3 m (9.8 ft) from the NE zone boundary is maintained.*

*c) Interpretation of the limits of the NE zone boundaries is governed by regulations contained in Section 2.6 of this By-law. The location of the NE “setback” boundaries shall be adjusted accordingly in the event that the NE “zone” boundary is re-interpreted.*

**Interpretation:** This report provides the recommendation that any future development on the created lot maintain a minimum 30 m setback from delineated limits of wetland, which we expect will satisfy the requirement to maintain a minimum 3 m setback from features captured by the NE zone.

#### **6.20.4 Environmental Impact Studies**

*Where development is proposed on lands within 120 metres of land designated as a Provincially significant wetland on the County of Grey Official Plan within a Natural Environment (NE) Zone, the Municipality, Saugeen Conservation Authority and the County of Grey shall be contacted to determine if an Environmental Impact Study is required in the review and approval of the proposed development.*

**Interpretation:** This report has been submitted to satisfy the above provision requiring submission of an EIS report.





## 7) CONCLUSIONS

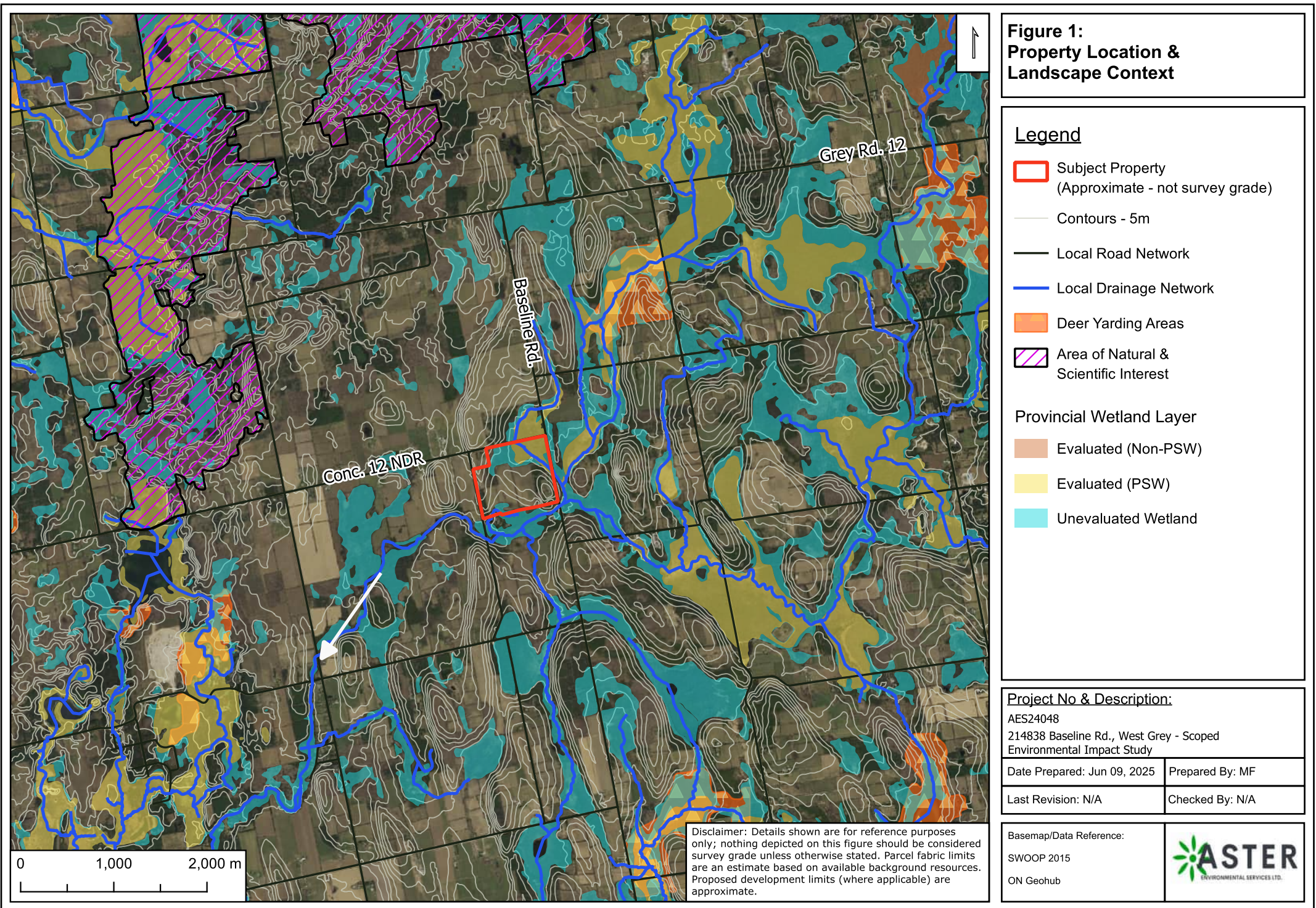
The preceding report provides the results of our scoped Environmental Impact Study. This report includes details regarding existing physical and ecological conditions within a defined study area, a description of the development proposal, an assessment of potential impacts to identified features, a mitigation plan, and a general assessment of consistency and conformity with relevant municipal, provincial, and federal environmental policies.

Based upon the findings presented in this report and contingent upon the implementation of and adherence to the recommendations made herein, it is our conclusion that proposed severance can be accomplished without negatively impacting the functions of significant natural heritage features or the associated natural heritage system. We advise that any recommended mitigation/preventative measures outlined in **Section 5** be implemented through appropriate mechanism as determined by the approval authority.

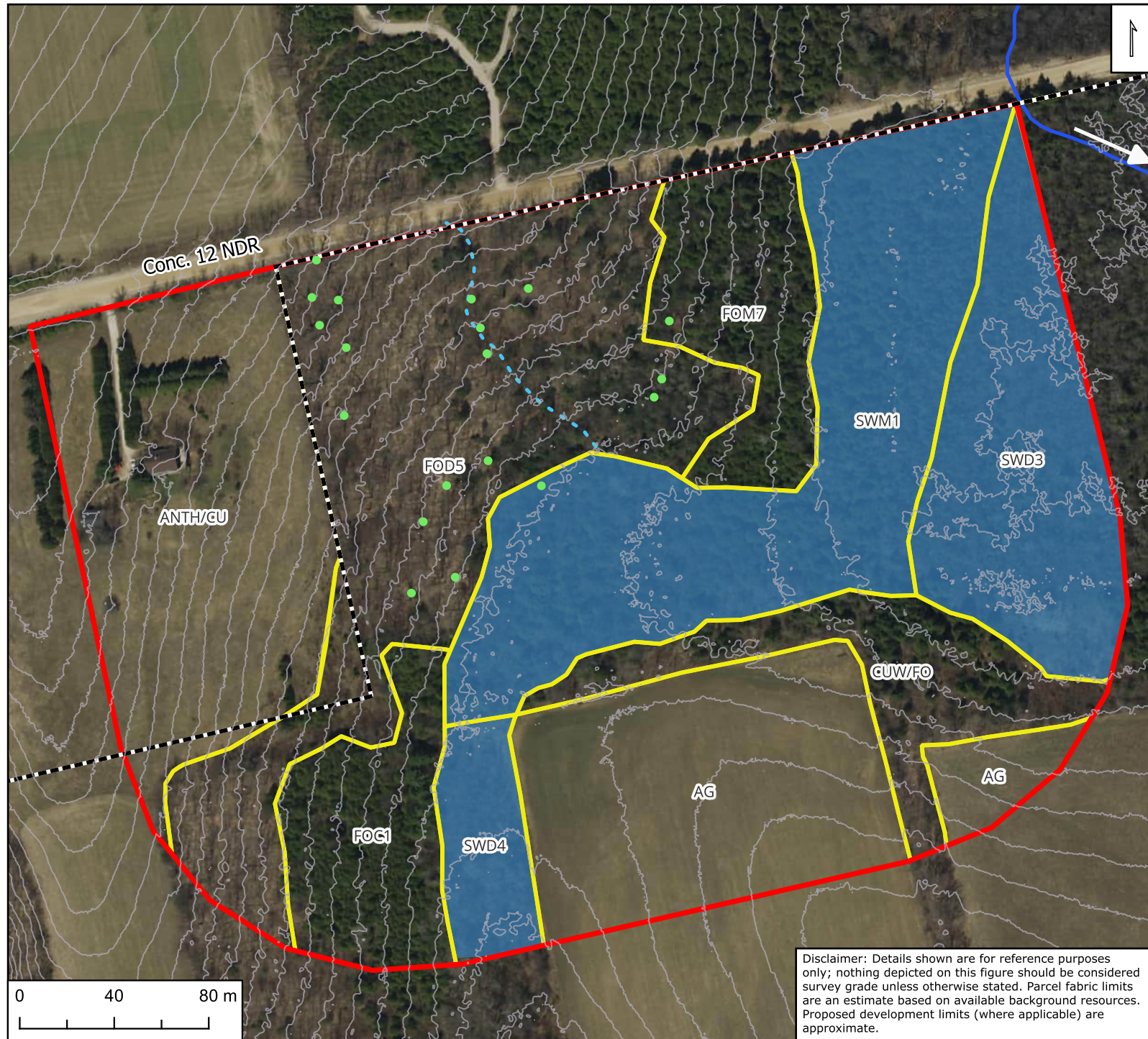
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**Figure 2:  
Existing Conditions**

**Legend**

- Subject Property  
(Approximate - not survey grade)
- Study Area
- Contour - 1m
- Local Drainage Network
- Wetland (Confirmed Boundaries)
- Ephemeral Drainage Flow Path
- Potential Wildlife Habitat Trees

**Vegetation/Land Cover (ELC)**

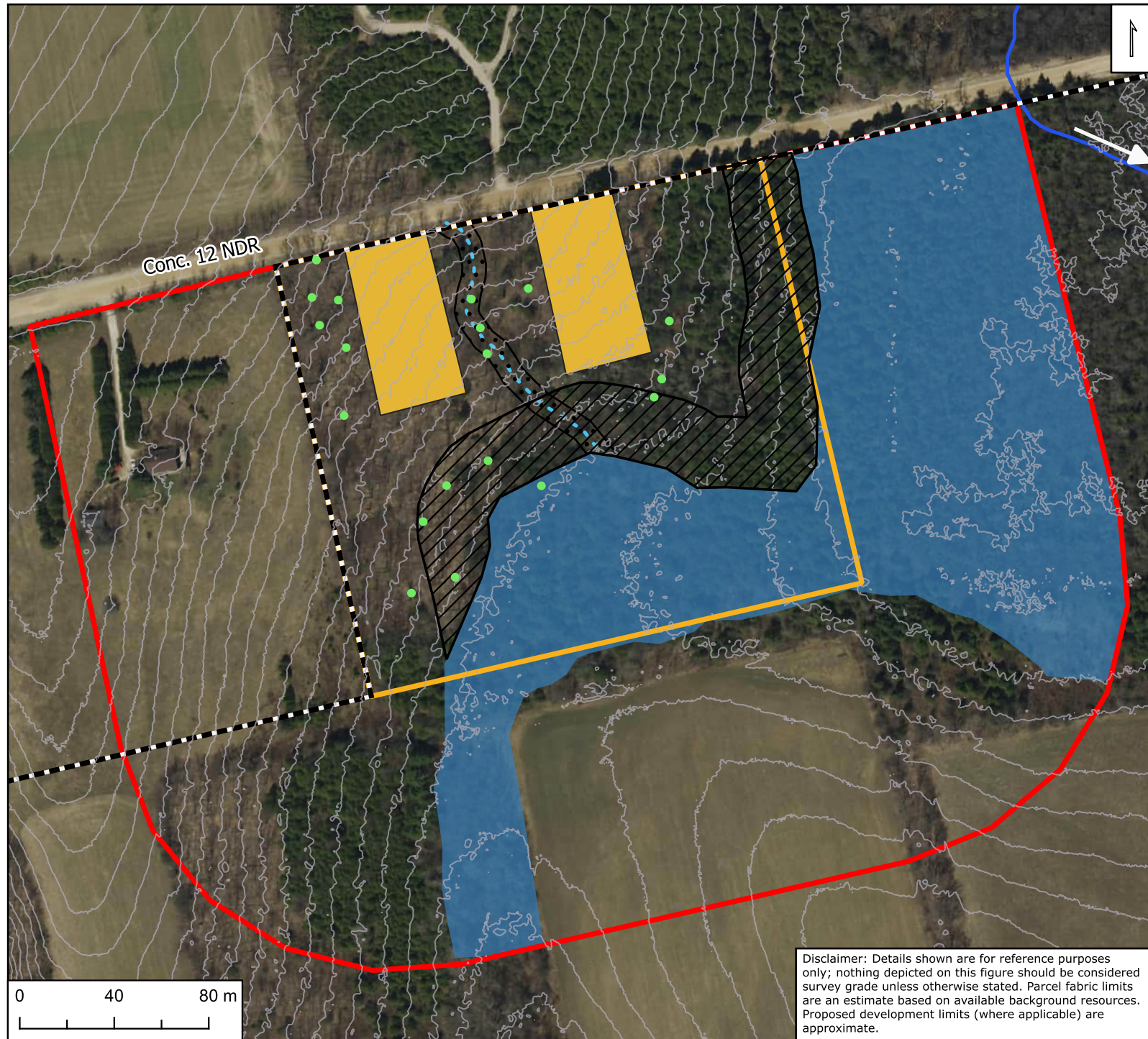
- AG: Agricultural Field
- ANTH/CU: Anthropogenic / Cultural
- CUW/FO: Cultural Woodland / Field Edge
- FOC1: Dry - Fresh Cedar Coniferous Forest
- FOD5: Dry - Fresh Sugar Maple Deciduous Forest
- FOM7: Fresh - Moist White Cedar Hardwood Mixed Forest
- SWD3: Maple Mineral Deciduous Swamp
- SWD4: Poplar Mineral Deciduous Swamp
- SWM1: White Cedar Mineral Mixed Swamp

Project No & Description:	
AES24048 214838 Baseline Rd., West Grey - Scoped Environmental Impact Study	
Date Prepared: Jun 10, 2025	Prepared By: MF
Last Revision: N/A	Checked By: N/A

Basemap/Data Reference: SWOOP 2015 ON Geohub	
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Disclaimer: Details shown are for reference purposes only; nothing depicted on this figure should be considered survey grade unless otherwise stated. Parcel fabric limits are an estimate based on available background resources. Proposed development limits (where applicable) are approximate.





**Figure 3:  
Proposed Development**

**Legend**

- Subject Property (Approximate - not survey grade)
- Study Area
- Contour - 1m
- Local Drainage Network
- Wetland (Confirmed Boundaries)
- Ephemeral Drainage Flow Path
- Potential Wildlife Habitat Trees
- Drainage Buffer (5 m)
- Wetland Buffer (30 m)
- Proposed Parcel Severance (Approximate - not survey grade)
- Conceptual Options for Future Development Envelope

**Project No & Description:**

AES24048  
214838 Baseline Rd., West Grey - Scoped Environmental Impact Study

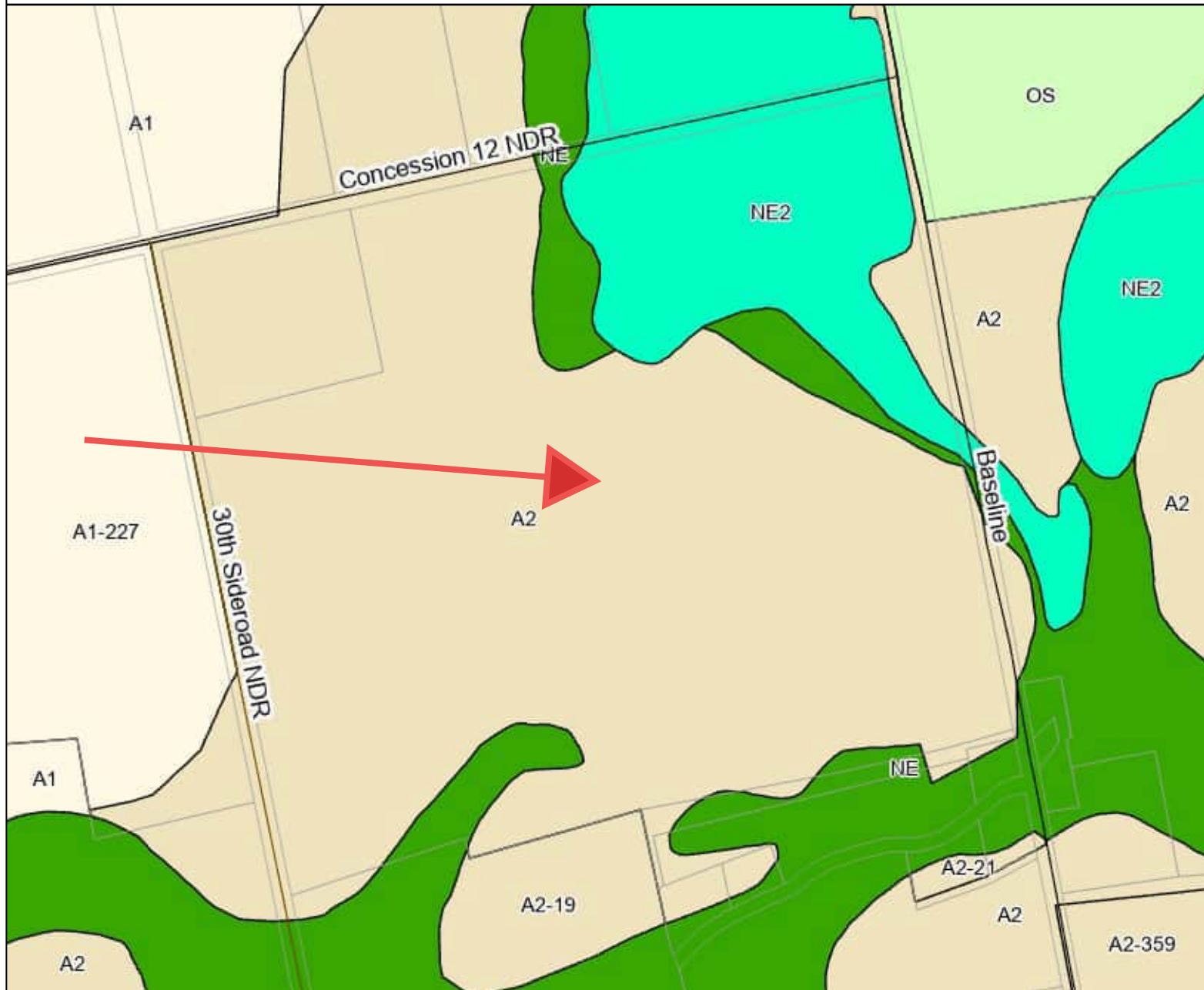
Date Prepared: Jun 10, 2025	Prepared By: MF
Last Revision: N/A	Checked By: N/A

Basemap/Data Reference:

SWOOP 2015  
ON Geohub

## **Appendix 1. Land Use Schedules.**





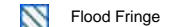
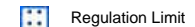
## Legend

### Large Scale Roads


















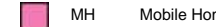
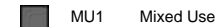





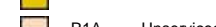

-  Provincial Highway
-  County Road
-  Township Road
-  Seasonal Road

### Parcels - Current

### Zoning - West Grey - Floodline

-  Flood Fringe
-  Regulation Limit

### Zoning - West Grey

-  A1 Agricultural
-  A2 Rural
-  A3 Restricted Rural
-  C1 General Commercial
-  C2 Highway Commercial
-  C3 Neighbourhood Commercial
-  C4 Shopping Centre Commercial
-  C5 Hamlet Commercial
-  C6 Rural Commercial
-  FD Future Development
-  FL Flood Way
-  I Institutional
-  M1 Industrial
-  M2 Restricted Industrial
-  M3 Rural Industrial
-  M4 Extractive Industrial
-  MH Mobile Home Park
-  MU1 Mixed Use
-  ND No Development
-  NE Natural Environment
-  NE2 Natural Environment 2
-  OS Open Space
-  ER Estate Residential
-  R1A Unserved Residential
-  R1B Low Density Residential
-  R2 Medium Density Residential

## Notes

444 0 222 444 Meters

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
© County of Grey

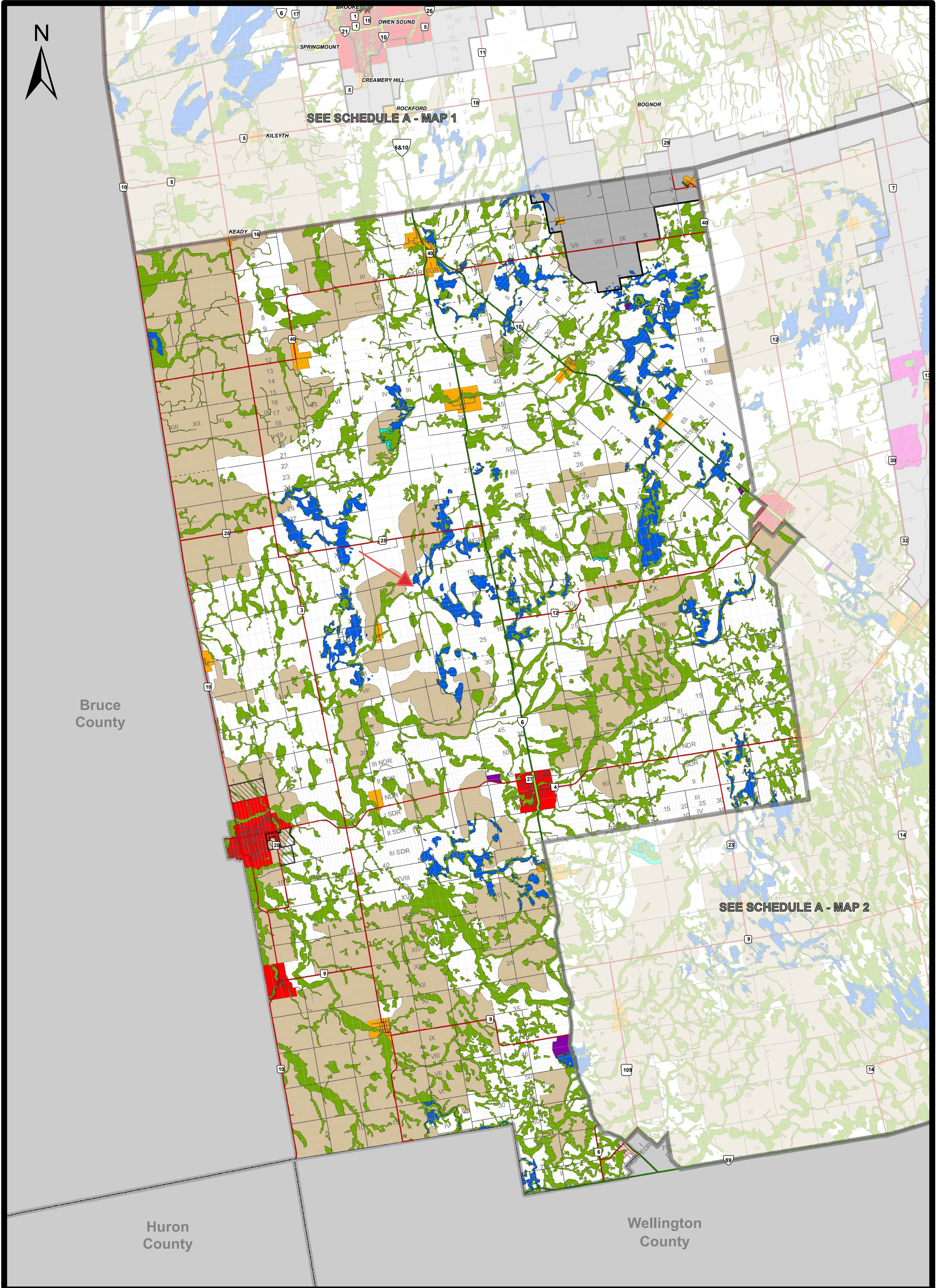


This map is a user generated static output from an Internet mapping site and is for reference only.  
Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Printed October 28, 2024

THIS MAP IS NOT TO BE USED FOR NAVIGATION





THE COUNTY OF GREY  
OFFICIAL PLAN

**SCHEDULE A  
Land Use Types**

**MAP 3**

**LEGEND**

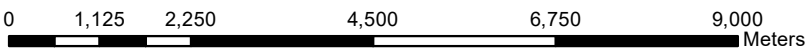
- Provincial Highway Connecting Link
- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Agricultural

- Special Agricultural
- Rural
- Primary Settlement Area \*
- Secondary Settlement Area \*
- Inland Lakes & Shoreline Settlement Area
- Recreational Resort Settlement Area
- Sunset Strip Settlement Area
- Industrial Business Park Settlement Area

- Space Extensive Industrial and Commercial
- Niagara Escarpment Plan Boundary \*\*
- Niagara Escarpment Development Control Area
- Escarpment Natural Area
- Escarpment Recreation Area
- Hazard Lands
- Provincially Significant Wetlands and Significant Costal Lands

\* refer to Secondary Schedules for further detail.  
\*\* certain settlement areas within the Niagara Escarpment Plan Boundary may be subject to Development Control.

**SCALE 1:95,000**



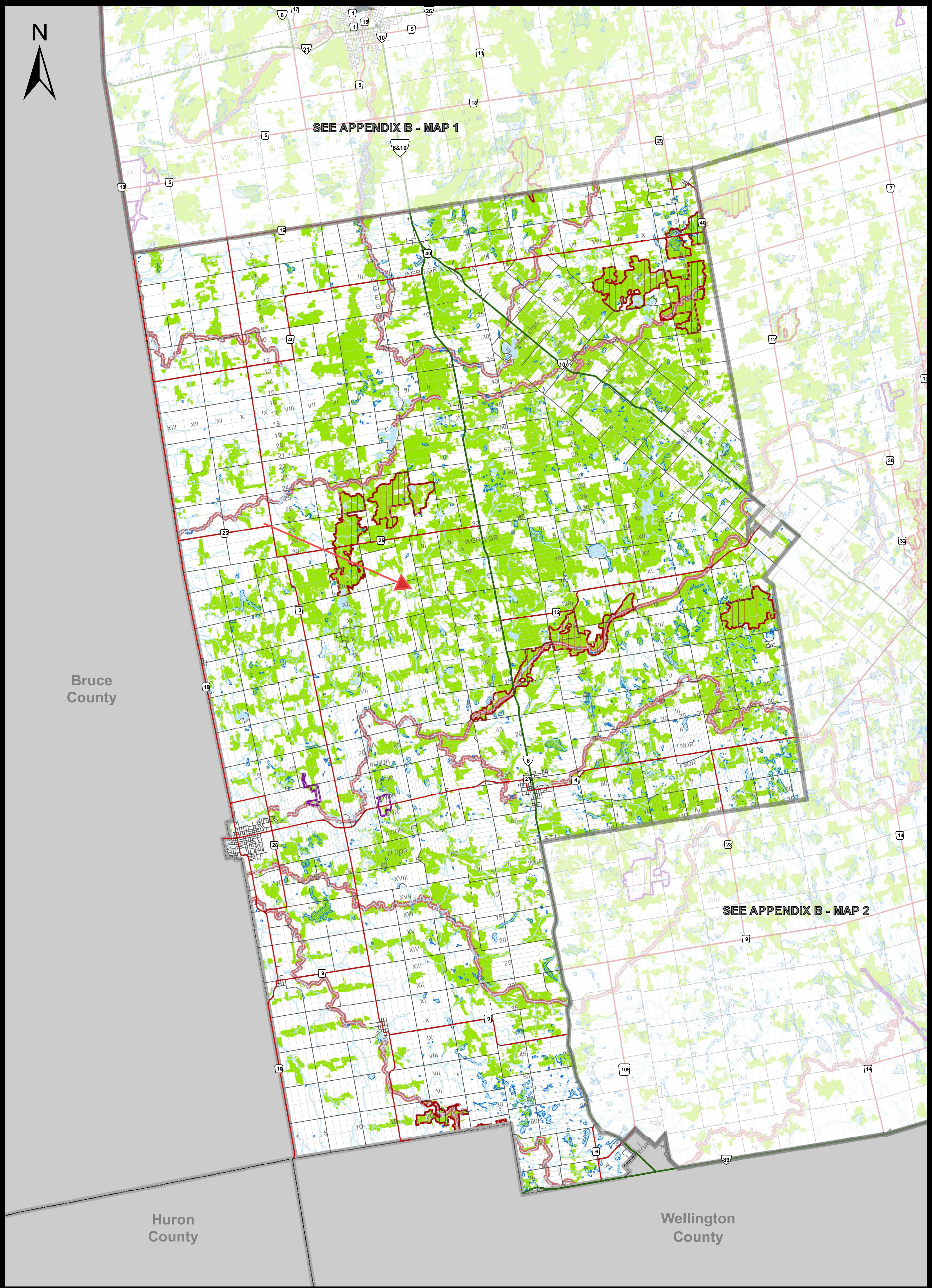
AUTHOR: Grey County Planning  
FILE NAME: GR\_OP\_SchedA\_Map3westX36.mxd  
CONSOLIDATION: July 12, 2024  
INTERACTIVE MAP: [geo.grey.ca](http://geo.grey.ca)  
DOWNLOAD PDF: [grey.ca/planning-development](http://grey.ca/planning-development)

*This map is for illustrative purposes only. Do not rely on this map as being a precise indicator of routes, location of features or surveying purposes. This map may contain cartographical errors or omissions.*









THE COUNTY OF GREY  
OFFICIAL PLAN

## APPENDIX B Constraint Mapping

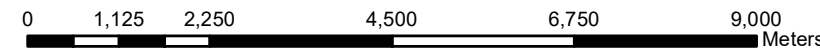
MAP 3

### LEGEND

- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Stream / River
- Lakes
- Other Wetlands

- Significant Earth & Life ANSI
- Significant Earth ANSI
- Significant Life ANSI
- Significant Valleylands
- Significant Woodlands

SCALE 1:95,000

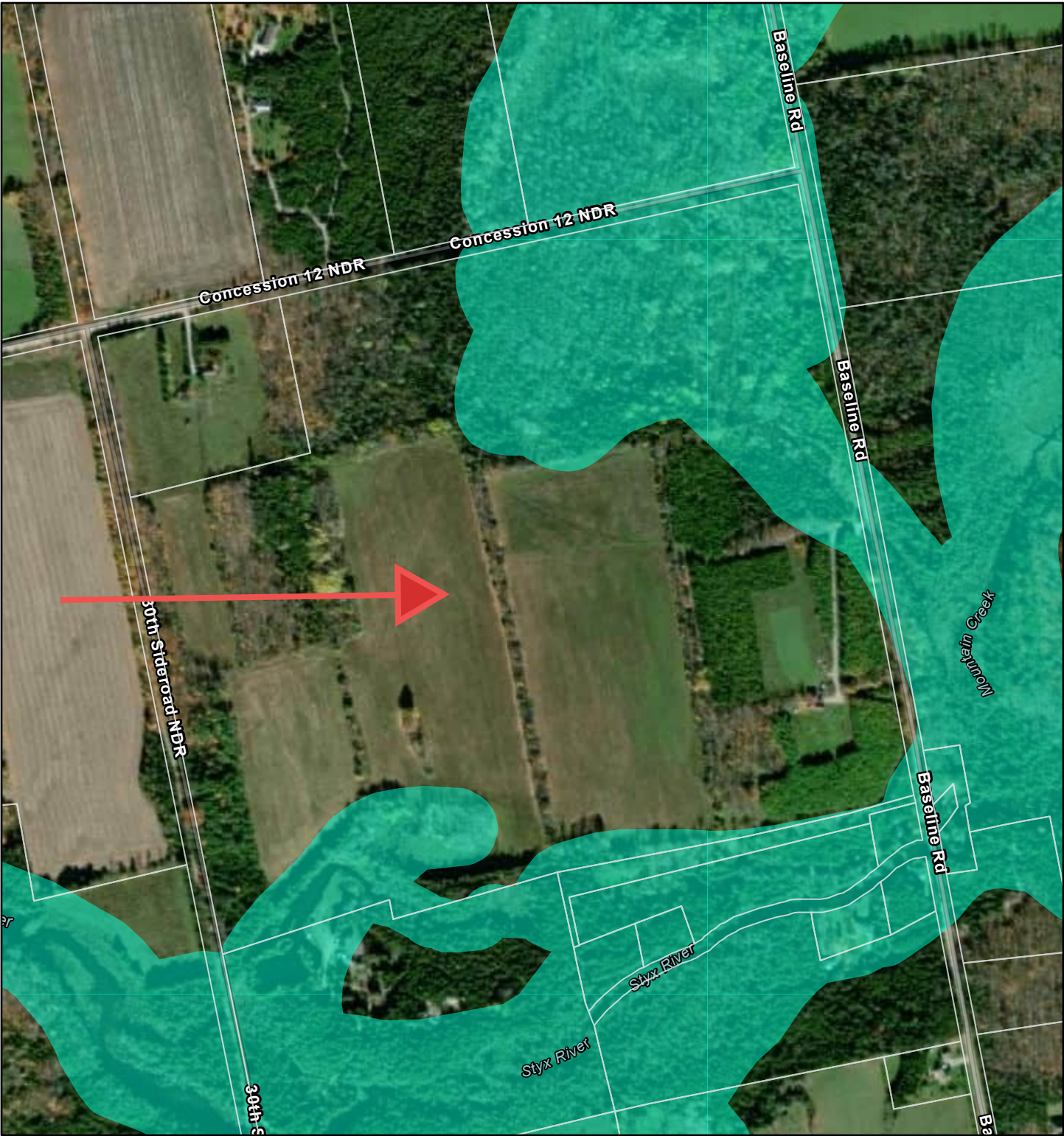


AUTHOR: Grey County Planning  
FILE NAME: GR\_OP\_ApdxB\_Map3westX36.mxd  
CONSOLIDATION: May 1, 2023  
INTERACTIVE MAP: geo.grey.ca  
DOWNLOAD PDF: grey.ca/planning-development



This map is for illustrative purposes only. Do not rely on this map as being a precise indicator of routes, location of features or surveying purposes. This map may contain cartographical errors or omissions.

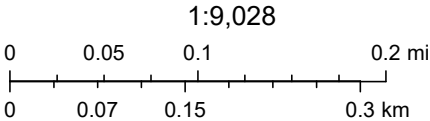


# Verkaik Property - Baseline Rd. West Grey



2/28/2025, 9:19:25 AM

-  SVCA Watershed
-  Property Boundary



Maxar



## **Appendix 2.** Photos of Representative Site Conditions.





**Photo 1.** Concession 12 along proposed parcel frontage, facing west.



**Photo 2.** Concession 12 along proposed parcel frontage, facing east.



**Photo 3.** FOD5 ecosite, in general location of recommended building envelope.



**Photo 4.** FOD5 ecosite; note large cut stumps and remnant younger canopy cover.



**Photo 5.** Transition zone from FOD5 to FOM7.



**Photo 6.** FOM7 ecosite; logging access trail in center frame.





**Photo 7.** Typical structure of SWM1 ecosite.



**Photo 8.** Typical structure of SWD3 ecosite.



**Photo 9.** Crop field and successional edge.



**Photo 10.** Transition from successional field edge (CUW/FO) to adjacent area of SWM1.



**Photo 11.** Field edge with deciduous hedgerow.



**Photo 12.** Typical structure of SWD4 ecosite.





**Photo 13.** Transition from FOC1 to SWD4.



**Photo 14.** Area of wet field edge adjacent to SWD4 ecosite.



**Photo 15.** Culvert at south side of Concession 12, directing storm flows onto property.



**Photo 16.** Area of poorly defined headwater/ephemeral flow path down slope from culvert.





**Photo 17.** Aerial view of subject property and proposed new parcel, facing southeast.



**Photo 18.** Aerial view of subject property, facing south/southeast; intersection of Concession Rd 12 and 30<sup>th</sup> Sideroad at lower right of frame.





**Photo 19.** Aerial view of subject property, facing southwest; intersection of Concession Rd. 12 and Baseline Rd. at bottom center of frame.



**Photo 20.** Aerial view of study area; notable transition from upland forest, to mixed forest, to conifer-dominant swamp, to hardwood-dominant swamp.

### **Appendix 3.** List of Documented Plant Species.

Scientific Name	Common Name(s)	S Rank	ESA Status	OWES Wetland Plant List
<i>Abies balsamea</i>	Balsam Fir	S5		X
<i>Acer rubrum</i>	Red Maple	S5		X
<i>Acer saccharum</i>	Sugar Maple	S5		
<i>Anemone virginiana</i> var. <i>virginiana</i>	Tall Anemone	S5?		
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	S5		X
<i>Betula alleghaniensis</i>	Yellow Birch	S5		X
<i>Betula papyrifera</i>	Paper Birch	S5		X
<i>Caltha palustris</i>	Yellow Marsh Marigold	S5		X
<i>Cardamine diphylla</i>	Two-leaved Toothwort	S5		
<i>Carex blanda</i>	Woodland Sedge	S5		
<i>Carex castanea</i>	Chestnut Sedge	S5		X
<i>Carex debilis</i>	White-edge Sedge	S5		
<i>Carex eburnea</i>	Bristle-leaved Sedge	S5		
<i>Carex gracillima</i>	Graceful Sedge	S5		X
<i>Carex leptalea</i>	Bristle-stalked Sedge	S5		X
<i>Carex peckii</i>	Peck's Sedge	S5		
<i>Carex pedunculata</i>	Long-stalked Sedge	S5		
<i>Carex plantaginea</i>	Plantain-leaved Sedge	S5		
<i>Carpinus caroliniana</i>	Blue-beech	S5		X
<i>Carya cordiformis</i>	Bitternut Hickory	S5		
<i>Carya cordiformis</i>	Bitternut Hickory	S5		
<i>Caulophyllum thalictroides</i>	Blue Cohosh	S5		
<i>Cicuta maculata</i>	Spotted Water-hemlock	0		
<i>Circaea alpina</i>	Small Enchanter's Nightshade	S5		X
<i>Circaea canadensis</i>	Broad-leaved Enchanter's Nightshade	S5		
<i>Cirsium arvense</i>	Canada Thistle	SNA		
<i>Cirsium vulgare</i>	Bull Thistle	SNA		
<i>Clematis virginiana</i>	Virginia Clematis	S5		X
<i>Clinopodium vulgare</i>	Wild Basil	S5		
<i>Coptis trifolia</i>	Goldthread	S5		X
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood	S5		
<i>Cornus sericea</i>	Red-osier Dogwood	S5		X
<i>Cypripedium parviflorum</i>	Yellow Lady's-slipper	0		
<i>Dactylis glomerata</i>	Orchard Grass	SNA		
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	S5		X
<i>Dryopteris cristata</i>	Crested Wood Fern	S5		X
<i>Equisetum hyemale</i>	Common Scouring-rush	S5		X
<i>Erythronium americanum</i>	Yellow Trout Lily	S5		
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	S5		
<i>Fragaria virginiana</i> ssp. <i>virginiana</i>	Wild Strawberry	SU		
<i>Fraxinus americana</i>	White Ash	S4		



<i>Fraxinus nigra</i>	Black Ash	S4	END	X
<i>Geranium robertianum</i>	Herb-Robert	S5		
<i>Geum fragarioides</i>	Barren Strawberry	S5		
<i>Geum rivale</i>	Water Avens	S5		X
<i>Impatiens capensis</i>	Spotted Jewelweed	S5		X
<i>Juglans nigra</i>	Black Walnut	S4?		
<i>Lactuca biennis</i>	Tall Blue Lettuce	S5		
<i>Larix decidua</i>	European Larch	SNA		
<i>Lysimachia borealis</i>	Northern Starflower	S5		
<i>Lysimachia ciliata</i>	Fringed Yellow Loosestrife	S5		X
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley	S5		
<i>Maianthemum racemosum</i>	Large False Solomon's-seal	S5		
<i>Maianthemum stellatum</i>	Star-flowered False Solomon's-seal	S5		
<i>Maianthemum trifolium</i>	Three-leaved False Solomon's-seal	S5		X
<i>Matteuccia struthiopteris</i>	Ostrich Fern	S5		X
<i>Mitella diphylla</i>	Two-leaved Mitrewort	S5		X
<i>Mitella nuda</i>	Naked Mitrewort	S5		X
<i>Nabalus albus</i>	White Rattlesnakeroot	S5		X
<i>Onoclea sensibilis</i>	Sensitive Fern	S5		X
<i>Osmunda claytoniana</i>	Interrupted Fern	S5		X
<i>Osmunda regalis</i>	Royal Fern	S5		X
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam	S5		
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	S4?		
<i>Physocarpus opulifolius</i>	Eastern Ninebark	S5		X
<i>Picea glauca</i>	White Spruce	S5		X
<i>Pinus strobus</i>	Eastern White Pine	S5		X
<i>Plantago lanceolata</i>	English Plantain	SNA		
<i>Plantago major</i>	Common Plantain	SNA		
<i>Polystichum acrostichoides</i>	Christmas Fern	S5		
<i>Populus balsamifera</i>	Balsam Poplar	S5		X
<i>Populus tremuloides</i>	Trembling Aspen	S5		
<i>Potentilla anserina</i> ssp. <i>anserina</i>	Common Silverweed	S5		X
<i>Prunella vulgaris</i>	Common Self-heal	0		
<i>Prunus serotina</i>	Black Cherry	S5		
<i>Prunus virginiana</i>	Chokecherry	S5		
<i>Ranunculus abortivus</i>	Kidney-leaved Buttercup	S5		
<i>Ranunculus acris</i>	Common Buttercup	SNA		X
<i>Ranunculus recurvatus</i>	Hooked Buttercup	S5		
<i>Ranunculus sceleratus</i> var. <i>multifidus</i>	Cursed Buttercup	S5		X
<i>Rhamnus alnifolia</i>	Alder-leaved Buckthorn	S5		X
<i>Ribes cynosbati</i>	Eastern Prickly Gooseberry	S5		
<i>Ribes triste</i>	Swamp Red Currant	S5		X
<i>Rubus idaeus</i> ssp. <i>strigosus</i>	North American Red Raspberry	S5		
<i>Rubus pubescens</i>	Dwarf Raspberry	S5		X
<i>Salix discolor</i>	Pussy Willow	S5		X
<i>Sanguinaria canadensis</i>	Bloodroot	S5		
<i>Schizachne purpurascens</i>	Purple False Melic	S5		

<i>Solanum dulcamara</i>	Climbing Nightshade	SNA		X
<i>Solidago canadensis</i>	Canada Goldenrod	0		
<i>Solidago rugosa</i>	Rough-stemmed Goldenrod	S5		X
<i>Spiraea alba</i> var. <i>alba</i>	White Meadowsweet	S5		X
<i>Symphotrichum cordifolium</i>	Heart-leaved Aster	S5		
<i>Symphotrichum novae-angliae</i>	New England Aster	S5		
<i>Symphotrichum puniceum</i>	Purple-stemmed Aster	S5		X
<i>Taraxacum officinale</i>	Common Dandelion	SNA		
<i>Thalictrum pubescens</i>	Tall Meadow-rue	S5		X
<i>Tiarella cordifolia</i>	Heart-leaved Foamflower	S5		X
<i>Toxicodendron radicans</i> var. <i>rydbergii</i>	Western Poison Ivy	S5		
<i>Trillium grandiflorum</i>	White Trillium	S5		
<i>Triosteum aurantiacum</i>	Orange-fruit Horse-gentian	S4S5		
<i>Tsuga canadensis</i>	Eastern Hemlock	S5		X
<i>Tussilago farfara</i>	Coltsfoot	SNA		X
<i>Typha latifolia</i>	Broad-leaved Cattail	S5		X
<i>Ulmus americana</i>	White Elm	S5		X
<i>Viburnum lentago</i>	Nannyberry	S5		X
<i>Viburnum opulus</i> ssp. <i>opulus</i>	Cranberry Viburnum	SNA		
<i>Viola sororia</i>	Woolly Blue Violet	S5		X



## **Appendix 4.** Endangered and Threatened Species Screening.

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
American Ginseng ( <i>Panax quinquefolius</i> ): <b>Endangered</b>	American Ginseng requires well-drained but moist acidic to neutral soils generally overlying calcareous bedrock. They are obligate understory plants found in undisturbed mature deciduous and mixed forests, and occasionally in coniferous forests and swamps.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is within the range of this species. Applicable local databases (NHIC) do not contain records for this species (which would be listed as Restricted).</p> <p><b>Habitat Structural Suitability:</b> The forest structure observed within portions of the study area is potentially suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Bank Swallow ( <i>Riparia riparia</i> ): <b>Threatened</b>	The Bank Swallow is a small aerial insectivore bird that nests colonially in burrows they excavate within banks. Colonies will nest in bluffs, riverbanks, aggregate pits, roadside embankments, and topsoil piles near open habitat that provides a steady source of insects, such as wetlands.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally within the range of this species. At least one applicable local database (OBBA) contains records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Black Ash ( <i>Fraxinus nigra</i> ): <b>Endangered</b>	The Black Ash grows everywhere in Ontario except the Far North. These trees require moisture, and are commonly found in northern swampy woodlands, from eastern Manitoba, throughout Ontario, and as far east as Newfoundland.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is within the range of this species. Applicable local databases do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat observed within portions of the study area is considered suitable for this species.</p> <p><b>Survey Result:</b> Several Black Ash were observed within the study area.</p> <p><b>Conclusion:</b> Black Ash is confirmed present within the study area. See report for further discussion.</p>	Y
Blanding's Turtle ( <i>Emydoidea blandingii</i> ): <b>Threatened</b>	Blanding's Turtle are semi-aquatic and use wetland habitats with shallow water and abundant vegetation. Their habitat includes a broad range of wetlands, forest clearings, and meadows. They breed in aquatic habitat and nest in open natural and anthropogenic upland areas.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Local databases (ORAA) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is theoretically suitable for this species; however, populations are not known to occur locally.</p> <p><b>Site-specific Survey Result:</b> No individuals were observed during our on-site investigation.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Bobolink ( <i>Dolichonyx oryzivorus</i> ): <b>Threatened</b>	Nests and forages in meadows, grasslands, hayfields, and pastureland. Fields must have 25% or less woody plant cover. They typically require large fields (>4ha) and avoid small, fragmented habitats. They also avoid habitat within 75 m of a forest edge.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally within the range of this species. At least one applicable local database (OBBA) contains local records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not suitable for this species.</p> <p><b>Survey Result:</b> N/A.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Butternut ( <i>Juglans cinerea</i> ): <b>Endangered</b>	Butternut is shade intolerant and grows in rich, moist, well-drained loams often along streambanks. Butternut is also found in well-drained gravel sites. It is often found at forest edges where it can access abundant sunlight.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The forest structure observed within portions of the study area is potentially suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs in the study area. No further evaluation or mitigation required.</p>	N
Cerulean Warbler ( <i>Setophaga cerulea</i> ): <b>Threatened</b>	Found in two small breeding clusters in the Carolinian Forest and the Frontenac Axis. They breed in hilly, mature deciduous forests with a preference for oak and/or maple dominated forests with swampy bottomlands. They are area and edge-sensitive and require large continuous tracts of forest.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Local databases (OBBA) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Chimney Swift ( <i>Chaetura pelagica</i> ): <b>Threatened</b>	The Chimney Swift historically nested and roosted in large hollow trees, rock walls, and other vertical surfaces. They now use human-made structures like uncapped chimneys and have high site fidelity to nesting chimneys. 95% of nests are within 1 km of a waterbody.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally within the range of this species. At least one applicable local database (OBBA) contains local records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Eastern Meadowlark ( <i>Sturnella magna</i> ): <b>Threatened</b>	Nests and forages in meadows, grasslands, shrubby fields, hayfields and pastureland. Prefers habitat with >80% grass cover. Needs a minimum of 5 ha of continuous habitat.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally within the range of this species. At least one applicable local database (OBBA) contains local records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Eastern Prairie Fringed Orchid ( <i>Platanthera leucophaea</i> ): <b>Endangered</b>	The Eastern Prairie Fringed Orchid grows in open fens and wet prairies within southern Ontario. They require high sun exposure as well as high moisture. Populations are sparse, with most locations well documented.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is within the provincial range of this species. Applicable local databases (NHIC) do not contain records for this species (which would be listed as Restricted).</p> <p><b>Habitat Structural Suitability:</b> The forest structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> No individual plants were observed during our on-site investigation that included a survey of vascular plants.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Eastern Red Bat ( <i>Lasiurus borealis</i> ): <b>Endangered</b>	Eastern Red Bat overwinter in the southern United States. Summer habitat is primarily deciduous and coniferous forests of any age class. Roosting occurs among the foliage of trees and tend to be on large diameter and tall trees reaching or exceeding the height of the surrounding canopy. Roost sites are selected based on overhead foliage for cover with open flight space below.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area may be suitable for this species</p> <p><b>Site-specific Survey Result:</b> An inventory of potential bat roosting trees was undertaken to inform mitigation planning; several snags were observed throughout the study area.</p> <p><b>Conclusion:</b> There is potential for this species to occur within the study area. See report for further discussion.</p>	Y



Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Eastern Small-footed Myotis ( <i>Myotis leibii</i> ): <b>Endangered</b>	Eastern Small-footed Myotis overwinter in caves and mines in Ontario and do not disperse far from their hibernacula during the summer. They can be found roosting in rocky habitats singly or in groups but will also use human structures as day roosts. They are aerial insectivores and forage in forests, rocky habitats, and ponds.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area is not ideally suited for this species. The property contains no rock exposures, notable crevices, talus slopes, or other ideal roosting opportunities.</p> <p><b>Site-specific Survey Result:</b> No individuals or evidence of habitat was observed during our on-site investigation that included a general habitat-based wildlife survey.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Gattinger's Agalinis ( <i>Agalinis gattingeri</i> ): <b>Endangered</b>	Gattinger's Agalinis is a small hemiparasitic plant that attaches to the roots of other plants. Their Ontario populations are within alvar and prairie habitats on the Bruce Peninsula, Manitoulin Island, and Walpole Island. They can tolerate different moisture conditions and are sensitive to shading.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> No individual plants were observed during our on-site investigation that included a survey of vascular plants.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Henslow's Sparrow ( <i>Ammodramus henslowii</i> ): <b>Endangered</b>	Henslow's Sparrows' current breeding habitat is generally limited to Prince Edward County and the Regional Municipality of Halton. Their habitat is open grasslands with dense vegetation at least 30 cm tall, thick standing dead material, <1% shrub cover, and intermediate moisture. They prefer larger, continuous grasslands and are sensitive to edge effects.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Applicable local databases (OBBA) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation structure observed within the study area is not considered suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Hill's Thistle ( <i>Cirsium hillii</i> ): <b>Threatened</b>	Hill's Thistle grow in dry open habitats (prairies, sand barrens, savannas, alvars, dunes) and are intolerant of shade and crowding. They are found in southern Ontario in Simcoe County (Wasaga Beach Provincial Park), Manitoulin Island and surrounding islands, and the Bruce Peninsula.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> No individual plants were observed during our on-site investigation that included a survey of vascular plants.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Houghton's Goldenrod ( <i>Solidago houghtonii</i> ): <b>Threatened</b>	The range of Houghton's Goldenrod is largely limited to Manitoulin Island, the Bruce Peninsula, and Cockburn Island. They grow in open, treeless areas of limestone or dolostone alvars along shorelines, or on sand dunes. They prefer areas in the alvar where water pools.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> No individual plants were observed during our on-site investigation that included a survey of vascular plants.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Hungerford's Crawling Water Beetle ( <i>Brychius hungerfordi</i> ): <b>Endangered</b>	Hungerford's Crawling Water Beetle is found in Bruce County in the Rankin, Saugeen, and North Saugeen Rivers. They are found 1.5 km downstream from dams in cobble, gravel, silt/sand, and vegetated habitats. They prefer cool alkaline water with a moderate flow.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species, which is highly restricted and confined to larger watercourses. Applicable local databases (NHIC, iNaturalist) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> Not applicable.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Hoary Bat ( <i>Lasiurus cinereus</i> ): <b>Endangered</b>	Hoary Bats live in coniferous or deciduous forests. Roosting occurs among the foliage of trees and tend to be on large diameter and tall trees reaching or exceeding the height of the surrounding canopy. Like Eastern Red Bats, Hoary Bats tend to roost individually or with pups.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area may be suitable for this species</p> <p><b>Site-specific Survey Result:</b> An inventory of potential bat roosting trees was undertaken to inform mitigation planning; several snags were observed throughout the study area.</p> <p><b>Conclusion:</b> There is potential for this species to occur within the study area. See report for further discussion.</p>	Y
Lake Sturgeon ( <i>Acipenser fulvescens</i> ): <b>Endangered</b>	Lake Sturgeon need large continuous habitats in river and lake systems to provide habitat for all life stages. Spawning takes place in shallow fast flowing headwaters where a natural or man-made barrier occurs. Spawning substrates are gravel, rock, hardpan, or sand.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> N/A</p> <p><b>Site-specific Survey Result:</b> N/A</p> <p><b>Conclusion:</b> There is no potentially suitable aquatic habitat in the study area. No further evaluation or mitigation required.</p>	N
Least Bittern ( <i>Ixobrychus exilis</i> ): <b>Threatened</b>	Breeds in large marshes within Southern Ontario. Creates nest platforms from tall, dense emergent vegetation within 10m of water and prefers Typha spp. Needs 200 ha of wetland for nesting and foraging but does not need to be continuous wetland. Prefers complexes of smaller wetlands.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is within the provincial range of this species. At least one local database (OBBA) contains records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species. Wetlands are present but do not appear to support typical habitat structure.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Little Brown Myotis ( <i>Myotis lucifugus</i> ): <b>Endangered</b>	Their hibernacula are within caves and abandoned mines, wells, and tunnels. Maternity colonies are within a few kilometers of hibernacula within snag trees, rock crevices, exfoliating tree bark, and anthropogenic structures. Roosts and swarming sites are in similar areas around the hibernacula.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area may be suitable for this species</p> <p><b>Site-specific Survey Result:</b> An inventory of potential bat roosting trees was undertaken to inform mitigation planning; several snags were observed throughout the study area.</p> <p><b>Conclusion:</b> There is potential for this species to occur within the study area. See report for further discussion.</p>	Y
Loggerhead Shrike ( <i>Lanius ludovicianus</i> ): <b>Endangered</b>	The Loggerhead Shrike forages in open grasslands and edge habitats. They require scattered trees and bushes in their habitat for perches and nest sites, and vegetation with large thorns or barbed wire to impale prey. Breeding habitat is exceedingly rare in Ontario, and most extant habitat is well documented.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Local databases (OBBA) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> No individuals were observed during our on-site investigation.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Louisiana Waterthrush ( <i>Parkesia motacilla</i> ): <b>Threatened</b>	The Louisiana Waterthrush is mainly found along the Niagara Escarpment and north shore of Lake Erie. They are dependent on clear, steep, lower order streams in ravines within large unbroken mature deciduous-mixed forests.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is within the provincial range of this species; however, local databases (OBBA) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N



Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Massasauga ( <i>Sistrurus catenatus</i> ): <b>Threatened</b>	The Massasauga has four populations: Ojibway Prairie near Windsor, Wainfleet Bog near Port Colborne, the Bruce Peninsula, and Georgian Bay/Muskoka. It is an ambush predator and prefers habitat with vegetative or rock cover. It's habitats are forests, forest clearings and edges, rock outcrops, wetlands, shorelines, meadows, alvars, and fields.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is outside of the provincial range of this species. Applicable local databases (NHIC, ORAA, iNaturalist) do not contain records for this species within or adjacent to the study area.</p> <p><b>Habitat Structural Suitability:</b> N/A</p> <p><b>Site-specific Survey Result:</b> No individuals were observed during our on-site investigation that included a general habitat-based wildlife survey.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Northern Myotis/Northern Long-eared Bat ( <i>Myotis septentrionalis</i> ): <b>Endangered</b>	Northern Myotis are found below the tree line in Canada and are mostly absent from the prairies. They use live and dead trees near water in forest habitats when active and migrate to caves and abandoned mines for hibernation.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area may be suitable for this species</p> <p><b>Site-specific Survey Result:</b> An inventory of potential bat roosting trees was undertaken to inform mitigation planning; several snags were observed throughout the study area.</p> <p><b>Conclusion:</b> There is potential for this species to occur within the study area. See report for further discussion.</p>	Y
Piping Plover ( <i>Charadrius melodus circumcinctus</i> ): <b>Endangered</b>	The Ontario Piping Plover population breeds in Lake of the Woods, Wasaga Beach, Sauble Beach, Oliphant, and Manitoulin Island. They nest on beaches >10 m wide on shorelines > 0.4 m with gravel patches, sparse vegetation, and driftwood. They prefer early succession dunes.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the typical provincial range of this species. Local databases (OBBA, NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Pitcher's Thistle ( <i>Cirsium pitcheri</i> ): <b>Threatened</b>	The Pitcher's Thistle grows along the Lake Huron, Michigan, and Superior shorelines and most of the Canadian population is on Manitoulin Island. Their habitat is sand dunes and beach ridges with dry, loose sand and minimal vegetation. They mainly grow along the foredune but will colonize disturbed areas further inland.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> No individual plants were observed during our on-site investigation that included a survey of vascular plants.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Queensnake ( <i>Regina septemvittata</i> ): <b>Endangered</b>	The Queensnake is found along and west of the Niagara Escarpment. They prefer rocky watercourses with rock or gravel bottoms but sometimes use marshes, lakes, quarries, ponds, and wet meadows. They feed primarily on crayfish and require abundant prey. They are found within 5 m of water.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the provincial range of this species. Local databases (ORAA) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> N/A.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Red-Headed Woodpecker ( <i>Melanerpes erythrocephalus</i> ): <b>Endangered</b>	The Red-headed Woodpecker lives in open woodland and woodland edges and is often found in parks, golf courses and cemeteries. These areas typically have many dead trees, that the bird uses for nesting and perching. The Red-headed Woodpecker is found across southern Ontario, where it is widespread but rare.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally within the range of this species; however, applicable local database (OBBA, NHIC, iNaturalist) do not contain local records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not well suited for this species; the closed-canopy forest and lack of dominance by mast trees is not preferred habitat.</p> <p><b>Survey Result:</b> No individuals were observed during our on-site investigation. No indicators of suitable habitat observed.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Redside Dace ( <i>Clinostomus elongatus</i> ): <b>Endangered</b>	The Redside Dace is limited to specific tributaries and watersheds of Lake Ontario, Lake Simcoe, Lake Erie, and Lake Huron. They use slow moving clear or brown-tinged streams with overhanging vegetation and pool and riffle habitat, typically in the headwaters of streams.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the typical provincial range of this species. Local databases (DFO, NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> N/A.</p> <p><b>Site-specific Survey Result:</b> N/A.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Short-eared Owl ( <i>Asio flammeus</i> ): <b>Threatened</b>	The Short-eared Owl breeds in northern Ontario and is found year-round in southern Ontario. They use open habitats (tundra, grassland, pasture) to nest on the ground and overwinter in open areas with nearby roosting trees. They shelter from inclement weather in conifers and emergent wetland vegetation.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the typical provincial range of this species. Local databases (OBBA, NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The vegetation and landscape structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> N/A.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Silver-haired Bat ( <i>Lasionycteris noctivagans</i> ): <b>Endangered</b>	Silver-haired bats are among the most common bats in forested areas, most closely associated with coniferous, mixed coniferous and deciduous forests, especially in old growth forests. They form maternity colonies almost exclusively in tree cavities or small hollows.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area may be suitable for this species</p> <p><b>Site-specific Survey Result:</b> An inventory of potential bat roosting trees was undertaken to inform mitigation planning; several snags were observed throughout the study area.</p> <p><b>Conclusion:</b> There is potential for this species to occur within the study area. See report for further discussion.</p>	Y

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Spotted Turtle ( <i>Clemmys guttata</i> ): <b>Endangered</b>	The Spotted Turtle uses a mix of terrestrial and aquatic habitats. Aquatic habitats include wetlands, ponds, vernal pools, creeks, streams, sheltered bay edges, stormwater ponds, and man-made channels. Their terrestrial habitats are shorelines, rocky outcrops, upland forests, open fields, and meadows.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape may be within the historic range of this species; however, location information for this species is extremely confidential. Applicable local databases (NHIC) do not appear to contain records for this species (which would be listed as Restricted).</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area is not considered suitable for this species.</p> <p><b>Site-specific Survey Result:</b> N/A.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N
Tricolored Bat ( <i>Perimyotis subflavus</i> ): <b>Endangered</b>	The Tri-colored Bat have a scattered distribution and are found as far north as Sudbury. They are found in a variety of forested habitats. They overwinter alone in caves and mines and roost in dead vegetation clumps and lichen in forested habitats near water.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> The habitat structure observed within the study area is not considered suitable for this species. The study area lacks any components of Oak canopy, which is preferred roosting habitat for this species.</p> <p><b>Site-specific Survey Result:</b> N/A</p> <p><b>Conclusion:</b> There is no expectation that significant habitat for this species occurs within the study area. No further evaluation or mitigation required</p>	N
Unisexual Ambystoma - Jefferson Salamander dependent population ( <i>Ambystoma laterale</i> - (2) <i>jeffersonianum</i> ): <b>Endangered</b>	Unisexual Ambystoma have egg and larval stages in predatory fish-free ponds within deciduous and mixed forests. Once they metamorphose into adults they disperse up to a kilometer from their natal pond and use shaded forest habitats with thick leaf litter and high soil moisture. They use stone and woody debris as refugia.	<p><b>Local Range Context &amp; Database Review:</b> The local landscape is generally outside of the typical provincial range of this species. Local databases (ORAA, NHIC) do not contain records for this species.</p> <p><b>Habitat Structural Suitability:</b> N/A.</p> <p><b>Site-specific Survey Result:</b> N/A.</p> <p><b>Conclusion:</b> There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.</p>	N



## **Appendix 5.** Significant Wildlife Habitat Screening.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Category 1: Seasonal Concentration Areas for Wildlife Species					
Waterfowl Stopover and Staging Areas (Terrestrial)	American Black Duck, Wood Duck, Green-winged Teal, Blue-winged Teal, Mallard, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall	CUM1, CUT1, in addition to evidence of spring flooding	Fields flooded with sheet water during Spring (mid March to May)	<b>Studies Confirm:</b> Annual mixed species aggregations of 100 or more total birds  <b>Area of SWH Defined As:</b> Ecosite plus 100-300m radius	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Waterfowl Stopover and Staging Areas (Aquatic)	Canada Goose, Cackling Goose, Snow Goose, American Black Duck, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall, Green-winged Teal, Blue-winged Teal, Hooded Merganser, Common Merganser, Lesser Scaup, Greater Scaup, Long-tailed Duck, Surf Scoter, White-winged Scoter, Black Scoter, Ring-necked Duck, Common Goldeneye, Bufflehead, Redhead, Ruddy Duck, Red-breasted Merganser, Brant, Canvasback	MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, SWD2, SWD3, SWD5, SWD6, SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration.  Reservoirs managed as large ponds qualify.	<b>Studies Confirm:</b> Mixed species aggregations of 100 or more total birds for 7 days, <b>and/or</b> annual use by Ruddy Ducks, Canvasbacks, or Redheads  <b>Area of SWH Defined As:</b> Ecosites plus 100m radius, includes wetlands and shorelines	The study area includes areas of coniferous and mixed swamp; however, no large open wetlands or woodland pools are present that would support this function. No further assessment provided - not SWH.
Shorebird Migratory Stopover Areas	Greater Yellowlegs, Lesser Yellowlegs, Marbled Godwit, Hudsonian Godwit, Black-bellied Plover, American Golden-Plover, Semipalmated Plover, Solitary Sandpiper, Spotted Sandpiper, Semipalmated Sandpiper, Pectoral Sandpiper, White-rumped Sandpiper, Baird's Sandpiper, Least Sandpiper, Purple Sandpiper, Stilt Sandpiper, Short-billed Dowitcher, Red-necked Phalarope, Whimbrel, Ruddy Turnstone, Sanderling, Dunlin	BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5	Shorelines of lakes, rivers and wetlands, including beach areas, bars, groynes, armour rock, and seasonally flooded, muddy and un-vegetated shoreline habitats.	<b>Studies Confirm:</b> Mixed species aggregations of 3 or more listed species with >1000 shorebirds counted over the migration period, <b>and/or</b> any site with >100 Whimbrel for 3 or more years  <b>Area of SWH Defined As:</b> ELC shorelines plus 100m radius	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Raptor Wintering Area	Rough-legged Hawk, Red-tailed Hawk, Northern Harrier, American Kestrel, Snowy Owl  <b>Special Concern:</b> Short-eared Owl, Bald Eagle	<b>Hawks/Owls:</b> one each from forest (FOD, FOM, FOC) and upland (CUM, CUT, CUS, CUW) <b>Bald Eagle:</b> forest (FOD, FOM, FOC, SWD, SWM, SWC) on shorelines of large water bodies	Combination of fields and woodlands that provide roosting, foraging and resting habitats; <b>Hawks/Owls:</b> >20 ha with a combination of forest and upland; >15ha field habitat; field area windswept with limited snow depth; <b>Bald Eagle:</b> open water, large trees and snags	<b>Studies Confirm:</b> 1 or more Short-eared Owls, 1 or more Bald Eagles, or at least 10 individuals and 2 of the listed species <b>and</b> used ≥3 times in 5 years for a minimum of 20 days  <b>Area of SWH Defined As:</b> n/a	The study area contains forest and open field areas; however, the largest fields are represented by active agricultural cash crop and not successional/cultural ecosites. A smaller open field area is present in the west portion of the study area, but this does not meet the minimum area threshold of 15 ha. While it is possible that this function occurs within the study area, the study area does not meet technical criteria to be considered significant. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
<b>Bat Hibernacula</b>	Big Brown Bat, Tri-coloured Bat	CCR1, CCR2, CCA1, CCA2 (Buildings are not SWH)	Caves, mine shafts, underground foundations, Karsts  Does not include active mines	<b>Studies Confirm:</b> confirmed hibernating bats  <b>Area of SWH Defined As:</b> 200m radius around hibernaculum entrance, 1000m radius for wind farms	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
<b>Bat Maternity Colonies</b>	Big Brown Bat, Silver-haired Bat	All Ecosites in Community Series: FOD, FOM, SWD, SWM (Buildings are not SWH)	Tree cavities and snags; deciduous or mixed stands with >10/ha >25cm dbh trees, Silver-haired Bats prefer forests with 21 snags/ha	<b>Studies Confirm:</b> confirmed use by >10 Big Brown Bats <b>or</b> >5 adult female Silver-haired Bats  <b>Area of SWH Defined As:</b> entire woodland/forest ELC <b>or</b> Ecoelement containing maternity colonies	Woodland areas on and adjacent to the study area have the potential to support this habitat function. See report for further discussion.
<b>Turtle Wintering Areas</b>	Midland Painted Turtle  <b>Special Concern:</b> Northern Map Turtle, Snapping Turtle	<b>Snapping and Midland Painted Turtles:</b> Community classes SW, MA, OA, SA, ELC Community Series FEO, BOO <b>Northern Map Turtle:</b> open water areas with current (Not sewage lagoons or stormwater ponds)	Water deep enough to not freeze, soft mud substrates; permanent water bodies, large wetlands, bogs or fens with adequate Dissolved Oxygen	<b>Studies Confirm:</b> 5 over-wintering Midland Painted Turtles, <b>or</b> 1 or more overwintering Northern Map Turtles or Snapping Turtles  <b>Area of SWH Defined As:</b> ELC with overwintering turtles, if site is within a stream or river only the deep-water pool is protected	The study area does not contain any features that may support this habitat function. Swamp ecosites do not support sufficient depths of standing water. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
<b>Reptile Hibernaculum</b>	<b>Snakes:</b> Eastern Gartersnake, Northern Watersnake, Northern Red-bellied Snake, Northern Brownsnake, Smooth Green Snake, Northern Ring-necked Snake  <b>Special Concern:</b> Five-lined Skink, Milksnake, Eastern Ribbonsnake	<b>Snakes:</b> any forest ecosite other than very wet ones; talus, rock barrens, crevice, cave, and alvar sites; rock piles or slopes, stone fences, crumbling foundations <b>Skink:</b> Community Series FOD, FOM and Ecosites FOC1, FOC3	<b>Snakes:</b> sites with access below the frost line, wetlands with hummocks  <b>Skink:</b> mixed forests with rock outcrops providing cover rock overlaying granite bedrock with fissures	<b>Studies Confirm:</b> use by ≥5 individuals from one species <b>or</b> use by individuals from ≥2 species; congregation of ≥5 individuals from one species <b>or</b> individuals from ≥2 species near potential hibernacula; if SC species are present site is SWH; any active skink hibernaculum  <b>Area of SWH Defined As:</b> feature containing hibernacula plus 30m radius	Site investigations did not document any evidence of this function within the study area. No further assessment provided - not SWH.
<b>Colonially-nesting Bird Breeding Habitat (Bank and Cliff)</b>	Cliff Swallow, Northern Rough-winged Swallow	Found in CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1	Exposed banks, sandy hills, borrow pits, steep slopes, sand piles that are undisturbed or naturally eroding  Does not include man-made structures or active aggregate pits	<b>Studies Confirm:</b> 1 or more nesting sites with ≥8 Cliff Swallow pairs <b>and/or</b> Rough-winged Swallow Pairs during the breeding season  <b>Area of SWH Defined As:</b> colony and 50m radius from peripheral nests	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
<b>Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)</b>	Great Blue Heron, Black-crowned Night Heron, Great Egret, Green Heron	SWM2, SWM3, SWM5, SWM6, SWD1, SWD2, SWD3, SWD4, SWD5, SWD6, SWD7, FET1	Live or dead standing trees in wetlands, lakes, islands, peninsulas, may use shrubs or other emergent vegetation; most nests 11-15m from ground	<b>Studies Confirm:</b> ≥5 active Great Blue Heron or other listed species nests  <b>Area of SWH Defined As:</b> colony plus 300m radius <b>or</b> extent of forest ecosite containing colony <b>or</b> any island <15ha with a colony	The study area does not contain any features that may support this habitat function. No large sticks nests or indicator species observed. No further assessment provided - not SWH.



Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
<b>Colonially-nesting Bird Breeding Habitat (Ground)</b>	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	MAM1-6, MAS1-3, CUM, CUT, CUS  <b>Brewer's Blackbird:</b> close to watercourses in open fields	<b>Gulls and Terns:</b> rocky islands or peninsulas in open water, marshy areas  <b>Brewer's Blackbird:</b> near streams and irrigation ditches in farmland	<b>Studies Confirm:</b> >25 active nests of Herring Gulls or Ring-billed Gulls, >5 active nests of Common Terns, >2 active nests of Caspian Terns, ≥5 Brewer's Blackbird pairs, any active nesting colony of Little Gulls or Great Black-backed Gulls  <b>Area of SWH Defined As:</b> colony plus 150m radius <b>or</b> extent of ecosites containing colony <b>or</b> any island <3ha	The study area does not contain any features that may be expected to support this habitat function. No further assessment provided - not SWH.
<b>Migratory Butterfly Stopover Areas</b>	Painted Lady, Red Admiral  <b>Special Concern:</b> Monarch	One Community Series each from field (CUM, CUT, CUS) and forest (FOC, FOD, FOM, CUP)	Minimum 10ha combination of field and forest located within 5km of Lake Ontario	<b>Studies Confirm:</b> >3000 Monarch Use Days (days a site is used * the number of individuals), <b>or</b> >3000 Monarch Use Days with Painted Ladies or Red Admirals present  <b>Area of SWH Defined As:</b> n/a	The study area is located outside of applicable distance from Lake Ontario shoreline. No further assessment provided - not SWH.
<b>Landbird Migratory Stopover Areas</b>	All migratory songbirds and raptors	Community Series FOC, FOM, FOD, SWC, SWM, SWD	Woodlots > 10ha within 5km of Lake Ontario; significance increases with proximity to shoreline and size	<b>Studies Confirm:</b> use by > 200 birds/day with > 35 species, <b>and</b> at least 10 species recorded on 5 different survey days  <b>Area of SWH Defined As:</b> n/a	The study area is located outside of applicable distance from Lake Ontario shoreline. No further assessment provided - not SWH.
<b>Deer Yarding Areas</b>	White-tailed Deer	Community Series FOM, FOC, SWM, SWC and Ecosites CUP2, CUP3, FOD3, CUT	<b>Stratum I:</b> coniferous forest with >60% canopy cover  <b>Stratum II:</b> mixed or deciduous forest surrounding Stratum I	<b>Confirm Studies:</b> mapping by MNRF  <b>Area of SWH Defined As:</b> n/a	The study area is not contained in a mapped Deer Yarding Area. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Deer Winter Congregation Areas	White-tailed Deer	Community Series FOC, FOM, FOD, SWC, SWM, SWD, conifer plantations	Woodlots > 100ha, smaller woodlots can be SWH based on MNRF assessment	<b>Confirm Studies:</b> mapping by MNRF, all woodlots >100ha are significant  <b>Area of SWH Defined As:</b> n/a	NA - see category above.
<b>Category 2: Rare Vegetation Communities</b>					
Cliffs and Talus Slopes		Community Series TAO, CLO, TAS, CLS, TAT, CLT	Any cliff > 3m or talus slope	<b>Confirm Studies:</b> any ELC for cliffs or talus slopes  <b>Area of SWH Defined As:</b> n/a	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Sand Barren		SBO1, SBS1, SBT1	Exposed sand, sparsely vegetated, <60% tree cover	<b>Confirm Studies:</b> confirmed ELC for Sand Barrens, <50% exotic vegetative cover  <b>Area of SWH Defined As:</b> n/a	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Alvar	<b>Indicator species:</b> Carex crawei, Panicum philadelphicum, Eleocharis compressa, Scutellaria parvula, Trichostema brachiatum	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Level calcerous bedrock, rock pavement, overlain by thin veneer of soil, <60% tree cover	<b>Confirm Studies:</b> >0.5ha, at least 4 indicator species, <50% exotic vegetative cover, in good condition  <b>Area of SWH Defined As:</b> n/a	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Old Growth Forest		Community Series FOD, FOC, FOM, SWD, SWC, SWM	Woodland ≥30ha with at least 10ha interior habitat with 100m edge buffer	<b>Studies Confirm:</b> dominant trees are >140 years old, no recognizable forestry activities  <b>Area of SWH Defined As:</b> combined ecosites or ecoelements with old growth characteristics	The estimated age of on-site woodlands is not sufficient to be considered old growth. On-site woodland are represented by mature second growth, but with evidence of forest management activities. No further assessment provided - not SWH.
Savannah	See Appendix N of the Significant Wildlife Habitat Technical Guide.	TPS1, TPS2, TPW1, TPW2, CUS2	Tallgrass prairie with 25-60% tree cover, cannot be remnant site	<b>Studies Confirm:</b> ≥1 Savannah indicator species <b>and</b> <50% exotic vegetative cover  <b>Area of SWH Defined As:</b> ecosite	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
<b>Tallgrass Prairie</b>	See Appendix N of the Significant Wildlife Habitat Technical Guide.	TPO1, TPO2	Dominated by prairie grasses, <25% tree cover	<b>Studies Confirm:</b> ≥1 Prairie indicator species  <b>Area of SWH Defined As:</b> ecosite	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
<b>Other Rare Vegetation Communities</b>		Provincially Rare S1, S2, and S3 vegetation communities in Appendix M of the SWHTG	Beaches, Fens, Forest, Marsh, Barrens, Dunes, Swamps	<b>Studies Confirm:</b> confirmed ELC from Appendix M of the SWHTG  <b>Area of SWH Defined As:</b> ELC	No rare vegetation communities have been identified within the study area. No further assessment provided - not SWH.
<b>Category 3: Specialized Habitats for Wildlife</b>					
<b>Waterfowl Nesting Area</b>	American Black Duck, Northern Pintail, Northern Shoveler, Gadwall, Blue-winged Teal, Green-winged Teal, Wood Duck, Hooded Merganser, Mallard	Upland habitat adjacent to MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, SWD4	Area extending 120m from >0.5ha wetland, <b>or</b> a cluster of ≥3 <0.5ha wetlands, adjacent upland areas at least 120m wide, trees >40cm dbh with nesting cavities	<b>Studies Confirm:</b> ≥3 nesting pairs from listed species excluding Mallards, <b>or</b> ≥10 nested pairs including Mallards, <b>or</b> active nesting American Black Ducks  <b>Area of SWH Defined As:</b> wetland and 120m boundary, boundary may vary to provide nesting habitat	The study area includes areas of coniferous and mixed swamp; however, there are no areas of large open pools or observed large cavity trees adjacent to the wetland edge. No evidence of waterfowl was documented during the on-site investigations. No further assessment provided - not SWH.
<b>Bald Eagle and Osprey Nesting, Foraging and Perching Habitat</b>	Osprey  <b>Special Concern:</b> Bald Eagle	Community Series FOD, FOM, FOC, SWD, SWM, SWC	Forested shorelines along lakes, ponds, rivers, or wetlands <b>Osprey:</b> nest at the top of tree <b>Eagle:</b> nest in notch of super canopy tree (Does not include nests on man-made structures)	<b>Studies Confirm:</b> one or more active nests in area, nest must be used annually, must be inactive ≥3 years to be non-significant  <b>Area of SWH Defined As:</b> Osprey nest and 300m radius or contiguous woodland stand Bald Eagle nest and 400-800m radius plus perching and foraging habitat	The study area does not contain any features that may be expected to support this habitat function. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
<b>Woodland Raptor Nesting Habitat</b>	Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Red-shouldered Hawk, Barred Owl, Broad-winged Hawk	All forested Ecosites, also SWC, SWM, SWD, CUP3	Natural or conifer plantation stands >30ha with >10ha of interior habitat with 200m edge buffer, stick nests found in conifer, deciduous, or mixed forests, Coopers Hawk nest on forest edges	<b>Studies Confirm:</b> 1 or more active nests from listed species  <b>Area of SWH Defined As:</b> active Red-shouldered Hawk, Northern Goshawk nest and 400m radius or 28ha of suitable habitat; or Active Barred Owl nest and 200m radius; or Active Broad-winged Hawk, Coopers Hawk nest and 100m radius; or Active Sharp-shinned Hawk nest and 50m radius	The local landscape is likely to support woodland raptor habitat, and single stick nest was observed in the study area, which may belong to a nesting raptor. However, the study area itself does not support interior woodland habitat structure. Therefore, while woodland raptors may use the study area to nest, the lack of interior woodland does not meet candidate criteria for significance. No further assessment provided - not SWH.
<b>Turtle Nesting Areas</b>	Midland Painted Turtle  <b>Special Concern:</b> Northern Map Turtle, Snapping Turtle	MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, BOO1, FEO1	Close to water with open, sunny areas containing sand and gravel turtles can dig in, does not include road shoulders	<b>Studies Confirm:</b> ≥5 nesting Midland Painted Turtles, <b>or</b> ≥1 nesting Northern Map Turtle or Snapping Turtle  <b>Area of SWH Defined As:</b> area/areas with exposed mineral soils plus 30-100m radius, including travel routes from wetland to nesting area	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
<b>Seeps and Springs</b>	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp.	Any forested ecosite near headwaters	Forested area with <25% meadow/field/pasture within headwaters of river or stream	<b>Studies Confirm:</b> ≥2 seeps/springs  <b>Area of SWH Defined As:</b> area containing seeps/springs	The study area supports seepage zones associated with lower slopes and wetlands. See report for further discussion.
<b>Amphibian Breeding Habitat (Woodland)</b>	Eastern Newt, Blue-spotted Salamander, Spotted Salamander, Gray Treefrog, Spring Peeper, Western Chorus Frog, Wood Frog	Community Series FOC, FOM, FOD, SWC, SWM, SWD	Wetland, pond, pool >500m <sup>2</sup> within 120m of a woodland	<b>Studies Confirm:</b> breeding by ≥1 listed newt/salamander species <b>or</b> ≥2 listed frog species with at least 20 adults or egg masses <b>or</b> ≥2 listed frog species with Call Level Codes of 3  <b>Area of SWH Defined As:</b> wetland plus 230m radius of woodland, including travel corridor	The study area supports tree wetlands that could provide breeding habitat for various amphibians. See report for further discussion.



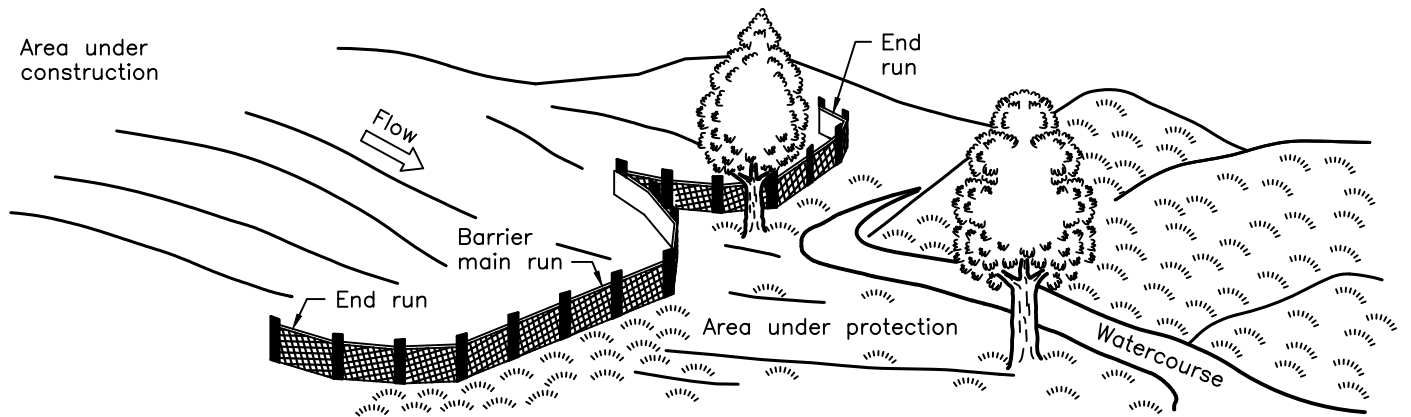
Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
<b>Amphibian Breeding Habitat (Wetlands)</b>	Eastern Newt, American Toad, Spotted Salamander, Four-toed Salamander, Blue-spotted Salamander, Gray Treefrog, Western Chorus Frog, Northern Leopard Frog, Pickerel Frog, Green Frog, Mink Frog, Bullfrog	ELC Classes SW, MA, FE, BO, OA, SA	Wetlands >500m <sup>2</sup> , bullfrogs require permanent waterbodies	<b>Studies Confirm:</b> breeding by ≥1 listed newt/salamander species <b>or</b> ≥2 frog/toad species with at least 20 adults or egg masses <b>or</b> ≥2 frog/toad species with Call Level Codes of 3  <b>Area of SWH Defined As:</b> ELC ecosite and shoreline are SWH	N/A - see category above.
<b>Woodland Area-Sensitive Bird Breeding Habitat</b>	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  <b>Special Concern:</b> Cerulean Warbler, Canada Warbler	Community Series FOC, FOM, FOD, SWC, SWM, SWD	Habitats where interior forest birds are breeding, typically forests >30ha and >60 years old; interior forest habitat is at least 200 m from forest edge habitat.	<b>Studies Confirm:</b> breeding pairs/nesting by ≥3 listed species, any site with breeding Cerulean Warblers or Canada Warblers  <b>Area of SWH Defined As:</b> n/a	The study area does not contain any features that may support this habitat function. Our on-site investigations did document the presence of multiple indicator species; however, the study area itself does not support interior woodland habitat structure. Therefore, while area-sensitive woodland birds may use the study area to nest, the lack of interior woodland does not meet candidate criteria for significance. No further assessment provided - not SWH.
<b>Category 4: Habitats of Species of Conservation Concern</b>					
<b>Marsh Bird Breeding Habitat</b>	American Bittern, Virginia Rail, Sora, Common Moorhen, American Coot, Pied-billed Grebe, Marsh Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan  <b>Special Concern:</b> Black Tern, Yellow Rail	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1, SAM1, SAF1, FEO1, BOO1  <b>Green Heron:</b> SW, MA, CUM1	Shallow water with emergent vegetation  <b>Green Heron:</b> edge of sluggish streams, ponds, marshes sheltered by shrubs and trees	<b>Studies Confirm:</b> ≥5 nesting pairs of Sedge Wren or Marsh Wren <b>or</b> 1 pair of Sandhill Cranes, <b>or</b> breeding by ≥5 of the listed species, <b>or</b> ≥1 pairs of Trumpeter Swans, Black Terns, Green Herons, or Yellow Rails  <b>Area of SWH Defined As:</b> area of ELC used for breeding	The study area does not contain any features that may be expected to support this habitat function. No further assessment provided - not SWH.
<b>Open Country Bird Breeding Habitat</b>	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier, Savannah Sparrow  <b>Special Concern:</b> Short-eared Owl	CUM1, CUM2	Grassland areas >30ha, includes cultural fields and meadows, agricultural land not used for farming in last 5 years	<b>Studies Confirm:</b> nesting/breeding of ≥2 listed species <b>or</b> ≥1 breeding Short-eared Owls  <b>Area of SWH Defined As:</b> contiguous grassland ELC	The study area does not contain any features that may be expected to support this habitat function. Open field areas to the south support agricultural uses. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
<b>Shrub/Early Successional Bird Breeding Habitat</b>	<b>Indicator Species:</b> Brown Thrasher, Clay-coloured Sparrow  <b>Common Species:</b> Field Sparrow, Black-billed Cuckoo, Eastern Towhee, Willow Flycatcher  <b>Special Concern:</b> Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large fields >10ha succeeding to shrub and thicket, shrub thickets >10ha	<b>Studies Confirm:</b> nesting/breeding of ≥1 Indicated Species <b>and</b> at least 2 Common Species, <b>or</b> breeding Yellow-breasted Chat or Golden-winged Warbler  <b>Area of SWH Defined As:</b> contiguous field/thicket ELC	The study area does not contain any features that may be expected to support this habitat function. No further assessment provided - not SWH.
<b>Terrestrial Crayfish</b>	Chimney or Digger Crayfish, Devil or Meadow Crayfish	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SWD, SWT, SWM, CUM1 with inclusions of meadow marsh or swamp	Wet meadow/shallow marsh edges	<b>Studies Confirm:</b> ≥1 individuals or burrows in suitable habitat  <b>Area of SWH Defined As:</b> area of ELC with burrows	No terrestrial crayfish burrows observed during on-site investigations.
<b>Special Concern and Rare Wildlife Species</b>	Species tracked by NHIC	n/a	ELC surrounding recorded occurrence	<b>Studies Confirm:</b> confirmation species is present  <b>Area of SWH Defined As:</b> area of habitat to the finest ELC scale that protects habitat form and function	The study area has the potential to support habitat for one or more special concern or rare species. See report for further discussion.
<b>Category 5: Animal Movement Corridors</b>					
<b>Amphibian Movement Corridors</b>	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	Any ecosite associated with water	Corridor linking summer and breeding habitat	<b>Studies Confirm:</b> confirmed Amphibian Breeding Habitat-Wetland, at least 15m of vegetation on both sides of waterway <b>or</b> up to 200m wide  <b>Area of SWH Defined As:</b> corridor is part of buffer surrounding Amphibian Breeding Habitat-Wetland	N/A

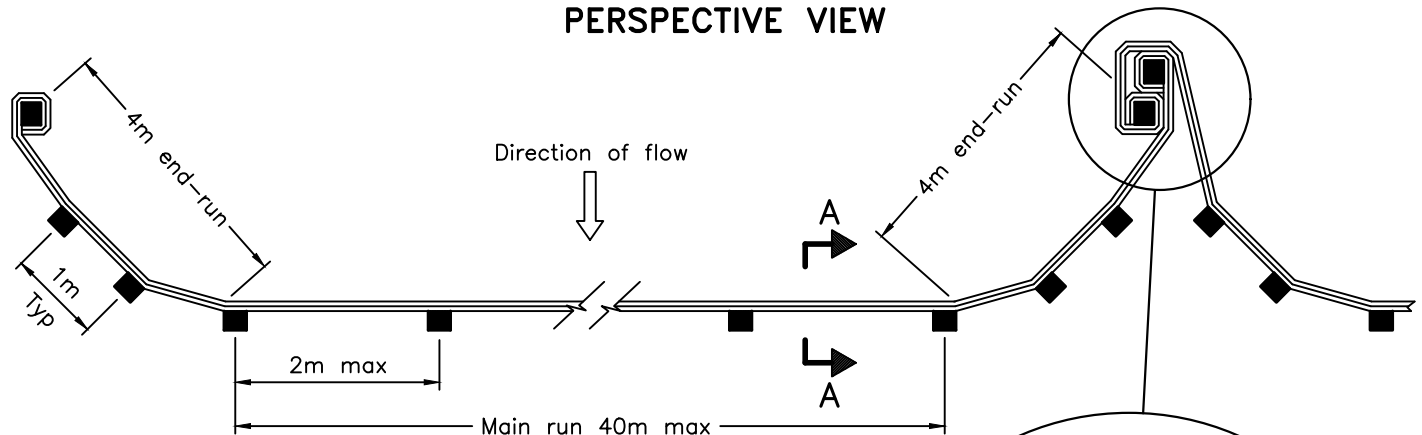
Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Deer Movement Corridors	White-tailed Deer	Any forested ecosite	Identified by MNRF, follow riparian areas, woodlots, ravines, or ridges	<b>Studies Confirm:</b> confirmed Deer Wintering Habitat  <b>Area of SWH Defined As:</b> corridors at least 200m wide with gaps <20m, with 15m of vegetation on both sides of waterways	N/A
<b>Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 6E</b>					
6E-14 Mast Producing Areas	Black Bear	Community Series FOM, FOD	Woodland ecosites >30ha with mast-producing tree species (cherry, oak, beech)	<b>Studies Confirm:</b> woodlands >30ha with 50% composition of FOM1-1, FOM2-1, FOM3-1, FOD1-1, FOD1-2, FOD2-1, FOD2-1, FOD2-3, FOD2-4, FOD4-1, FOD5-2, FOD5-3, FOD5-7, FOD6-5  <b>Area of SWH Defined As:</b> n/a	N/A
6E-17 Lek	Sharp-tailed Grouse	CUM, CUT, CUS	Grassland >15ha adjacent to shrubland, grassland >30ha adjacent to deciduous woodland	<b>Studies Confirm:</b> confirmed courtship activities  <b>Area of SWH Defined As:</b> field/meadow ecosites plus 200m radius	N/A

## **Appendix 6.** Example Sediment Fence Standard.

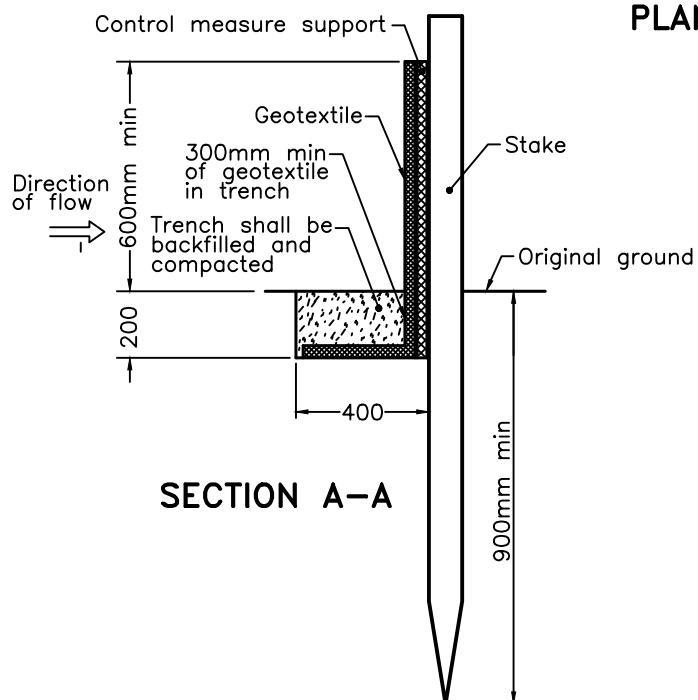




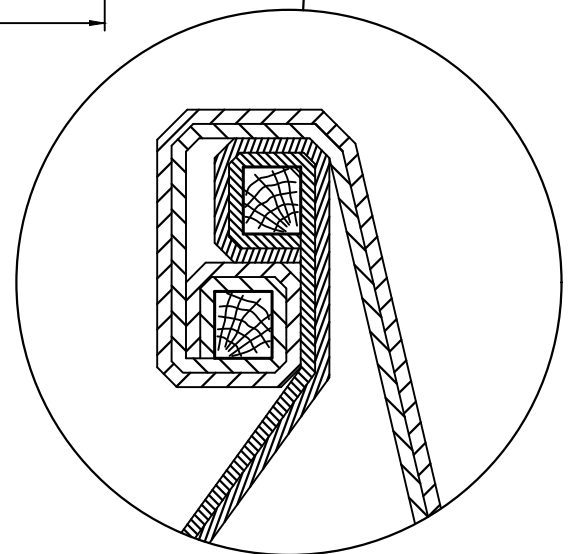
PERSPECTIVE VIEW



PLAN



SECTION A-A



JOINT DETAIL

NOTE:

A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

HEAVY-DUTY  
SILT FENCE BARRIER

Nov 2021

Rev 3



OPSD 219.130