

Scoped Environmental Impact Study

610 Syer Line
Township of Cavan-Monaghan

August 2025



Prepared For:	Kelly Jones
Prepared By:	Aster Environmental Services Ltd.
Date:	Aug 19, 2025
Project ID:	AES-25036

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Kelly Jones

Sent to: kellyjones@nexicom.net

**Technical Report: Environmental Impact Study, 610 Syer Line, Township of Cavan-Monaghan
(County of Peterborough)**

Dear Kelly:

Aster Environmental Services Ltd. has prepared the attached report to address 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, if/where applicable, 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.

Mike Francis

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1) **INTRODUCTORY CONTEXT & BACKGROUND**

Aster Environmental Services Inc. (hereafter 'Aster Environmental' or 'AES') was retained by Kelly Jones (hereafter 'proponent') to prepare an Environmental Impact Study (EIS) for proposed development on a property described as 610 Syer Line in the Township of Cavan-Monaghan (the 'subject property'; see **Figure 1**). The property measures approximately 23 ha and is located in a rural area of the Township represented by agricultural land uses, rural residential properties, and mixed natural cover.

To summarize our understanding of planning context, AES has reviewed various land use planning schedules applicable to the local jurisdiction. According to Schedule A (Map D-2) of the Township's Zoning Bylaw, the subject property is zoned for a combination of 'Agricultural' and 'Natural Linkage' land uses. The Township's Official Plan (OP) similarly designates the subject property as a combination of Agricultural and Natural Linkage. Schedule B to the OP identifies a portion of two natural heritage features within the property: 'Watercourse' and 'Significant Woodland'. The subject property is also contained within the watershed-based regulatory jurisdiction of the Otonabee Region Conservation Authority (ORCA), with a small portion of the property regulated by this agency under 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 is mostly represented by a combination of existing residential space and 'old-field' type, fallow agricultural fields. The property also contains some mixed successional/natural cover, including small portions of woodland, some of which is reflected in applied planning designations. The woodland area associated with the property also extends onto the adjacent parcels to the north and east. On-site fields contain multiple ravine-type features, one of which is mapped as containing the origins of a drainage feature. Other semi-natural areas are present, including thicket areas and mixed successional vegetation surrounding the existing residential areas. All areas of natural cover on the local landscape have the potential to support various wildlife habitat functions, including habitat for species protected under the provincial *Endangered Species Act*.

It is our understanding that this report has been requested by the Township of Cavan-Monaghan and/or the County of Peterborough to accompany an application for consent to create one (1) new residential building lot. At this stage, there are no specific plans to develop structures (dwellings or otherwise) on the created lot; however, conceptual building locations have been identified as a result of this review. Any development on the created lot would need to be serviced via private well and waste-water system. It is understood that the proposed severance would require an amendment to the local Zoning Bylaw, due to current classification of the lands for agricultural use.

The initial goal of this assessment is to determine the presence, extent, and function of natural heritage features distributed throughout a defined 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 recommendation for identifying a developable portion of the proposed new lot, then reviews any potential impacts resulting from such development.



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 or 'study area' for this assessment is the subject property on which development is proposed (see **Figure 1** and **Figure 2**). General, cursory consideration may also be given to lands within 120 m from the boundary of the subject property. 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). 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.

2.2 **Review of Background Information Sources**

Background biophysical information pertaining to the study area was collected from a variety of sources. These include:

- **Township of Cavan-Monaghan Official Plan & Schedules** (2013)
- **County of Peterborough Official Plan & Schedules** (2025 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: 17QJ0095) and adjoining squares); accessed Aug 2025, at: 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 Aug 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 Aug 2025 at: 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-especies/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/ffhpp-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 Aug 2025 at: <http://www.ontario.ca/environment-and-energy/species-risk-ontario-list>).
- **iNaturalist** (accessed Aug 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 natural heritage features and functions potentially associated with the subject property and/or study area.

2.3.1 Functional Habitat Assessment

One of the key elements of any environmental/natural heritage assessment is a review of fish and/or wildlife habitat. In conducting such a review, AES 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 includes a review of existing background mapping to determine if significant features have been previously identified by the planning authority. We then consider the potential for significant species to occur based on general habitat requirements, background occurrence records, and published report. 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. This is considered far more practical than immediately deferring to targeted biophysical surveys that may be superfluous in achieving the goal of the study. This approach is suitable to apply to most small-scale and/or low-risk development applications.

2.3.2 Targeted Wildlife Assessment

In certain circumstances, AES completes 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 becomes critical to confirm presence/absence to inform mitigation planning or potential authorization requirements (e.g., *Endangered Species Act* permits).

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 minimal opportunity for increased 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. The



only targeted form of wildlife survey involved a scoped sampling of breeding bird diversity (see **Section 2.3.2.1** below).

2.3.2.1 Breeding Bird Survey

AES conducted two morning ‘point count’ surveys following general standards of the Ontario Breeding Bird Atlas (OBBA) protocol ([Bird Studies Canada et al. 2001](#)). A third, scoped survey was undertaken with specific focus on approximating the location of potential nests for protected grassland birds. The surveys were conducted at the appropriate time of day (between dawn and about 5 hours after dawn), and during appropriate weather conditions (no rain, wind speed ≤ 3 on the Beaufort Wind Scale), with individual point counts lasting approximately 10 minutes each. The purpose of this exercise is two-fold: to identify the presence of potential threatened/endangered bird species, and/or to identify species which may indicate the presence of SWH associated with one or more vegetation communities. The timing, conditions, and other details of breeding bird surveys is provided in **Table 1**. Further discussion on the results of this work is provided in **Section 3**, with potential additional implications pertaining to development constraints discussed in further sections as appropriate.

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 Ecoregions 6E and 7E. ELC defines ecological units or communities based on bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect), and corresponding vegetation. The key value of applying the ELC system in an EIS context is the potential to identify communities that are known to be rare/sensitive or otherwise likely to support certain other natural heritage features or functions (e.g., rare species or specialized wildlife habitat).

In our experience, the ELC classification key is not comprehensive, and improvised classifications are occasionally used to describe communities, e.g., anthropogenic features. Moreover, given the time demand required to conduct the ELC protocol, it is commonplace to employ a scoped, streamlined approach to ELC for the purpose of conducting site-specific EIS work. In most cases, vegetation communities are pre-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 boundaries were delineated in accordance with the “50% wetland vegetation rule” as directed by the Ontario Wetland Evaluation System (OWES), where feasible.

2.3.4.1 Vascular Plant Survey

Vascular plants are typically inventoried during vegetation community classification efforts and other on-site surveys. Additional observations may be recorded incidentally as part of any other field data collection efforts. For this specific study, vegetation surveys were undertaken during the late spring and early summer seasons, the dates of which are listed in **Table 1**.



AES maintains a working list of observed vascular plant species and collects 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 field data collection activities undertaken in 2025. 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 migratory birds 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**.

Table 1 below summarizes the details of field investigations and primary tasks undertaken in support of the EIS.

Table 1. Site Investigation Summary.

Date	Primary tasks	Survey Conditions	Person Hours
June 12, 2025	General site review, drainage review, ELC, plant inventory, bird point count survey #1	Air Temperature: 13-19°C; Beaufort Wind: 1; Cloud Cover: 0-50%; Precipitation: N/A	6
July 2, 2025	General site review, drainage review, ELC, plant inventory, bird point count survey #2	Air Temperature: 19-26°C; Beaufort Wind: 1-2; Cloud Cover: 0%; Precipitation: N/A	4
July 10, 2025	Scoped grassland bird nest approximation survey	Air Temperature: 20-22°C; Beaufort Wind: 1; Cloud Cover: 0%; Precipitation: N/A	1.5

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. The subject property is located outside of any targeted provincial planning areas, e.g., Greenbelt Plan, etc. Instead, planning in this jurisdiction is administered under both the local (Township of Cavan-Monaghan) and regional (County of Peterborough) Official Plans. Therefore, the terminology used in this report is consistent with those natural heritage features receiving protections under either OP.

Notably, the Township OP identifies natural heritage features as either ‘Natural Core Areas’ or ‘Natural Linkage Areas’. Core areas encompass all of the key natural heritage features (KNHFs)



defined under the Township OP policies, while linkage areas are intended to capture a broad buffer around such features, facilitating areas for movement of plants and wildlife. This report provides an itemized assessment of the potential presence/absence of each KNHF identified within the Township OP. The purpose of this approach is to support an organized review by the approval authority. Such KNHFs, as defined under the Township OP, include the following:

- Wetlands
- Permanent & Intermittent Streams
- Fish Habitat
- Seepage Areas & Springs
- Lakes
- Sand Barrens, Savannahs, Tallgrass Prairies, and Alvars
- Areas of Natural and Scientific Interest
- Significant Valleylands
- Significant Woodlands
- Significant Habitat of Endangered Species and Threatened Species
- Significant Wildlife Habitat (encompasses habitat for special concern species)

In addition to the above-listed core features, the KNHF assessment provides a discussion of linkage functions.

The listed features are assessed in accordance with applicable technical guidance documents, including but limited to the following:

- *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).
- *Department of Fisheries and Oceans Fish and Fish Habitat Protection Program guidelines.*
- *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 study site is characterized through an existing conditions assessment, site characteristics are defined for their significance and sensitivities. The impact assessment then focuses on predicting how features may be subject to change, degradation, or outright elimination through the life of a development.

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 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.

Our 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 presented 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
- Provincial *Conservation Authorities Act*, R.S.O. 1990, c. C.27
- Township of Cavan-Monaghan Official Plan, 2013

3) EXISTING CONDITIONS – STUDY AREA CHARACTERIZATION

3.1 General Site Conditions & Land Uses

The subject property measures approximately 23 ha, fronting onto a single municipal roadway known as Syer Line. The property supports an existing residential dwelling and associated amenity space, but is otherwise represented by fallow agricultural fields and successional natural cover. The property reflects a variety of past land uses, including a large area in the east half of the parcel that was apparently used as an aggregate/borrow pit for construction of a local highway. Most or all of the property was formerly used as livestock pasture; however, the sterile conditions apparently did not support sufficient quantity or quality of forage to sustain long-term pasturing. Most of the property is now used for various recreational purposes, including hunting and general access, with maintained walking trails throughout.

From a landscape perspective, the property is surrounded by a mix of land uses that are similar to the property, including agriculture, rural residential, and mixed natural cover that supports outdoor recreation. There is a railway corridor bordering the northern boundary of the property, and the provincial Highway 115 corridor is located ~1.5 km to the southeast. The nearest local settlement,



Cavan, is located ~2 km to the northeast, while the nearest major City center, Peterborough, is located ~13 km to the northeast.

3.2 Physiography, Topography, and Drainage

3.2.1 Physiographic Context

The study area is contained within the physiographic region known as the Peterborough Drumlin Fields. This is a broad-spanning region of glacial till plain stretching from Hastings to Simcoe County, bordering the northern boundary of the Oak Ridges Moraine. The landscape is represented by rolling till plains and hundreds of variable sized drumlins. The subject property is set within a localized area of sand plain on a broad north-facing slope, with drumlins being locally sparse in comparison to the surrounding landscape.

According to the Ontario Soil Survey (AgMaps 2025), soils associated with the study area are described as a combination of loams, including Schomberg Clay Loam and Otonabee Loam, as well as an area of Pontypool Sand encompassing a large area in the eastern half of the property (Gillespie & Acton 1981). Soils in the Pontypool series are generally composed of deep sands over till, supporting rapid infiltration. These soils generally occur in association with mixed slope classes and are highly prone to erosion. This mapped soil type overlaps with the area of former aggregate pit on the property, with conditions here appearing very sterile.

Schomberg Clay Loams form on smooth-moderately sloping topography and support good external drainage and slow internal drainage. This soil type is represented along the northern portion of the property in association with a fringe of well-established, second-growth tree cover. Otonabee Loams encompass the majority of the property, centered in the southwestern portion of the parcel. These soils are formed on calcareous till and support good drainage. Although considered productive agricultural soils, they are also vulnerable to topsoil loss through surface erosion, especially where they occur on moderate to steep slopes (as is partly the case on the property).

3.2.2 Topographic Context

The property contains an interesting topographic context, including some dramatic topographical features. There are a mix of slope classes, including some very steep slopes, as well as two well-defined ravines. The entirety of the property is contained within a broad, landscape-scale slope to the north, with the highest elevations (~268 m) occurring along the southern property limit, and the lowest (~237 m), at the northern property limit. This >30 m drop in elevation occurs across an averaged distance of ~400 m, for an average slope of 7-8%. However, this drop in elevation is not equally distributed, with the slope increasing toward the north.

Some irregular slope features occur throughout the property, including an area of steep slopes (~20%) directly west and northwest of the existing dwelling. This descends in an eastward direction into a relatively flat 'bowl' that is understood to have previously been used for aggregate extraction. The two noted ravine features in the center and western half of the property also support irregular breaks in the broader northward slope. The feature in the center of the property is notably wider and contains a small area of established forest cover. The smaller ravine occurs in the western half of the property and is very narrow, an apparent erosion scar that has formed along a headwater drainage path.

Elevations on the broader local landscape follow a similar pattern, with lands generally sloping northward toward the valley of Cavan Creek. Irregular features and mixes slope classes are well represented locally, including sparse occurrence of a few narrow drumlin features to the east.



3.2.3 Drainage Context

The subject property is contained within the sub-watershed of Cavan Creek, part of the broader drainage basin of the Otonabee River. The headwaters of Cavan Creek originate from the northern slopes of the Oak Ridges Moraine, as well as the adjacent drumlinized till plains. These dramatic landscape features support abundant groundwater discharge that form watercourses with many small branches and tributaries on the local landscape (see **Figure 1**).

Background mapping resources depict a single drainage feature as occurring within the subject property (see **Figure 2**), and a second feature originating a short distance to the east, near the southeast corner of the parcel. The feature mapped on the property appears to be an ephemeral headwater drainage pathway, fed by localized surface inputs and concentrated into a narrow north-south oriented ravine. Site investigations did not document any flow within this feature, nor any sign of a defined bed/channel. It is assumed that flows are short-lived during the spring freshet and following larger storm events, but substantial enough to have eroded the incised ravine feature to a depth of several meters.

The feature mapped as occurring to the southeast of the property is likely also represented by a headwater-type flow regime; however, this feature was not assessed directly. All other drainage on the property is assumed to be primarily facilitated by infiltration and diffuse surface flows in a northerly and easterly direction.

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.

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, with a full list of observed plants provided in **Appendix 3**. 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. Various photos in **Appendix 2** can be viewed to support an understanding of on-the-ground conditions.

3.3.1 ANTH: Anthropogenic – Residential Area

This portion of the property supports the existing dwelling structure and surrounding residential amenity space. This includes the access driveway, parking areas, material storage areas, and broad sections of disturbed/maintained ground cover. This polygon extends to capture a small structure and associated clearing along the eastern property boundary, presumably a former livestock barn.

3.3.2 CUM1: Mineral Cultural Meadow

This ecosite is represented by a complex of successional 'old field' vegetation, an assumed former pasture field that appears to have been inactive in recent years. Most of this polygon is represented by a mix of grasses and forbs, dominated by Smooth Brome (*Bromus inermis*), Orchard Grass (*Dactylis glomerata*), and Goldenrod (*Solidago canadensis*, *S. juncea*), with mixed lesser associate species such as Asters (*Symphyotrichum novae-angliae*, *S. ericoides*, *S. cordifolium*), Hawkweeds (*Pilosella* spp.), Oxeye Daisy (*Leucanthemum vulgare*), Clovers (*Trifolium* spp.), and growing patches of invasive Dog-Strangling Vine ('DSV'; *Vincetoxicum rossicum*).



There is some variation throughout the polygon, with notably sparse growth in the dry, sterile soils found in the eastern half of the property. In the western half of the property, growth appears more robust, but also subject to considerable maintenance. There is a swath of the field in the southeastern corner of the property (up to ~3 ha) that appears subject to regular maintenance/mowing (see **Figure 2**). There is also some minor shrub cover in the western half of this ecosite, including ~10% of low regeneration of species such as Apple (*Malus sp.*), Buckthorn (*Rhamnus cathartica*), Autumn Olive (*Elaeagnus umbellata*), Red Cedar (*Juniper virginiana*), and trace Common Juniper (*J. communis*).

In general, this ecosite is very dry and sterile, with marginal potential as pastureland. In addition to some larger maintained swaths, there is a network of mowed trails throughout the field that supports general walking and recreational vehicle access. As noted, the prominence of invasive DSV is notable and likely to continue spreading throughout the ecosite. In certain sections of the field, this species is progressing to be the dominant vegetation cover, forming large, mono-cultural patches and outcompeting pasture grasses and native forbs.

3.3.3 HE: Hedgerow

The western property boundary supports a narrow hedgerow, containing a mix of open-grown deciduous tree cover and dense shrub/vine growth. Common species in the hedge include Sugar Maple (*Acer saccharum*), Elm (*Ulmus americana*), Basswood (*Tilia americana*), Buckthorn, Lilac (*Syringa vulgaris*), Cherry (*Prunus serotina*, *P. virginiana*), Grape (*Vitis riparia*), Thicket Creeper (*Parthenocissus vitacea*), and DSV. Groundcover is a continuation of the adjacent dry meadow cover.

3.3.4 CUT/CUW: Cultural Thicket/Woodland

This ecosite occurs in the northern portion of the property, where mixed, woody successional vegetation is well-established along a moderate to steep portion of the north-facing slope. This area was presumably part of the broader on-site pastureland, with an apparent history of erosion issues due to soil and slope conditions. Vegetation structure includes a sparse, low canopy of White Cedar (*Thuja occidentalis*), Scots Pine (*Pinus sylvestris*), and scattered Elm, with some areas of higher density White Cedar toward the base of the slope. The dominant layer is mature shrub/low treed growth between 1-5 m in height, covering an average of 50% of the total area, with common species including White Cedar, Scots Pine, Apple, Common Juniper, Asian Honeysuckle (*Lonicera tatarica*), Hawthorn (*Crataegus sp.*). Remaining areas are represented by dry, sterile meadow coverage, generally similar to ecosite CUM1.

An extension of this ecosite captures the dense thicket vegetation associated with one of the on-site ravine features, specifically the narrow ravine that contains the mapped headwater drainage feature. This sheltered area contains a sparse upper canopy of Black Cherry, with a more continuous and denser lower layer of Buckthorn, Choke Cherry, Hawthorn, Alternate-leaved Dogwood (*Cornus alternifolia*), White Ash (*Fraxinus americana*), and Nannyberry (*Viburnum lentago*). Groundcover in this area consists of dense DSV and mixed successional vegetation including Canada Goldenrod, Common Horsetail (*Equisetum arvense*), Sedges (*Carex rosea*, *C. gracillima*), Heart-leaved Aster, and Agrimony (*Agrimonia gryposepala*).

3.3.5 FOD4: Dry – Fresh Deciduous Forest

This ecosite is associated with the wider ravine feature situated in the center of the property. This is an area of young but well-established deciduous forest with a canopy consisting of Bitternut Hickory (*Carya cordiformis*), Large-toothed Aspen (*Populus grandidentata*), Trembling Aspen (*P. tremuloides*), and trace Elm. Tree cover is mostly young, with individual trees generally 10-15 cm in diameter or less. The edges of this ecosite support patches of young, clonal Aspen growth, transitioning into the adjacent meadow ecosites.



The sub-canopy in this ecosite supports a prominent, dense layer of Ironwood (*Ostrya virginiana*), which is a typical structure of heavily pastured woodlands. Shrub-height vegetation is sparse, consisting of Buckthorn, Ironwood, Choke Cherry, and White Ash regeneration. Groundcover in this ecosite contains some very dense patches of DSV, but also some remnant diverse woodland species, including Mayflower (*Maianthemum canadense*), Violets (*Viola sp.*), Zigzag Goldenrod (*Solidago flexicaulis*), Virginia Waterleaf (*Hydrophyllum virginiana*), and woodland sedges (*Carex pensylvanica*, *C. pedunculata*). This location is very dry, except for the northern extent which appears to support some minor groundwater seepage.

3.3.6 FOC2-2: Dry – Fresh White Cedar Coniferous Forest

This ecosite occurs along the lowest portions of the on-site slope, along the edge of the adjacent railway bed. The dominant canopy vegetation is mature, second-growth White Cedar, with associate cover of mature Trembling Aspen, and Ironwood and Hickory common along the more exposed southern edge. There is no definable sub-canopy and very sparse shrub coverage under the dense Cedar canopy, consisting mostly of young Ash saplings. The groundcover is similarly sparse, with some dense DSV coverage and meadow vegetation along the forest edge.

This polygon contains some noted inclusions, one being a blowdown area with lots of downed trees and root tip-ups. This small gap includes some maturing and younger patches of mixed Aspen, as well as dense growth of Staghorn Sumac (*Rhus typhina*), Thicket Creeper, and Grape, with abundant DSV and Spreading Dogbane (*Apocynum androsaemifolia*) in the groundcover. There is a second inclusion of two small ponds/woodland pools, where trickle drainage from a seepage zone is impounded along the edge of the railbed. This is entirely surrounded by overhanging woodland vegetation, and otherwise mostly unvegetated in the shallow standing water. The margins of the pond contain a mix of wetland-typical species, including sedges (*Carex hystericina*, *C. bebbii*), Flatsedge (*Eleocharis sp.*), sparse Cattail (*Typha latifolia*).

3.3.7 FOC/CUW: Coniferous Forest/Cultural Woodland

This ecosite is similar in nature to the FOC2-2 community described above, but includes some cultural elements, being associated with the on-site dwelling and amenity area. The polygon west of the dwelling contains a mixed canopy of White Cedar, Scots Pine, White Birch (*Betula papyrifera*), Balsam Poplar (*Populus balsamifera*), Red Pine (*Pinus resinosa*), and Aspen. This area is elevated and very dry/sterile, occurring on rolling hills and mounds with exposed sand. There is very dense coverage of DSV, with associate species including mixed Clover, Black Medic (*Medicago lupulina*), Grape, Crown Vetch (*Securigera varia*), and patches of Lily-of-the-Valley (*Convallaria majalis*) near the residential lawn edges.

The eastern property boundary supports additional canopy of White Cedar, Scots Pine, and Trembling Aspen in a variable mix. There is fairly abundant lower growth of Buckthorn and Alternate-leaved Dogwood, and very dense coverage of DSV. The landscape slopes eastward in this location and appears to transition to a fresh-moist ecosite beyond the eastern property boundary.

3.4 Fish & Wildlife Habitat Conditions

The combined results of our 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, as discussed in the following sections.

3.4.1 Fish Habitat

Regarding fish habitat, there is a single mapped drainage feature documented within the study area (**Section 3.2.3**). This feature is described as headwater drainage, appearing to support only minor, seasonal flows. This feature is not expected to support direct fish habitat and offers no upstream



connectivity for fish that may occur further down system. During periods of seasonal flow, the feature may be regarded as indirect fish habitat, augmenting and contributing to areas of habitat downstream.

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 scattered patches of natural cover, including a mosaic of woodlands, wetlands, and drainage corridors. These areas can be expected to support a range of common and sensitive wildlife.

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 study area 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. The on-site investigation included a targeted inventory of breeding birds. The species documented during this survey are generally considered common locally; however, one or more observed species are listed as SAR in Ontario (see **Appendix 4**). 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 identification of key habitat features. Aside from two very small woodland pools, the subject property contains no specialized habitat for herptiles (e.g., open-water wetlands, bedrock openings, etc.). Regardless, it is possible that limited species could occur within the study area during the course or regular seasonal movements. Potential occurrences of herptile species of conservation concern are assessed in **Section 4** based on combination of habitat assessment and review of background databases.

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 background databases (NHIC, OBBA, iNaturalist), as well as indicative habitat features observed by AES during the assessment. All relevant observations of wildlife species and/or habitat features, including individuals of species at risk or other species of conservation concern, are discussed in **Section 4** of this report within the context of KNHFs.



4) **SIGNIFICANT/KEY NATURAL HERITAGE FEATURE ASSESSMENT**

Based on review of the biophysical information collected during background information gathering, and analysis of the existing conditions of the study area as described above, the following KNHFs are considered both applicable and present (or potentially present) within the study area.

- Wetlands
- Seepage Areas & Springs
- Significant Woodlands
- Habitat of Endangered & Threatened Species
- Significant Wildlife Habitat

All potentially relevant significant features defined under the Township/County OP are listed in the section below, with rationale provided regarding the conclusion of presence/absence of each feature.

4.1 Wetlands

Background databases (e.g., NHIC) do not depict any areas of wetland occurring on the subject property. The NHIC database displays an area of 'unevaluated' wetland mapped as occurring ~100 m to the northwest of the property, separated by intervening rail tracks (see **Figure 1** and **Figure 2**). The characteristics of these wetlands, if they occur as mapped, cannot be verified. It is generally assumed that this feature is marginal swamp woodland, likely a continuation of the Cedar/Aspen forest found on the subject property, but in an area of higher moisture content at a lower elevation.

As discussed under **Section 3.3.6**, there are two small woodland pools identified within ecosite FOC. These are each approximately 200 m² in area and not considered stand-alone wetland ecosites, although they may be considered wetland 'inclusions'.

Further discussion, including an assessment of potential impacts to wetlands resulting from implementation of the proposed severance, is provided in **Section 5.1**.

4.2 Permanent & Intermittent Streams

The property supports at least one ephemeral/headwater drainage pathway (**Figure 2**). An additional drainage feature is mapped as originating on lands to the east, also assumed to be an undefined, headwater-type feature; however, the flow regime for this latter feature cannot be confirmed. Neither of these features appear representative of a permanent or intermittent stream, lacking defined channels, regular flow, or base flow. As such, they may not represent KNHFs as defined under applicable plans. Notwithstanding, the on-site headwater drainage pathway is identified in local zoning and OP schedules as a 'Natural Linkage' feature, subject to protective policies and provisions.

Further discussion, including an assessment of potential impacts to the on-site headwater drainage pathway resulting from implementation of the proposed severance, is provided in **Section 5.1**.

4.3 Fish Habitat

An assessment of potential fish habitat functions within the study area is provided under **Section 3.4.1**. To summarize, there are no features contained in the study area with capacity to support fish habitat. Noted headwater drainage features do not represent direct fish habitat; however, they may be expected to provide general contributing/indirect support to areas of fish habitat further down the system.

Further discussion, including an assessment of potential impacts to contributing/indirect fish habitat resulting from implementation of the proposed severance, is provided in **Section 5.1**.



4.4 Seepage Areas & Springs

There is one discrete area of groundwater seepage identified in the lower elevation of the central ravine feature on the property, within ecosite FOD4 (see **Figure 2**). It is possible that this may be related to an old dug well, as indicated by a remnant well cap in the same general area of the noted seepage. The seepage zone appears to continue down the slope, supporting a thin trickle flow along the floor of the ravine. This ultimately drains into a small pool along the southern edge of the railway bed.

Further discussion, including an assessment of potential impacts to the identified seepage area resulting from implementation of the proposed severance, is provided in **Section 5.1**.

4.5 Lakes

No lakes were identified within the study area during on-site investigations or background information review. No further assessment undertaken.

4.6 Sand Barrens, Savannahs, Tallgrass Prairies, & Alvars

No vegetation communities classified as sand barrens, savannahs, tallgrass prairies, and/or alvars were identified within the study area during the on-site investigations or background information review. No further assessment undertaken.

4.7 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 provincial life science ANSI is ~10 km to the southwest of the subject property. There are no ANSIs present in association with the study area. No further assessment undertaken.

4.8 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 two small ravine features, both of which contain some minor drainage in the form of headwater flow paths and groundwater seepage. However, these features are not prominent on the landscape or associated with any definable watercourses. These ravines are discrete and generally contained within the limits of the property, rather than being large, connective valleys. In our opinion, no features indicative of significant valleylands are present on the subject property or study area. No further assessment undertaken.

4.9 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.

Schedule B to the Township's OP (see **Appendix 1**) identifies areas of significant woodland overlapping the northeastern and southeastern corners of the subject property, part of a larger woodland complex on adjacent lands to the east. Additional woodland cover is present on the subject property but not currently reflected on Schedule B (e.g., ecosite FOD4), likely because these areas are relatively small and not contiguous with the broader woodland complex. The full extent of definable woodland cover on the property is depicted on **Figure 2**, while the areas representing significant woodland may be limited to those overlapping the eastern property boundary.

An assessment of potential impacts to woodlands/significant woodlands resulting from implementation of the development plan is provided in **Section 5.2**.

4.10 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, AES 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 (17QJ0095 and adjoining squares). Databases of iNaturalist, OBBA, and ORAA were also reviewed as of Aug 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 5**. The screening is based on a list of species that are known to occur within the upper-tier municipal jurisdiction (*i.e.*, County of Peterborough). 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**.

4.10.1 Bobolink (*Dolichonyx oryzivorus*; Threatened) & Eastern Meadowlark (*Sturnella magna*; Threatened)

Both Bobolink and Eastern Meadowlark require open grassland-type habitat conditions to carry out key life processes, including artificial conditions created by hayfield production or fallow agricultural fields. These species are discussed herein due to the presence of open meadow/fallow field conditions represented on the property and local landscape that may be considered suitable for one or both species to carry out key life processes.

The micro-scale vegetation conditions represented within the CUM1 ecosite (see **Figure 2**) are generally considered suitable to support breeding and nesting for both of these species, with a mix of grasses and forbs that are typical of an aged hayfield/old field. Macro-scale habitat conditions are equally critical in assessing habitat suitability. For example, breeding territories are generally only established in settings where the total contiguous area of appropriate open vegetation (*i.e.*, the patch size) meets a minimum threshold. In the case of Bobolink, a contiguous area of least 10 ha of suitable open habitat is preferred, while 5 ha is reportedly the minimum (McCracken et al, 2013). Eastern



Meadowlark are similarly reported to require a minimum of 5 ha of suitable habitat to establish breeding territories.

There is upwards of 15 ha of open meadow vegetation on the subject property, although this occurs in various patches interrupted by wooded and residential areas. Substantial portions of the on-site meadow areas are considered marginal or unsuitable based on the presence of steep slopes and other areas where vegetation is sparse in the dry, sterile soils. It is also noted that portions of the field appear subject to regular maintenance (see **Figure 2**), precluding the potential for nesting habitat in these areas.

Morning bird surveys were undertaken in the late spring and early summer of 2025 to review the potential presence of these and other grassland bird species. A single Bobolink was documented calling from adjacent lands to the west during the first survey only. This adjacent property supports a notably healthier and more robust hayfield, with more prevalent cover of Alfalfa. Additionally, the adjacent field is not fragmented by areas of woody vegetation, providing a more continuous open area of suitable habitat. These structural conditions are known to be favorable for Bobolink. No individual Bobolink were documented on the subject property, and the conditions are generally not considered ideal. Based on our observations and habitat assessment, Bobolink habitat is not considered present on the property and is not discussed further herein as a potential development constraint.

Conversely, Eastern Meadowlark were documented in multiple locations on the property during on-site surveys. Per **Figure 2**, we documented multiple general observations, including females and males making breeding and alarm calls. As protections for this species are based on the location of a nest, substantial effort was spent during multiple surveys to attempt to confirm or estimate any potential nest locations. The only evidence of nesting was associated with a patch of relatively full old field vegetation in the central portion of the property, approximately south of the FOD4 ecosite (see **Figure 2**). Meadow vegetation in the eastern half of the property may be too sparse to support nesting due to the overly sterile soil conditions. Other open field areas in the northwestern portion of the property may be too fragmented by woody edge features (woodlands, hedgerows). The southwestern portion of the property is subject to regular maintenance and not presently suitable for nesting.

Additional discussion, including a review of potential impacts to Eastern Meadowlark habitat resulting from implementation of the proposed plan, is provided in **Section 5.3**.

4.10.2 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.

Portion of the study area support established tree cover as described in **Section 3.3**. Based on a qualitative review of these features, there is minor potential that endangered bats would utilize the subject property for communal roosting activities. Most tree cover on the subject property is younger second growth and in a generally a healthy condition. We observed no prominent clusters of dead-standing trees or trees with obvious signs of cavities.

While there is minor potential that the study area is supporting habitat for endangered bat species, no targeted surveys have been undertaken to quantify this. In any case, it is not possible to rule out the potential for *individuals* of endangered bat species (or other bat species) to be present during the



active season in any area of established tree cover. Further discussion, including an assessment of potential impacts to individuals of endangered bat species resulting from implementation of the proposed development plan, is provided in **Section 5.3**.

4.11 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, AES 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 6**. As detailed in this assessment, the results of our 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**.

4.11.1 Raptor Wintering Areas

The subject property supports forested areas and large fallows fields, a structural combination that can support overwintering habitat for various raptor species. If this function occurs, it would likely be associated with the eastern half of the property which contains a larger open field bordered by multiple woodland edges.

4.11.2 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 4.10.2** for discussion regarding the potential for bat maternity habitat to be present on the subject property. While the discussion in **Section 4.10.2** is provided specifically for endangered bat species, the assessment and conclusions are comparable to species that are not protected under the ESA.

4.11.3 Seeps & Springs

Refer to **Section 4.4** which discusses seepage areas and springs as a standalone KNHF.

4.11.4 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 1km² 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 2** have been recorded locally or otherwise have the potential to occur based on observed habitat conditions.

**Table 2. Special Concern & Rare Species with potential to occur in the study area.**

Species	Status	Discussion
Grasshopper Sparrow (<i>Ammodramus</i> <i>savannarum</i>)	Special Concern	There are NHIC records on the local landscape for Grasshopper Sparrow, a species that exhibits preference for large, open grassland settings, including agricultural fields and successional meadows. Multiple individuals of this species were documented during on-site surveys, including likely evidence of nesting. See impact assessment for further discussion.
Golden-winged Warbler (<i>Vermivora</i> <i>chrysoptera</i>)	Special Concern	There are NHIC records on the local landscape for Golden-winged Warbler, a species that exhibits preference for shrublands and young, successional woodlands. A singing male was documented during the first bird survey, calling from a shrubby thicket in a narrow ravine feature (see Figure 2). The area where the individual was documented may represent structurally suitable breeding habitat, but is highly limited in extent. See impact assessment for further discussion.
Eastern Wood-Pewee (<i>Contopus</i> <i>virens</i>)	Special Concern	There are NHIC records on the local landscape for both Eastern Wood-Pewee and Wood Thrush. Both are common woodland birds that are ubiquitous in many areas of woodland cover in southern Ontario. The structure of woodland ecosites on the subject property would represent marginal or unsuitable habitat for either species. Neither was documented during our on-site bird surveys. No further assessment undertaken.
Wood Thrush (<i>Hylocichla</i> <i>mustellina</i>)	Special Concern	
Snapping Turtle (<i>Chelydra</i> <i>serpentina</i>)	Special Concern	There are NHIC records on the local landscape for Snapping Turtle, which rely on open water wetlands and exposed mineral substrates to carry out key life process such as basking, nesting, and overwintering. The property appears to lack any suitable habitat for this species. There are two very small ponds along the northern property boundary; however, these are isolated, shallow, and encompassed within a shaded woodland canopy. In general, we don't expect that these features offer any potential habitat for turtles. No further assessment undertaken.

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**.

4.12 Natural Linkages

In addition to various individual natural heritage features, it is acknowledged that any area of natural cover offers the potential to support linkages on the landscape. The subject property contains various natural features and areas; however, it is generally contained within a predominantly agricultural landscape. There is substantial natural, forested cover to the north and east of the property, but lands to the west and south are not in a natural condition and unlikely to support wildlife habitat values. Connective corridors may be associated with the lands to the north, but it is not apparent that the property itself supports any meaningful linkage functions between areas of natural cover.



Portions of the property are zoned and designated as 'Natural Linkage' under the local Zoning Bylaw and OP. These areas offer some minor natural coverage and opportunities for wildlife within the property, but do not support clear linkage functions insofar as they do not offer corridors for the movement of wildlife across the broader landscape.

Additional discussion, including a review of potential impacts to natural linkage functions resulting from implementation of the proposed plan, is provided in **Section 5.5**.

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 severed lot would encompass the existing dwelling and a relatively small area associated with the existing residential amenity space. This new lot would support approximately 77 m of road frontage on Syer Line, with a total parcel area of approximately 0.8 ha. The severed lot would capture the remainder of the existing parcel, including all existing fallow fields, natural features, and an estimated 430 m of road frontage. Access to this lot would continue to be from Syer Line, the only bordering roadway. The general location of the proposed severance 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).

Importantly, the proposal does not involve any specific application for development of the created lot at this time. While it is understood that the intent is to construct a single-family dwelling on the created lot, there is no specific timeline or design for prospective future construction. This means that recommendations provided herein may be general in nature and may need to be applied through site-specific conditions of approval. This report provides recommendations for a conceptual building envelope and evaluates the potential impacts of future construction within this envelope.

Our 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 KNHFs 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 Potential Impacts to Hydrologic Features (Wetlands, Headwater Drainage, Seepage Zones) & Indirect Fish Habitat

To summarize, there is a single unevaluated wetland feature mapped as occurring ~100 m northwest of the subject property, as well as two small woodland pools within the property that can be regarded as minor wetland inclusions. There is a single seepage zone identified on the property, and potentially others that occur on the local landscape to the north. Finally, there is a single definable drainage feature on the property, represented by an ephemeral headwater-type feature, with no defined channel or base flow. These features may all be theoretically regarded as indirect fish habitat insofar as they could contribute to areas of fish habitat further in the watershed through augmentation of base flows and seasonal inputs of allochthonous materials.

Where definable, these features are all depicted on report mapping for reference. We provide a combined discussion of these features herein, as the pathways of potential impacts are comparable. In general, development and/or site alteration activities that occur proximate to wetland, drainage features, and seepage zones 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 drainage features/wetlands post construction, which may result in increased soil compaction, channel alterations, dumping, vandalism, or other disturbances.

A key impact mitigation measure for drainage features and wetlands is provision of a physical/spatial setback from development and disturbance. Such a setback should generally be vegetated or at least pervious 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.

To avoid impacts to these features, we have identified a recommended 'Future Development Envelope' that maximizes the setback from all of the noted features, as depicted on **Figure 3**. The nearest feature is the identified headwater drainage alignment, which we recommend be afforded at least 30 m from the limit of disturbance associated with any future construction on the created lot. This recommended envelope would also provide >300 m separation from the mapped wetland polygon on adjacent lands, as well as the on-site seepage zone and woodland pools. All intervening lands will presumably be maintained as naturally vegetated buffers between development and these potentially sensitive natural features.

Future development of the created lot will inherently require site alteration and excavation, which has the potential to increase the risk of soil erosion. Therefore, construction activities could result in



migration of sediment toward the on-site headwater drainage feature. 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 local natural features. These potential issues should be mitigated through construction best management practises, as discussed below.

Provided that future development adheres to appropriate buffers and construction mitigation measures, there is no expectation that the proposal will result in a negative impact to the headwater drainage feature, wetland, seepage zone, or potential indirect fish habitat. The following general measures are recommended to avoid future negative impacts through the various pathways identified above.

- **Future development on the proposed new lot should maintain a minimum 30 m distance from the delineated limits of the on-site headwater drainage feature, as represented by the recommended 'Future Development Envelope' (see Figure 3). This distance affords a setback of >300 m from other potential key hydrological features, including the nearest mapped wetland and identified groundwater seepage zone.**
- **Where feasible, the existing headwater swale alignment should be maintained and avoided in the development process. If these drainage pathways must be manipulated, associated grading activities should occur strictly in dry conditions.**
- **Where feasible, general site grading/filling, as required, should occur after the spring 'freshet' window, once diffuse surficial flows are no longer traversing the headwater drainage channel.**
- **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 (see Appendix 7).**
 - **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**
 - **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.**
 - **The 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 Potential Impacts to Significant Woodland

Woodland features are scattered throughout the subject property, with areas of woodland along the eastern property boundary considered significant woodland by the planning authority. The general limit of woodland features and designated significant woodland is depicted on **Figure 3**.

Examples of direct impacts to woodlands from development 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.

The proposed severed parcel would encompass all of the identified significant woodland areas on the subject property. The proposed new parcel boundary would bisect a portion of a small woodland polygon that is already heavily influenced by the existing residential use. Future development on the created parcel is not expected to require any woodland encroachment (significant woodland or otherwise). The recommended Future Development Envelope is entirely contained outside of any woodland ecosites.

Given the context for proposed development, we do not anticipate that approval of the application will result in any direct encroachment or impacts to the ecological functions of significant woodlands or other woodlands within the study area. General recommendations are provided in subsequent sections pertaining to vegetation and tree removal timing windows, should any individual trees require removal to accommodate future development.

5.3 Potential Impacts to 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 5**) and subsequent assessment in **Section 4.10**.

5.3.1 Eastern Meadowlark

As discussed under **Section 4.10**, this species was recorded as occurring in the local area. This species requires grassland habitat that may be satisfied by agricultural settings, including fallow/old fields, such as that represented on the property. On-site surveys in the spring and summer of 2025 recorded this species in various locations on the property. Through thorough observation, we estimate that only a single nest was established on the property during the 2025 season, the approximate location being depicted on **Figure 3**.

While nest locations for this species can and do vary from year to year, ESA protections for this species are based largely on the location of a confirmed nest. Specifically, the ESA defines habitat for wildlife species as:

- (i) a dwelling-place, such as a den, nest or other similar place, that is occupied or habitually occupied by one or more members of a species for the purposes of breeding, rearing, staging, wintering or hibernating, and*
- (ii) the area immediately around a dwelling place described in subclause (i) that is essential for the purposes set out in that subclause.*



Based on the approximated nest location identified through 2025 surveys, there are certain portions of the property that can be regarded as habitat for Eastern Meadowlark. Per guidance in the 'General Habitat Description' (MECP 2021) for this species, the most critical habitat is represented by the nest location and the area of the defended territory, which is roughly 100 m around the nest. Therefore, we recommend that any future development on the created lot maintain this buffer distance to avoid negative impacts. To account for uncertainty in the exact location of the nest and the likelihood of annual variation in the nest location, we recommend extending this setback distance to 120 m from the approximated 2025 nest location, as depicted on **Figure 3**.

Importantly, the recommended Future Development Envelope is located in a portion of the field area that is apparently subject to regular maintenance (mowing) and inherently not suitable nesting habitat for Eastern Meadowlark. It should be noted that cessation of maintenance in the future could result in individuals of this species changing the preferred nest location or establishing additional nest locations. However, based on current available data and general habitat assessment, there is no indication that the recommended Future Development Envelope currently represents habitat for this species. Further, we expect that development can occur within this specific location without impacting continued function of nesting habitat in adjacent field areas. The following summarized recommendations are provided to support mitigation and future ESA compliance with respect to Eastern Meadowlark. Additional general wildlife mitigation measures are provided under **Section 5.4**.

- **Provide a minimum 120 m setback from the estimated location of the Eastern Meadowlark nest identified on Figure 3. This can be accomplished by restricting future development and site alteration to the 'Recommended Future Development Envelope'.**
- **Where feasible, it is recommended that construction processes be minimized during the core nesting season for Eastern Meadowlark (e.g., late May through July).**
- **Habitat suitability for Eastern Meadowlark on the subject property is likely influenced, in part, by the existing vegetation management regime. Should the current approach to vegetation/field management change prior to development of the property, additional surveys may be warranted to provide updated nesting data and ensure ongoing compliance with the ESA.**

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 conducted during our general vegetation assessment, staff did not observe any prominent clusters or concentrations of snag trees.

While development on the proposed new lot may require removal of individual trees (e.g., hedgerow trees), there would be no overlap or encroachment with woodland ecosites. In general, there is no expectation that the proposed development will result in 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:

- **Any tree removals required 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. This means that no tree clearing shall occur between April 15-Oct 1 of any given year.**



5.4 Potential Impacts to Significant Wildlife Habitat

Section 4.11 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. These include the following:

- Seasonal Concentration Areas of Animals
 - Raptor Wintering Area
 - Bat Maternity Colonies
- Specialized Habitat for Wildlife
 - Seeps & Springs
- Habitat of Species of Conservation Concern
 - Special Concern and Rare Wildlife Species
 - Grasshopper Sparrow
 - Golden-winged Warbler

The study area has the potential to support one or more of the above-listed habitat functions. Some of these functions are closely associated with woodlands, including potential bat maternity roosting areas, raptor wintering habitat, and the single identified seepage area. The proposed development will retain woodland areas within the severed parcel. Contemplated future development on the severed parcel would occur in open, maintained areas that require no woodland encroachment and would not be expected to impact these functions.

The other noted potential SWH function includes breeding habitat for Grasshopper Sparrow and Golden-winged Warbler. Both species were documented within the subject property, per the locations identified on **Figure 2**. Based on our survey results, there is some potential that Golden-winged Warbler is breeding within the delineated CUT/CUW ecosite, although surveys results were not considered definitive. Conversely, there is abundant evidence that Grasshopper Sparrow is breeding on the subject property, with at least one likely nest location identified. Contemplated future development on the severed lot (per the 'Recommended Future Development Envelope' on **Figure 3**) would be located a fair distance from the nearest documented locations for either of these species. Given that the likely future development footprint is subject to ongoing maintenance, there is no expectation that either of these species are utilizing this portion of the property for breeding/nesting.

Provided that future development on the created lot occur in an appropriate location and with regard for appropriate construction and stewardship practises, it is our opinion that the proposed development can avoid negative impacts to wildlife and wildlife habitat functions. One or more recommendations for general wildlife impact mitigation are summarized below in support of this conclusion.

- **Avoid removal of any 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 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.**
- **Isolate the perimeter of construction areas, a measure which is often satisfied through implementation of a sediment and erosion control plan (per recommendation provided under Section 5.1).**



- **Any future construction process on the created lot should adhere to a standard for wildlife impact mitigation. At a minimum, this should include:**
 - **Surveying of construction sites each morning to ensure that wildlife are not sheltered in construction equipment, material piles, etc.**
 - **If any wildlife is identified on site during construction processes, stop all active construction activities, and verify the identity of the species. Individuals of species protected under the ESA should be permitted to move off the site and/or relocated by a qualified biologist. Other wildlife should be either be gently relocated off the active construction site or avoided to the extent possible.**
- **Any new construction on the created lot 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.**

5.5 Potential Impacts to Natural Linkages

The study area and broader adjacent lands may support natural linkage functions, including movement corridors for wildlife. In general, we expect that such functions would occur primarily in association with woodland patches to the east of the study area (north-south linkage). Most of the property is represented by small patches of natural cover and open, post-agricultural meadows. Such features are generally not representative of significant linkages/corridors.

Per existing municipal zoning and designations, the small headwater drainage corridor in the west portion of the property, and woodlands along the eastern property boundary are regarded as natural linkages. Contemplated future development on the created lot is recommended and expected to occur within the southwestern corner of the parcel. This provides a substantial and functional distance to areas regarded as natural linkages by the planning authority.

In general, assuming development on the created lot is minor in scale and appropriately sited, this would not be expected to impact local wildlife movement corridors or linkages of the local natural heritage system.

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 most applicable to the proposal. AES 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 future development on the created lot adhere to mitigation measures recommended herein, we expect that this can avoid 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. If/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.

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 4.10** 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), 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.

Important note: as of the drafting of this report, the ESA has recently been subject to various amendments enacted through the passing of provincial 'Bill 5'. Various amendments are now in place, such as a revision to ways in which the ESA defines 'habitat' for threatened and endangered species. The ESA is due to be repealed and replaced with a new '*Species Conservation Act*'. It is our understanding that this new legislation will be put in place following the drafting of key regulations. At this time, the current amendments and future repeal of the ESA are not expected to change the opinions or conclusions provided in this report regarding potential impacts to Species at Risk.

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 7E¹;
- 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 7E¹ 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 opinion 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 Township of Cavan-Monaghan Official Plan (2013)

According to Schedule A (Map D-2) of the Township's Zoning Bylaw, the subject property is zoned for a combination of 'Agricultural' and 'Natural Linkage' land uses. The Township's Official Plan (OP) similarly designates the subject property as a combination of Agricultural and Natural Linkage. Schedule B to the OP identifies a portion of two natural heritage features within the property: 'Watercourse' and 'Significant Woodland'.

General development policies related to the natural environment are contained under Section 3 of the OP, with Section 3.7 specifically addressing the standards of an EIS. To the extent feasible given the nature and context of the proposal, this report has sought to provide the minimum information standards outlined in the Section 3.7. Section 3.8 provides further general policies on permitted uses within areas of the natural heritage system (NHS).

Detailed policies pertaining to protection of natural heritage features and the Township NHS are presented under Section 6 of the OP. Such policies outline how development may occur in association with natural features. Several policies that we believe to be applicable to the proposed development are listed under **Table 3**. We provide discussion regarding the applicability of each policy and our understanding/interpretation of how the proposal can occur in conformity.

Table 3. Discussion of natural heritage system policies in Cavan-Monaghan Official Plan.

Section No.	Policy Text	Discussion
6.2(b)	<i>Additional information regarding natural heritage features and hydrologically sensitive features may become available through detailed evaluation of development applications or further study. The incorporation of additional natural heritage features may be undertaken when this Plan is updated</i>	This report provides site-specific information regarding the presence and extent of one or more natural heritage features.
6.2(d)	<i>Development will not be approved where an approved Environmental Impact Study, Natural Heritage Evaluation or a Hydrological Evaluation identifies unacceptable negative impacts on the natural heritage system. The EIS may identify a vegetation protection zone which:</i> <i>i) Is of sufficient width to protect the Key Natural Heritage Feature or Key Hydrologic Feature and its functions from the impacts of the proposed change and associated activities that may occur before, during and after, construction, and where possible, restore or enhance the feature and/or its function; and,</i> <i>ii) Is established to achieve, and be maintained as natural self-sustaining vegetation.</i>	This report serves as an EIS, concluding that proposed severance is feasible without resulting in negative impacts to the natural heritage system. This conclusion assumes adherence the various recommendations provided herein, including general recommendations for an appropriate future development envelope.
6.3	<i>Natural Core Areas include areas with the highest concentration of sensitive and/or significant natural features and functions. Lands that are within the Oak Ridges Moraine established by the Province of Ontario are identified as the ORM – Natural Core Area designation on Schedules A and A-1. These areas are to be managed as a connected and integrated natural heritage system recognizing the functional inter-relationships between them.</i> <i>This designation also applies to lands that form a natural 30 metre vegetative protective buffer zone for significant</i>	This report identifies one or more features that fall under the OP list of KNHFs. Measures are recommended herein to support avoidance of negative impacts, including appropriate setback distances from future development.



	<i>natural heritage features. The vegetation protection zone is measured from the outside boundary of the Key Natural Heritage or Key Hydrologic Feature.</i> <i>The Natural Core Areas include the following Key Natural Heritage Features and Key Hydrologic Features...</i>	
6.3.1	<i>It is the objective of [the natural core area] designation to:</i> <i>a) Prohibit development or site alteration within Key Natural Heritage Features and Key Hydrologic Features; and,</i> <i>b) Preserve and maintain the environmental features and functions of the 30 metre vegetative protective buffer area.</i>	It is expected that contemplated future development on the proposed new lot can avoid development and site alteration within KNHFs, KHF, and an associated 30 m VPZ.
6.3.2	<i>The permitted use of land in the Natural Core Areas designation on Schedules A and A1 shall include...</i>	All candidate Natural Core Area features will remain contained within a single parcel. Potential future development can avoid any need for direct development within features potentially representing Natural Core Area features. Therefore, consideration for permitted uses within core features is not necessarily applicable.
6.3.3(a)	<i>On lands within the Natural Core Area designations, every Planning Act application or site alteration shall be supported by an Environmental Impact Study (EIS) that identifies planning, design and construction practices that ensure that no buildings or other site alterations will impede the movement of plants and animals among Key Natural Heritage Features, Hydrologically Sensitive Features and adjacent lands. The Township may exempt minor expansions to existing buildings and structures from this requirement in its Implementing Zoning By-law and Site Plan Control By-law.</i>	This report serves as an EIS, providing various recommendations for avoidance of impacts to key features.
6.4	<i>This [Natural Linkage Area] designation applies to lands forming a 120 metre vegetative protective buffer zone for Key Natural Heritage Features lands in the Natural Heritage System. This designation forms part of a central corridor system that supports or has the potential to support movement of plants and animals and provide linkages to natural heritage features. Lands within the Oak Ridges Moraine Area are designated as ORM – Natural Linkage Area on Schedules A and A-1.</i>	Natural Linkage Areas are identified on the subject property per existing OP designations.
6.4.2	<i>The permitted uses in the Natural Linkage Area designation shown on Schedules A and A-1 shall be...</i>	Potential future development can avoid any need for direct development within features potentially representing Natural Linkage Area features. Therefore, consideration for permitted uses within linkage features is not necessarily applicable.
6.4.3(a)	<i>The Natural Linkage Areas are intended to provide a natural buffer from key natural heritage features and a linkage between these features in the Township. Development in this designation shall only be permitted where the vegetative buffer and connectivity for which the area has been designated is preserved.</i>	Development is not proposed within any areas potentially representing a Natural Linkage Area.



6.4.3(b)	<i>Where development is proposed in the Natural Linkage Areas the Township may require the proponent to complete an Environmental Impact Study (EIS) in accordance with Section 3.7 of this Plan in order to ensure that the Linkage function will be preserved and enhanced as the result of the proposed development. Small-scale developments may be exempted from requiring an EIS through the pre-consultation process described in this Plan where staff is satisfied that the proposal will not adversely impact the Objectives of the designation.</i>	This report serves as an EIS, providing various recommendations for avoidance of impacts to key features.
6.4.3(c)	<i>The extent of the Natural Linkage Area designation may be determined through the completion of an EIS completed to the satisfaction of the Township in consultation with the Conservation Authority. Where the study identifies that a smaller Natural Linkage Area is sufficient to satisfy the objectives of this section and the other policies of this Plan, the policies of the abutting designation may apply to the lands.</i>	This report serves as an EIS, providing various recommendations regarding the extent of natural features.
6.7.1(a)	<i>Key natural heritage features relate to wetlands, significant portions of the habitat of endangered, rare and threatened species, fish habitat, significant valleylands, significant woodlands, areas of natural and scientific interest (ANSI - Life Science and Earth Science), sand barrens, savannahs and tall grass prairies and significant wildlife habitat. Hydrologically sensitive features relate to permanent and intermittent streams, wetlands, kettle lakes and seepage areas and springs;</i>	Various candidate and confirmed KNHFs are identified as occurring within the study area.
6.7.1(b)	<i>The general location of Key Natural Heritage Features and Hydrologically Sensitive Features are shown on Schedules B and B-1. Schedules B and B-1 do not include significant wildlife habitat, significant portions of the habitat of endangered, rare and threatened species, seepage areas, significant valleylands and springs. These features shall either be identified on a site-by-site basis or through the appropriate study such as a natural heritage or hydrological evaluation prior to undertaking any development or site alteration;</i>	Various candidate and confirmed KNHFs are identified as occurring within the study area, including features which are not mapped on OP schedules.
6.7.1(c)(d)	<i>Where site specific studies or updated information for the Province of Ontario results in refinements to the boundary or extent of Key Natural Heritage Feature or its related minimum vegetation protection zone, such refinement shall not require an amendment to this Plan. However, where such refinement of the boundary or extent of the feature is proposed for a wetland, area of natural and scientific interest and/or significant portions of the habitat of endangered, rare and threatened species or fish habitat, or their related minimum vegetation protection zones, then formal confirmation of the refinement is required from the Ministry of Natural Resources (Ontario) and in the case of fish habitat, with the Department of Fisheries and Oceans (Canada) or its delegate, prior to any development or site alteration;</i> <i>In addition, where the refinement results in greater minimum vegetation protection zone than is required by the policies of this Plan, the greater standard shall be used. All</i>	No amendment is proposed to existing mapped locations of wetland, ANSIs, fish habitat, or significant portions of the habitat of endangered, rare, and/or threatened species.



	<i>development and site alteration shall be prohibited within the greater minimum vegetation protection zone as established;</i>	
6.7.1(e)	<i>Development and site alteration shall be prohibited within Key Natural Heritage Features and Hydrologically Sensitive Features and their related minimum vegetation protection zone as identified by Table 1. Notwithstanding, conservation and resource management, transportation, infrastructure, utilities, (but only if the need for the project has been demonstrated and there is no reasonable alternative) and low intensity recreational uses may be permitted;</i>	It is expected that contemplated future development on the proposed new lot can avoid development and site alteration within KNHFs, Hydrologically Sensitive Features, and any associated 30 m VPZ.
6.7.1(f)	<i>New agricultural uses and/or agriculturally related uses shall not be permitted within a Key Natural Heritage Feature and/or a Hydrologically Sensitive Feature and their associated minimum vegetation protection zone;</i>	No new agricultural uses are proposed to occur within KNHFs, Hydrologically Sensitive Features, or any associated 30 m VPZ.
6.7.1(g)(h)	<i>An application for development or site alteration shall be accompanied by a natural heritage evaluation in the following circumstances if the development or site alteration is proposed within the minimum area of influence that relates to a Key Natural Heritage Feature or Hydrologically Sensitive Feature; A natural heritage or hydrological evaluation shall...</i>	This report serves as equivalent to an NHE, providing the general information standards required under policies of the OP.

Based on the results of this assessment and the recommendations contained within, we provide the opinion that the proposed development can be accomplished without impacting identified significant/key natural heritage features protected under policies of the Township OP. Various detailed recommendations are provided to support this opinion, including recommendations that will influence when, where, and/or how any future development should occur on the property. This report and the recommendations contained within are provided to support the approval authorities and/or technical peer reviewer in their review of the development proposal and consistency/conformity with the Township's OP.

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.



8) REFERENCES

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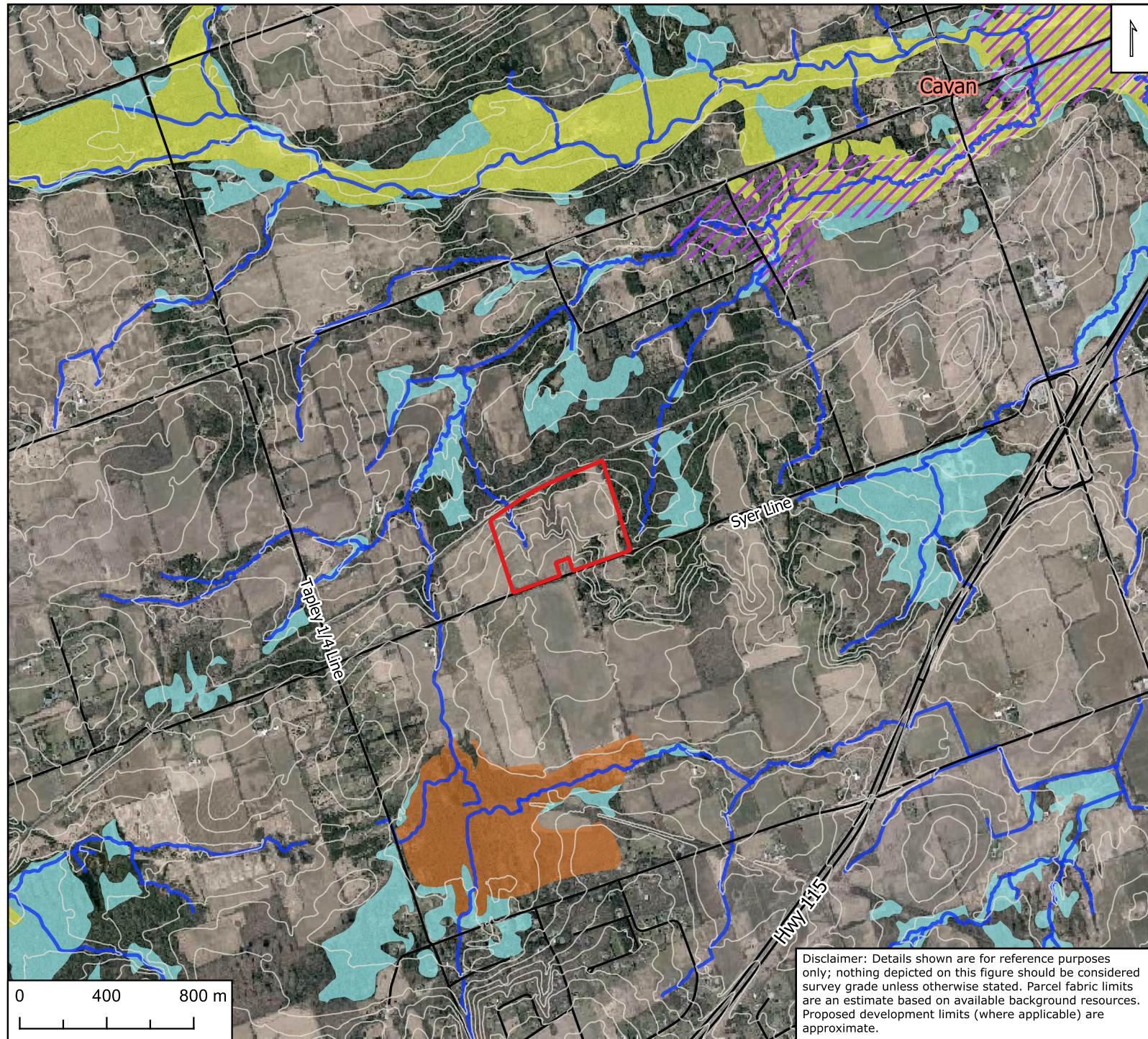


Figure 1:
Property Location & Landscape
Context

Legend

- Subject Property
- Contours (5m)
- Local Road Network
- Local Drainage Network
- Area of Natural & Scientific Interest (Provincial)**
- ANSI, Life Science
- Provincial Wetland Layer**
- Evaluated (PSW)
- Evaluated (Other)
- Unevaluated Wetland

Project No & Description:

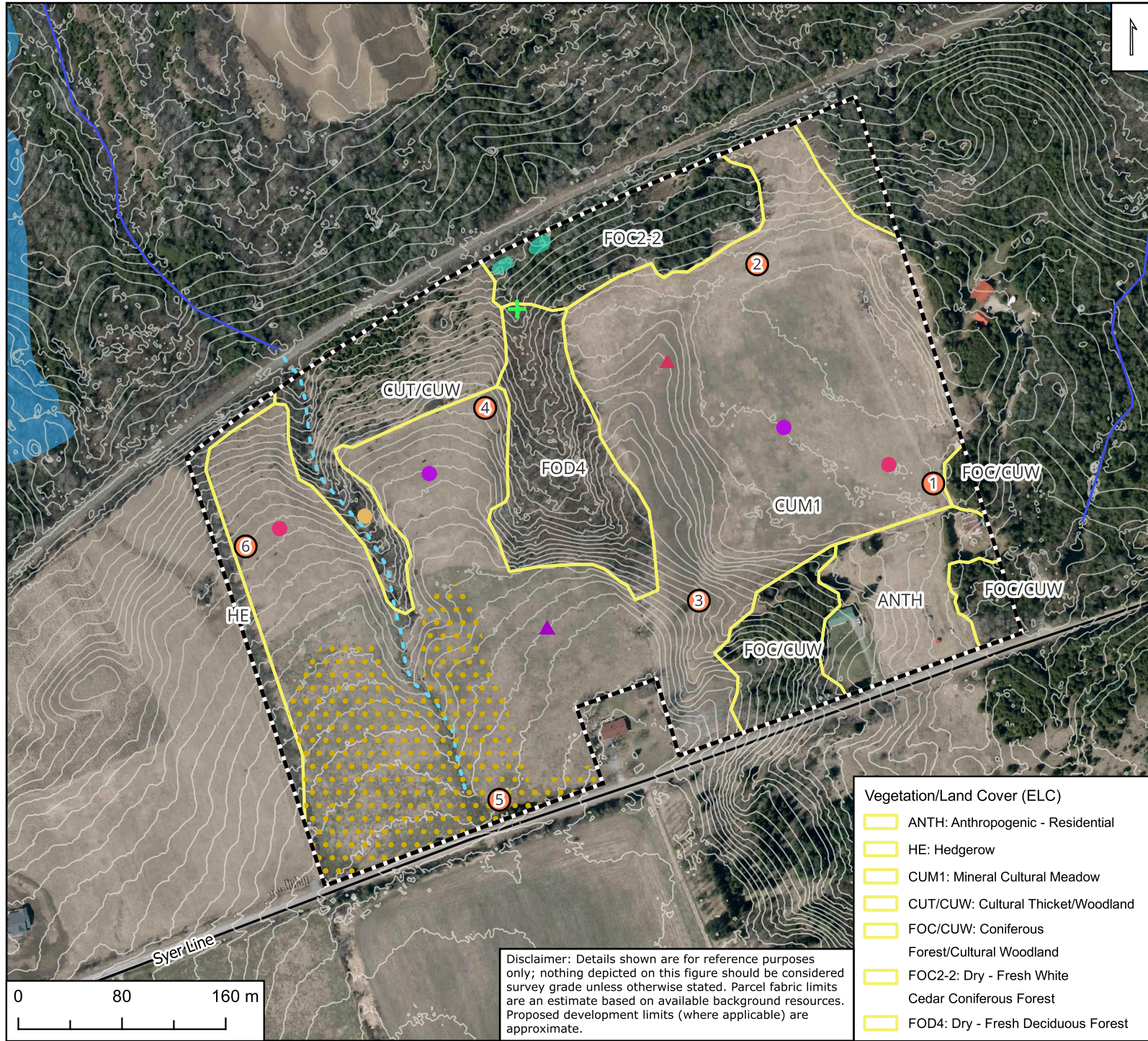
AES-25036	
610 Syer Line, Cavan - Environmental Impact Study	
Date Prepared: Aug 19, 2025	Prepared By: MF
Last Revision: N/A	Checked By: N/A

Basemap/Data Reference:

SCOOP 2018
On Geohub 2025



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 2:
Existing Site Conditions.**

Legend

- Subject Property
- Contours (1m)
- Bird Survey Stations
- Seepage Zone
- Pond Inclusions
- Maintained Portion of Field
- Drainage**
 - Headwater Flow Path
 - Unknown Flow Regime (Assumed Headwater)
- Provincial Wetland Layer**
 - Unevaluated Wetland
- Significant Wildlife Observations**
 - E. Meadowlark - Estimated Nest Location
 - E. Meadowlark - General Observation
 - Grasshopper Sparrow - Estimated Nest Location
 - Grasshopper Sparrow - General Observation
 - Golden-winged Warbler - General Observation

Project No & Description:

AES-25036
610 Syer Line, Cavan - Environmental Impact Study

Date Prepared: Aug 19, 2025	Prepared By: MF
Last Revision: N/A	Checked By: N/A

Basemap/Data Reference:
SCOOP 2018
On Geohub 2025



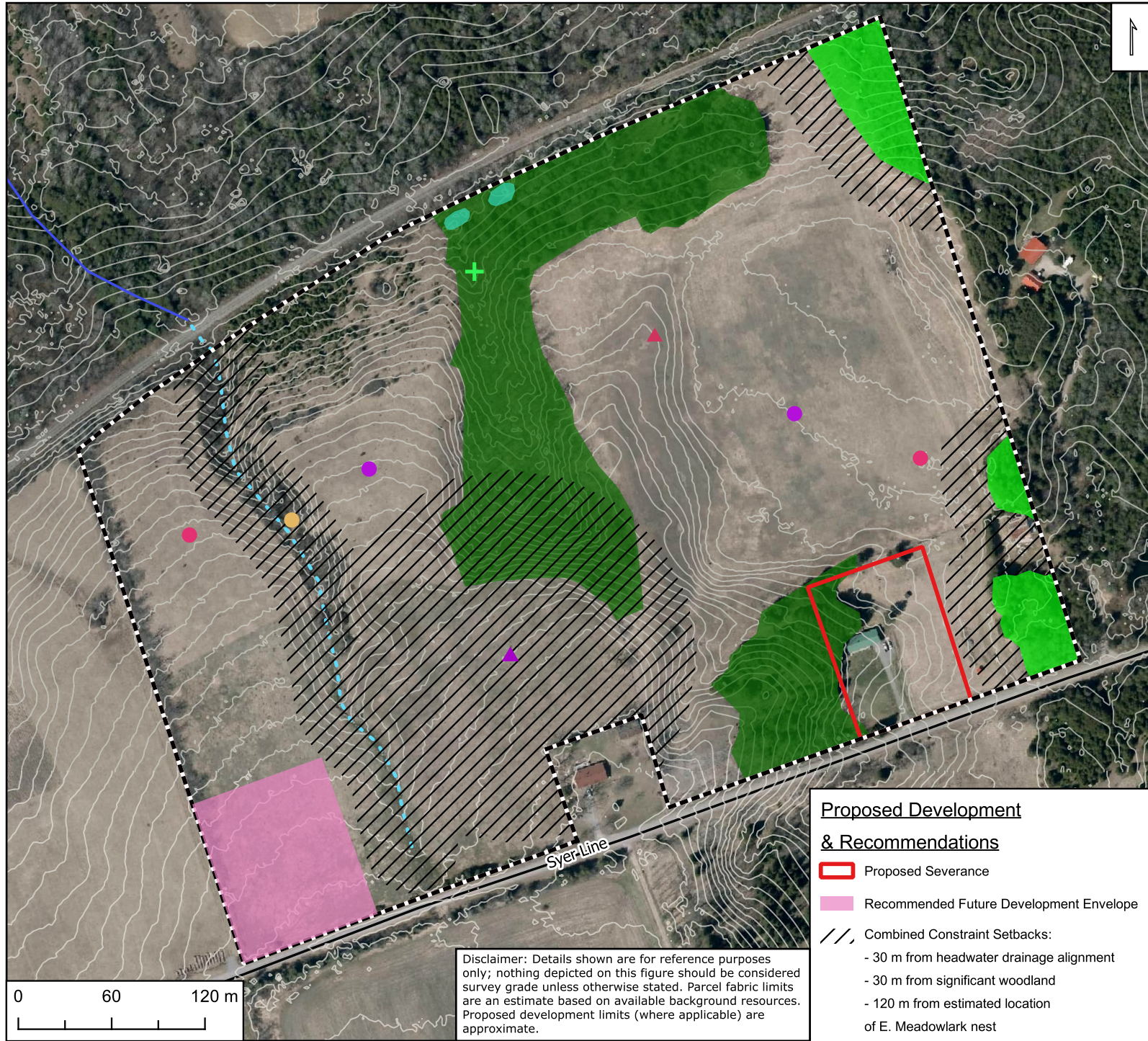


Figure 3:
Proposed Development & Recommendations.

Legend

- Subject Property
- Contours (1m)
- Seepage Zone
- Pond Inclusions
- Woodland**
 - Significant Woodland (Township OP - Schedule B)
 - Other Woodland
- Drainage**
 - Headwater Flow Path
 - Unknown Flow Regime (Assumed Headwater)
- Significant Wildlife Observations**
 - E. Meadowlark - Estimated Nest Location
 - E. Meadowlark - General Observation
 - Grasshopper Sparrow - Estimated Nest Location
 - Grasshopper Sparrow - General Observation
 - Golden-winged Warbler - General Observation

**Proposed Development
& Recommendations**

- Proposed Severance
- Recommended Future Development Envelope
- Combined Constraint Setbacks:
 - 30 m from headwater drainage alignment
 - 30 m from significant woodland
 - 120 m from estimated location of E. Meadowlark nest

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.

Project No & Description:

AES-25036
610 Syer Line, Cavan - Environmental Impact Study

Date Prepared: Aug 12, 2025	Prepared By: MF
Last Revision: N/A	Checked By: N/A

Basemap/Data Reference:
SCOOP 2018
On Geohub 2025



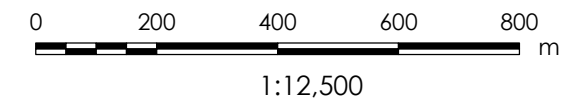
Appendix 1. Land Use Schedules.

Legend

- Zoning
- Land Parcels
- Floodplain Overlay

Zone Description

- A - Agricultural
- FD - Future Development
- HR - Hamlet Residential
- I - Institutional
- M2 - Rural Employment
- NC - Natural Core
- NL - Natural Linkage
- RR - Rural Residential
- RU - Rural



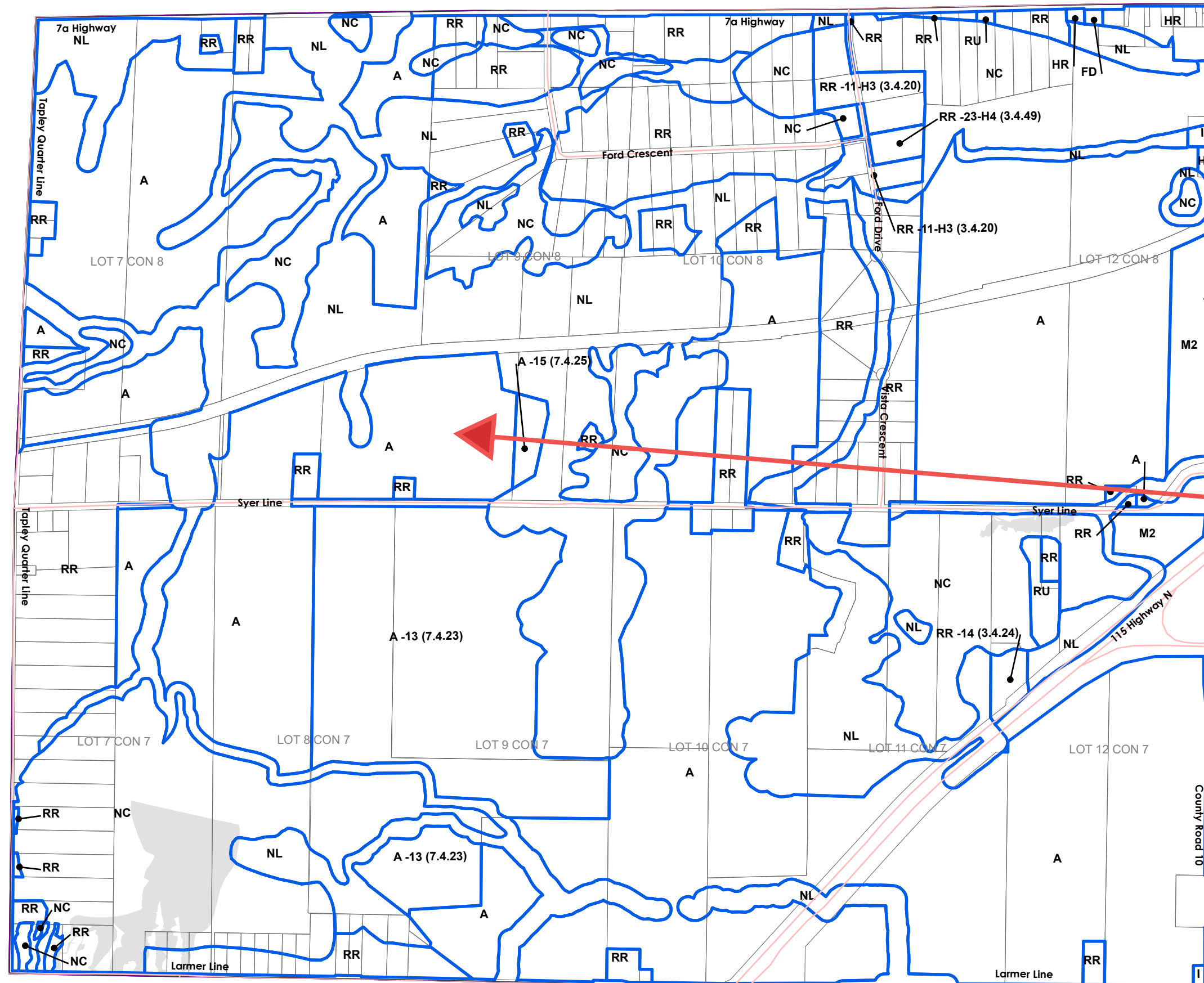
A-1	A-2	A-3	A-4	A-5	
B-1	B-2	B-3	B-4	B-5	
C-1	C-2	C-3	C-4	C-5	C-6
D-1	D-2	D-3	D-4	D-5	
E-1	E-2	E-3	E-4		
F-1	F-2	F-3	F-4		
G-1	G-2	G-3	G-4		

KEY MAP

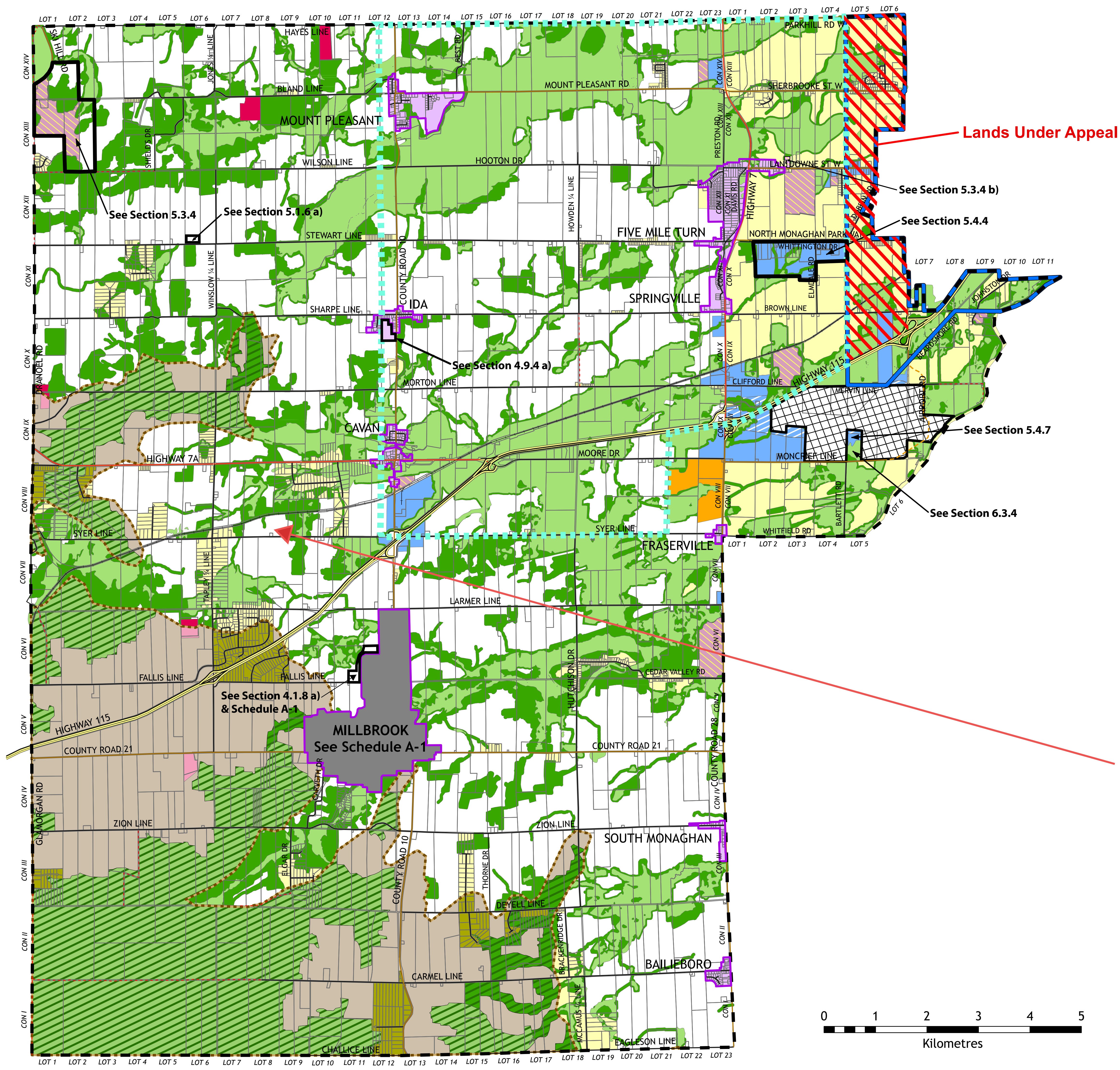
Schedule A Zoning By-law

Township of Cavan Monaghan
Zoning By-law No. 2018-58

Map D-2

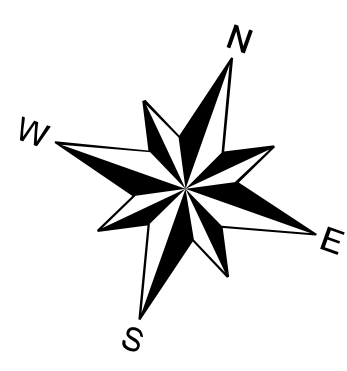


Township of Cavan Monaghan Official Plan - Schedule 'A' Land Use

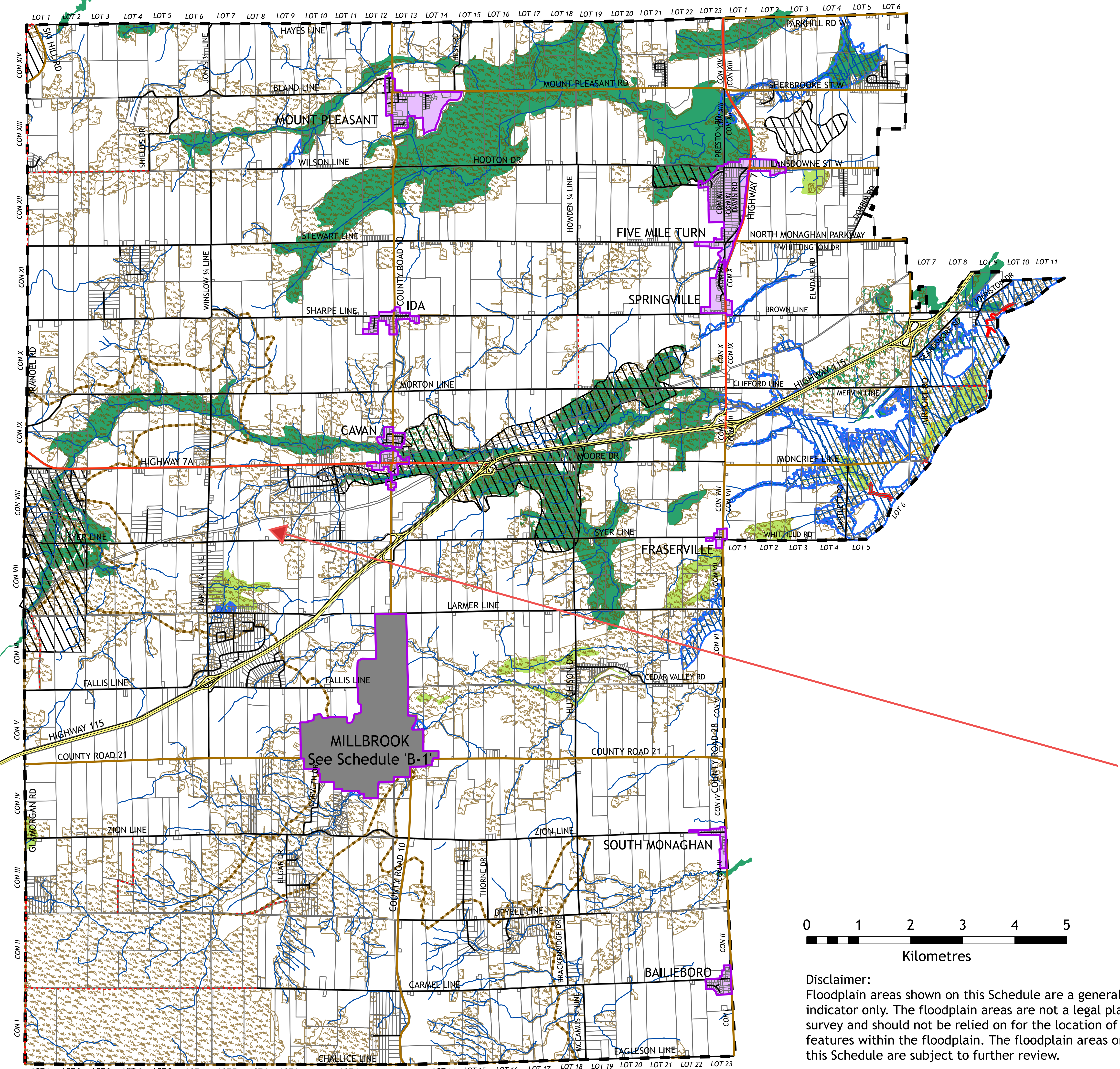


Legend

- Settlement Area
- Hamlet
- Millbrook Urban Settlement Area
- Countryside Areas
 - Agricultural
 - ORM - Prime Agricultural
 - Rural
 - ORM - Rural
 - Mineral Aggregate Extractive
 - ORM - Extractive
 - Rural Employment
 - Commercial Entertainment
 - Airport Employment
 - Recreational
- Natural Heritage System
 - Natural Core Area
 - ORM - Natural Core Area
 - Natural Linkage Area
 - ORM - Natural Linkage Area
- Oak Ridges Moraine Boundary
- Urban Rural Fringe
- Special Study Area No. 1 (See Section 2.6)
- Peterborough Airport
- Transportation
 - Freeway
 - King's Highway
 - County Road
 - Proposed Arterial Road
 - Township Road
 - Private Road
 - Railway



Township of Cavan Monaghan Official Plan - Schedule 'B' Natural Heritage System and Environmental Constraints



Legend

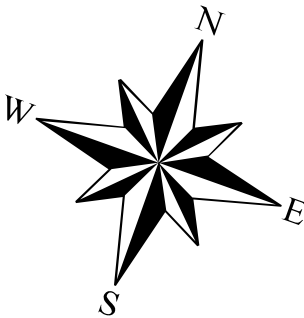
- Settlement Areas
- Hamlet
- Millbrook Urban Settlement Area

Natural Features

- Watercourse
- Oak Ridges Moraine Boundary
- ANSI
- Fish Spawning Area
- Floodplain Area
- Significant Woodland
- Other Wetland
- Provincially Significant Wetland

Transportation

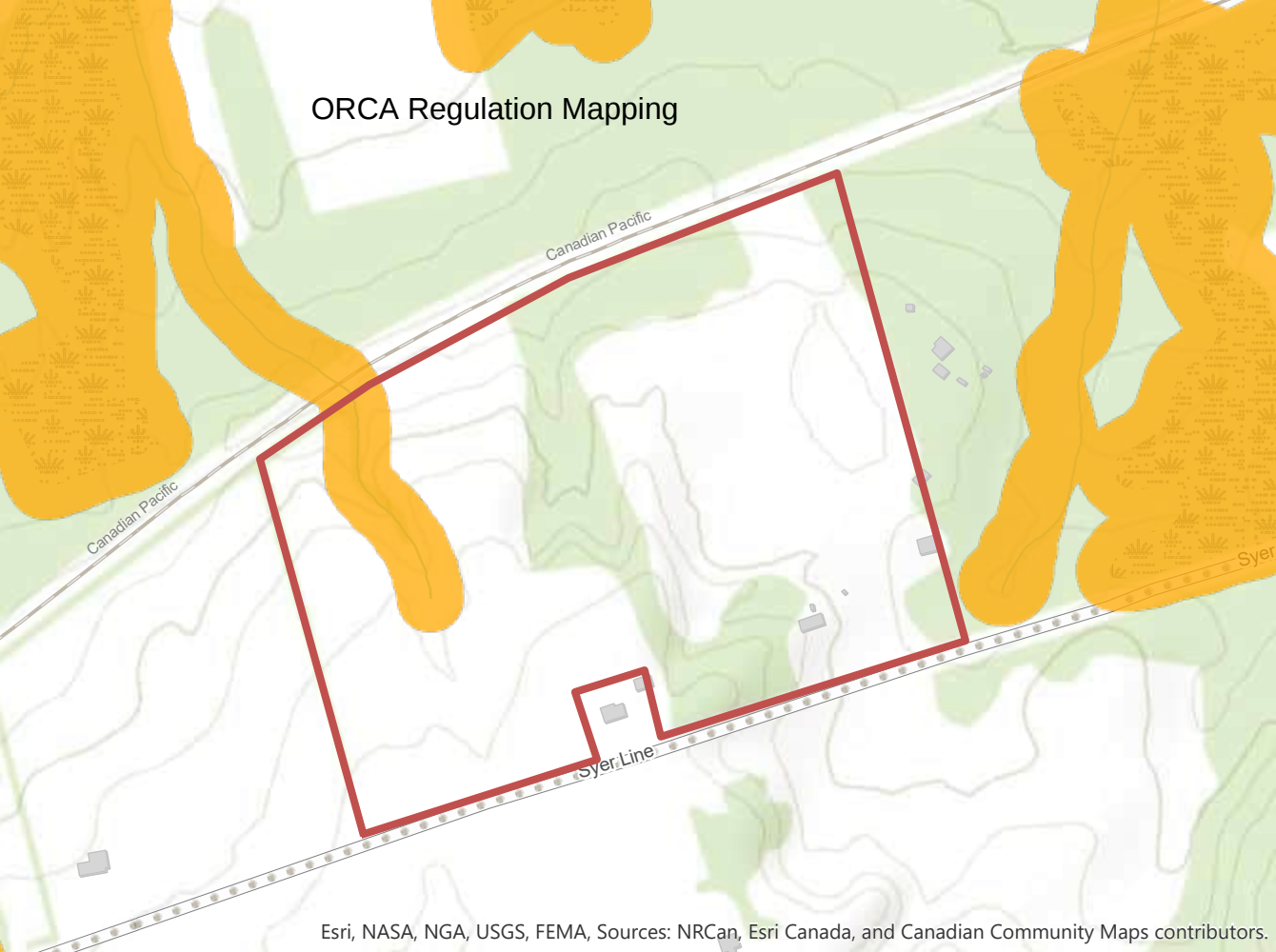
- Freeway
- King's Highway
- County Road
- Proposed Arterial Road
- Township Road
- Private Road



Disclaimer:
Floodplain areas shown on this Schedule are a general indicator only. The floodplain areas are not a legal plan of survey and should not be relied on for the location of features within the floodplain. The floodplain areas on this Schedule are subject to further review.

Consolidated February 6, 2015

ORCA Regulation Mapping



Appendix 2. Photos of Representative Site Conditions.



Photo 1. Existing dwelling and maintained grassed areas, facing NW.



Photo 2. Storage/amenity space east of existing dwelling, facing south.



Photo 3. Large fallow field north of existing dwelling, facing south.



Photo 4. Partial maintained grass areas in southwestern portion of property, facing NE.



Photo 5. Maintained portion of field, facing north from SW portion of property; start of mapped drainage corridor.



Photo 6. Successional woodland cover in north-central portion of the property.



Photo 7. Field with sparse shrub regeneration, north-central portion of property, facing south.



Photo 8. Coniferous forest along north property limit, adjacent to railway right-of-way.



Photo 9. Deciduous forest in broad depression in center of property.



Photo 10. Dense Dog-Strangling Vine coverage, typical in on-site woodland ecosystems.



Photo 11. Very dry, successional woodland in south-central portion of property.



Photo 12. Field edge adjacent to narrow, shrubby ravine in western half of property.



Photo 13. Aerial view of subject property, facing northwest over existing dwelling, amenity areas, and small successional woodland area.



Photo 14. Aerial view of subject property, facing northeast over partially maintained portion of fallow field; start of mapped drainage corridor in center of frame.



Photo 15. Aerial view of subject property; narrow, shrubby ravine feature in center of frame; broader depressional area to top of frame; successional woodland to left of frame adjacent to railway right-of-way.



Photo 16. Aerial view of west half of property, facing north.

Appendix 3. List of Documented Plant Species.

Scientific Name	Common Name(s)	S Rank	ESA Status	OWES Wetland Plant List
<i>Acer negundo</i>	Manitoba Maple	S5		X
<i>Acer saccharum</i>	Sugar Maple	S5		
<i>Acer spicatum</i>	Mountain Maple	S5		
<i>Achillea millefolium</i>	Common Yarrow	S5		
<i>Actaea pachypoda</i>	White Baneberry	S5		
<i>Agrimonia gryposepala</i>	Hooked Agrimony	S5		
<i>Alliaria petiolata</i>	Garlic Mustard	SNA		
<i>Amelanchier arborea</i>	Downy Serviceberry	S5		
<i>Anemone cylindrica</i>	Long-fruited Anemone	S4		
<i>Anemone virginiana</i> var. <i>virginiana</i>	Tall Anemone	S5?		
<i>Apocynum androsaemifolium</i>	Spreading Dogbane	S5		
<i>Aquilegia canadensis</i>	Red Columbine	S5		
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	S5		
<i>Asarum canadense</i>	Canada Wild Ginger	S5		
<i>Asclepias syriaca</i>	Common Milkweed	S5		
<i>Betula papyrifera</i>	Paper Birch	S5		X
<i>Bromus inermis</i>	Smooth Brome	SNA		
<i>Carex aurea</i>	Golden Sedge	S5		X
<i>Carex blanda</i>	Woodland Sedge	S5		
<i>Carex cephalophora</i>	Oval-leaved Sedge	S5		
<i>Carex deweyana</i>	Dewey's Sedge	S5		
<i>Carex gracillima</i>	Graceful Sedge	S5		X
<i>Carex pedunculata</i>	Long-stalked Sedge	S5		
<i>Carex pensylvanica</i>	Pennsylvania Sedge	S5		
<i>Carex rosea</i>	Rosy Sedge	S5		
<i>Carya cordiformis</i>	Bitternut Hickory	S5		
<i>Celastrus orbiculatus</i>	Oriental Bittersweet	SNA		
<i>Cirsium arvense</i>	Canada Thistle	SNA		
<i>Convallaria majalis</i>	European Lily-of-the-valley	SNA		
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood	S5		
<i>Cornus sericea</i>	Red-osier Dogwood	S5		X
<i>Dactylis glomerata</i>	Orchard Grass	SNA		
<i>Daucus carota</i>	Wild Carrot	SNA		
<i>Echium vulgare</i>	Common Viper's Bugloss	SNA		
<i>Elaeagnus umbellata</i>	Autumn Olive	SNA		
<i>Epipactis helleborine</i>	Broad-leaved Helleborine	SNA		
<i>Erigeron annuus</i>	Annual Fleabane	S5		
<i>Fagus grandifolia</i>	American Beech	S4		
<i>Fragaria virginiana</i> ssp. <i>virginiana</i>	Wild Strawberry	S5		
<i>Fraxinus americana</i>	White Ash	S4		
<i>Geranium robertianum</i>	Herb-Robert	S5		
<i>Hepatica acutiloba</i>	Sharp-lobed Hepatica	S5		
<i>Hieracium caespitosum</i>	Yellow Hawkweed	SNA		

<i>Hydrophyllum virginianum</i>	Virginia Waterleaf	S5		
<i>Hypericum perforatum</i>	Common St. John's-wort	SNA		
<i>Impatiens capensis</i>	Spotted Jewelweed	S5		X
<i>Juniperus communis</i>	Common Juniper	S5		
<i>Juniperus virginiana</i>	Eastern Red Cedar	S5		
<i>Leucanthemum vulgare</i>	Oxeye Daisy	SNA		
<i>Lithospermum officinale</i>	European Gromwell	SNA		
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	SNA		
<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	SNA		
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley	S5		
<i>Medicago lupulina</i>	Black Medic	SNA		
<i>Melilotus albus</i>	White Sweet-clover	SNA		
<i>Oenothera biennis</i>	Common Evening Primrose	S5		
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam	S5		
<i>Oxalis stricta</i>	European Wood-sorrel	S5		
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	S4?		
<i>Phleum pratense</i>	Common Timothy	SNA		
<i>Picea glauca</i>	White Spruce	S5		X
<i>Pilosella aurantiaca</i>	Orange Hawkweed	SNA		
<i>Pinus resinosa</i>	Red Pine	S5		
<i>Pinus strobus</i>	Eastern White Pine	S5		X
<i>Pinus sylvestris</i>	Scots Pine	SNA		
<i>Plantago lanceolata</i>	English Plantain	SNA		
<i>Plantago major</i>	Common Plantain	SNA		
<i>Poa compressa</i>	Canada Bluegrass	SNA		
<i>Populus balsamifera</i>	Balsam Poplar	S5		X
<i>Populus grandidentata</i>	Large-toothed Aspen	S5		
<i>Populus tremuloides</i>	Trembling Aspen	S5		
<i>Potentilla recta</i>	Sulphur Cinquefoil	SNA		
<i>Prunus serotina</i>	Black Cherry	S5		
<i>Prunus virginiana</i>	Chokecherry	S5		
<i>Quercus macrocarpa</i>	Bur Oak	S5		X
<i>Quercus rubra</i>	Northern Red Oak	S5		
<i>Ranunculus acris</i>	Common Buttercup	SNA		X
<i>Rhamnus cathartica</i>	European Buckthorn	SNA		X
<i>Rhus typhina</i>	Staghorn Sumac	S5		
<i>Ribes cynosbati</i>	Eastern Prickly Gooseberry	S5		
<i>Rosa acicularis</i>	Prickly Rose	S5		
<i>Rubus idaeus ssp. strigosus</i>	North American Red Raspberry	S5		
<i>Rudbeckia hirta</i>	Black-eyed Susan	S5		
<i>Salix petiolaris</i>	Meadow Willow	S5		X
<i>Silene latifolia</i>	White Campion	SNA		
<i>Solidago canadensis</i>	Canada Goldenrod	S5		
<i>Solidago flexicaulis</i>	Zigzag Goldenrod	S5		
<i>Solidago juncea</i>	Early Goldenrod	S5		
<i>Solidago nemoralis</i>	Gray-stemmed Goldenrod	S5		
<i>Solidago rugosa</i>	Rough-stemmed Goldenrod	S5		

<i>Sorbus aucuparia</i>	European Mountain-ash	SNA		
<i>Symphotrichum cordifolium</i>	Heart-leaved Aster	S5		
<i>Symphotrichum ericoides</i>	White Heath Aster	S5		
<i>Symphotrichum novae-angliae</i>	New England Aster	S5		
<i>Syringa vulgaris</i>	Common Lilac	SNA		
<i>Taraxacum officinale</i>	Common Dandelion	SNA		
<i>Thuja occidentalis</i>	Eastern White Cedar	S5		X
<i>Tilia americana</i>	Basswood	S5		
<i>Toxicodendron radicans</i> var. <i>rydbergii</i>	Western Poison Ivy	S5		
<i>Tragopogon pratensis</i>	Goat's Beard	SNA		
<i>Trifolium pratense</i>	Red Clover	SNA		
<i>Trifolium repens</i>	White Clover	SNA		
<i>Trillium grandiflorum</i>	White Trillium	S5		
<i>Ulmus americana</i>	White Elm	S5		X
<i>Verbascum thapsus</i>	Common Mullein	SNA		
<i>Viburnum lentago</i>	Nannyberry	S5		X
<i>Viburnum opulus</i> ssp. <i>opulus</i>	Cranberry Viburnum	SNA		
<i>Vicia cracca</i>	Tufted Vetch	SNA		
<i>Vincetoxicum rossicum</i>	European Swallowwort	SNA		
<i>Viola pubescens</i>	Downy Yellow Violet	S5		
<i>Vitis riparia</i>	Riverbank Grape	S5		

Appendix 4. Breeding Bird Survey Summary.

Species Recorded	Survey 1						Survey 2						Breeding Status Estimate	Survey notes (if applicable):
	Station #						Station #							
	1	2	3	4	5	6	1	2	3	4	5	6		
American Crow (Corvus brachyrhynchos)	Po	Po	Po	Po	Po	Po	Po	Po	Po	Po	Po		Pr	
Savannah Sparrow (Passerculus sandwichensis)	Po		Po	Po	Po	Po			Po				Pr	
House Wren (Troglodytes aedon)	Po												Po	
Song Sparrow (Melospiza melodia)	Po			Po	Po	Po	Po	Po	Po	Po	Po	Po	Pr	
Indigo Bunting (Passerina cyanea)	Po	Po		Po									Po	
Field Sparrow (Spizella pusilla)	Po		Po	Po	Po	Po				Po	Po	Po	Pr	
Black-capped Chickadee (Poecile atricapillus)	Po	Po	Po	Po			Po	Po	Po	Po			Pr	
American Robin (Turdus migratorius)	Po	Po	Po					Po					Pr	
Red-winged Blackbird (Agelaius phoeniceus)	x				x			x	x				x	Multiple observations but no breeding habitat.
Rose-breasted Grosbeak (Pheucticus ludovicianus)		Po				Po							Po	
Northern Flicker (Colaptes auratus)		Po										Po	Po	
Ovenbird (Seiurus aurocapilla)		Po								Po			Po	From woodland to north.
American Goldfinch (Spinus tristis)			Po			Po		Po			Po	Po	Pr	
Brown-headed Cowbird (Molothrus ater)				Po									Po	
Black-and-white Warbler (Mniotilta varia)				Po		Po			Po				Po	
Blue Jay (Cyanocitta cristata)				Po			Po			Po	Po	Po	Pr	
Grasshopper Sparrow (Ammodramus savannarum)				Po			Po		Pr			Po		Likely nest location identified on Figure 2.
Golden-winged Warbler (Vermivora chrysoptera)				Po									Po	Marginal potential habitat; single observation only.
Common Yellowthroat (Geothlypis trichas)				Po						Po			Pr	
Mourning Dove (Zenaida macroura)					Po					Po		Po	Po	
Eastern Meadowlark (Sturnella magna)					Po						Pr		Pr	Likely nest location identified on Figure 2.
Bobolink (Dolichonyx oryzivorus)					Po								Po	Adjacent lands to west.
Chestnut-sided Warbler (Setophaga pensylvanica)					Po								Po	
Northern Cardinal (Cardinalis cardinalis)							Po	Po				Po	Po	
Great Crested Flycatcher (Myiarchus crinitus)									Po				Po	
Broad-winged Hawk (Buteo platypterus)										x			x	Flyover.
Hairy Woodpecker (Dryobates villosus)										Po			Po	
Veery (Catharus fuscescens)										Po			Po	

Survey Details			
	Survey 1	Survey 2	Survey 3 (Focused grassland bird nest review)**
Date	2025-06-12	2025-07-02	2025-07-10
Time	7:40 - 9:30	7:20 - 9:10	7:00-8:30
Temperature (C)	13-16	19-25	20-22
Wind	1	1	1
Cloud Cover %	0-50	0	0
Background Noise Code	0-1	0-1	0-1

Breeding Code Explanations
Confirmed (Co): definitive breeding evidence, including observations of nest in use, nest with recent eggshells, adult carrying food or fecal sac, distraction display, fledged young.
Probable (Pr): probable breeding evidence, including observations of multiple singing birds and/or breeding pair in suitable habitat, mating display, territorial behaviour, agitated behavior, brood patch, nest building.
Possible (Po): possible breeding evidence, including observations of general singing/calling of species in suitable nesting habitat, during nesting season. Two consecutive 'possible' occurrences in the same location would be interpreted as 'probable' breeding evidence.
Present/Incidental (x): bird observed but does not fall under other codes, e.g., flyover, general observation (foraging), call heard outside of survey window, or call heard >100 m from station.

Appendix 5. 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>): Endangered	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.	Local Range Context & Database Review: 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). Habitat Structural Suitability: The forest structure observed within the study area is not considered suitable for this species. Survey Result: No individuals were observed during our on-site investigation. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N
Bank Swallow (<i>Riparia riparia</i>): Threatened	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.	Local Range Context & Database Review: The local landscape is generally within the range of this species. At least one applicable local database (OBBA) contains records for this species. Habitat Structural Suitability: The vegetation and landscape structure observed within portions of the study area may be marginally suitable for this species. Survey Result: No individuals were observed during our on-site investigation. No indicators of nesting habitat observed. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N
Black Ash (<i>Fraxinus nigra</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is within the range of this species. Applicable local databases do not contain records for this species. Habitat Structural Suitability: The forest structure observed within the study area is not considered suitable for this species. Survey Result: No individuals were observed during our on-site investigation. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Blanding's Turtle (<i>Emydoidea blandingii</i>): Threatened	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.	Local Range Context & Database Review: The local landscape is on the periphery of the provincial range of this species. Applicable local databases do not contain records for this species. Habitat Structural Suitability: The habitat structure observed within the subject property is not representative of specialized or important habitat for this species. Survey Result: No individuals or areas of key habitat were observed during our on-site investigation. Targeted presence/absence surveys are not considered applicable. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N
Bobolink (<i>Dolichonyx oryzivorus</i>): Threatened	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.	Local Range Context & Database Review: The local landscape is generally within the range of this species. Applicable databases (OBBA, NHIC) contain local records for this species. Habitat Structural Suitability: The vegetation and landscape structure observed within the study area is marginally suitable for this species. Field areas overlapping the subject property are not well structured to support nesting; however, fields on adjacent lands could support habitat. Survey Result: At least one individual was documented calling from adjacent lands during our on-site investigation. Conclusion: There is potential habitat for this species within the study area (adjacent lands). See report for further discussion.	Y
Butternut (<i>Juglans cinerea</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: The forest structure observed within portions of the study area is potentially suitable for this species. Survey Result: No individuals were observed during our on-site investigation. Conclusion: There is no expectation that this species occurs in the study area. No further evaluation or mitigation required.	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Cerulean Warbler (<i>Setophaga cerulea</i>): Threatened	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.	Local Range Context & Database Review: The local landscape is outside of the provincial range of this species. Applicable local databases do not contain records for this species. Habitat Structural Suitability: The vegetation and landscape structure observed within the study area is not considered suitable for this species. Site-specific Survey Result: No individuals were observed during our on-site investigation, which included breeding bird surveys. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N
Chimney Swift (<i>Chaetura pelagica</i>): Threatened	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.	Local Range Context & Database Review: The local landscape is generally within the range of this species. At least one applicable local database (OBBA) contains local records for this species. Habitat Structural Suitability: The vegetation and landscape structure observed within the study area is not suitable for this species. Survey Result: No individuals were documented during our on-site investigation. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N
Eastern Hog-nosed Snake (<i>Heterodon platirhinos</i>): Threatened	Eastern Hog-nosed snakes require a mosaic of habitats with sandy, well-drained soil and open vegetation close to water with a supply of American Toads. Their Ontario distribution is limited by climate and soil to the French River/Lake Nipissing and Carolinian areas.	Local Range Context & Database Review: The local landscape is outside of the provincial range of this species. Applicable local databases do not contain records for this species. Habitat Structural Suitability: N/A. Survey Result: No individuals or areas of key habitat were observed during our on-site investigation. Targeted presence/absence surveys are not considered applicable. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Eastern Meadowlark (<i>Sturnella magna</i>): Threatened	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.	Local Range Context & Database Review: The local landscape is within the range of this species. Applicable databases (OBBA, NHIC) contain local records for this species. Habitat Structural Suitability: The vegetation and landscape structure observed within portions of the study area is suitable for this species. Survey Result: One or more individuals were documented on the property during our on-site investigations. Conclusion: There is potential habitat for this species within the study area. See report for further discussion.	Y
Eastern Red Bat (<i>Lasiurus borealis</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: The habitat structure observed within portions of the study area may be suitable for this species Site-specific Survey Result: A general review of potential habitat function was undertaken to support this assessment, with minimal evidence of potential habitat documented. Conclusion: There is minor potential for this species to occur within portions of the study area. See report for further discussion.	Y
Eastern Small-footed Myotis (<i>Myotis leibii</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: 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. Site-specific Survey Result: No individuals or evidence of habitat was observed during our on-site investigation that included a general habitat-based wildlife survey. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Henslow's Sparrow (<i>Ammodramus henslowii</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is generally outside of the current provincial range of this species. Applicable local databases (OBBA) do not contain records for this species. Habitat Structural Suitability: The vegetation structure observed within the study area is not considered suitable for this species. Site-specific Survey Result: No individuals were observed during our on-site investigation that included breeding bird surveys. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N
Hoary Bat (<i>Lasiurus cinereus</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: The habitat structure observed within portions of the study area may be suitable for this species Site-specific Survey Result: A general review of potential habitat function was undertaken to support this assessment, with minimal evidence of potential habitat documented. Conclusion: There is minor potential for this species to occur within portions of the study area. See report for further discussion.	Y
Least Bittern (<i>Ixobrychus exilis</i>): Threatened	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.	Local Range Context & Database Review: The local landscape is generally within the range of this species. At least one applicable local database (OBBA) contains sparse local records for this species. Habitat Structural Suitability: The vegetation structure observed within the study area is not considered suitable for this species. Site-specific Survey Result: No individuals were observed during our on-site investigation. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Little Brown Myotis (<i>Myotis lucifugus</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: The habitat structure observed within portions of the study area may be suitable for this species Site-specific Survey Result: A general review of potential habitat function was undertaken to support this assessment, with minimal evidence of potential habitat documented. Conclusion: There is minor potential for this species to occur within portions of the study area. See report for further discussion.	Y
Northern Myotis/Northern Long-eared Bat (<i>Myotis septentrionalis</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: The habitat structure observed within portions of the study area may be suitable for this species Site-specific Survey Result: A general review of potential habitat function was undertaken to support this assessment, with minimal evidence of potential habitat documented. Conclusion: There is minor potential for this species to occur within portions of the study area. See report for further discussion.	Y
Red-Headed Woodpecker (<i>Melanerpes erythrocephalus</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is generally within the provincial range of this species. One database (OBBA) contains sparse local record for this species. Habitat Structural Suitability: The vegetation and landscape structure observed within the study area is not considered suitable for this species. Large trees with cavities and open-structured forest are absent from the study area. Site-specific Survey Result: No individuals were observed during our on-site investigation that included breeding bird surveys. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Short-eared Owl (<i>Asio flammeus</i>): Threatened	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.	Local Range Context & Database Review: 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. Habitat Structural Suitability: The vegetation and landscape structure observed within the study area is not considered suitable for this species. Site-specific Survey Result: N/A. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N
Silver-haired Bat (<i>Lasionycteris noctivagans</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: The habitat structure observed within portions of the study area may be suitable for this species Site-specific Survey Result: A general review of potential habitat function was undertaken to support this assessment, with minimal evidence of potential habitat documented. Conclusion: There is minor potential for this species to occur within portions of the study area. See report for further discussion.	Y
Spotted Turtle (<i>Clemmys guttata</i>): Endangered	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.	Local Range Context & Database Review: 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). Habitat Structural Suitability: The habitat structure observed within the study area is not considered suitable for this species. Site-specific Survey Result: N/A. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N

Species & Status	General Description of Habitat & Range	Project-Specific Evaluation & Discussion	Applicable to Study (Y,N)
Tricolored Bat (<i>Perimyotis subflavus</i>): Endangered	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.	Local Range Context & Database Review: The local landscape is assumed to be within the range of this species. Applicable local databases (NHIC) do not contain records for this species. Habitat Structural Suitability: The subject property lacks forested cover with prominent components of Oak/Maple, the preferred roosting habitat for this species. Site-specific Survey Result: N/A. Conclusion: There is no expectation that this species occurs within the study area. No further evaluation or mitigation required.	N

Appendix 6. 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)	Studies Confirm: Annual mixed species aggregations of 100 or more total birds Area of SWH Defined As: 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.	Studies Confirm: Mixed species aggregations of 100 or more total birds for 7 days, and/or annual use by Ruddy Ducks, Canvasbacks, or Redheads Area of SWH Defined As: Ecosites plus 100m radius, includes wetlands and shorelines	The study area does not contain any features that may support this habitat 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.	Studies Confirm: Mixed species aggregations of 3 or more listed species with >1000 shorebirds counted over the migration period, and/or any site with >100 Whimbrel for 3 or more years Area of SWH Defined As: 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 Special Concern: Short-eared Owl, Bald Eagle	Hawks/Owls: one each from forest (FOD, FOM, FOC) and upland (CUM, CUT, CUS, CUW) Bald Eagle: 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; Hawks/Owls: >20 ha with a combination of forest and upland; >15ha field habitat; field area windswept with limited snow depth; Bald Eagle: open water, large trees and snags	Studies Confirm: 1 or more Short-eared Owls, 1 or more Bald Eagles, or at least 10 individuals and 2 of the listed species and used ≥3 times in 5 years for a minimum of 20 days Area of SWH Defined As: n/a	The study area contains forest and open field areas that exceed 15 ha. Site investigations did not document raptor activity; however, winter surveys were not undertaken. It is possible that this function occurs in association with the study area. See report for further discussion.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Bat Hibernacula	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	Studies Confirm: confirmed hibernating bats Area of SWH Defined As: 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.
Bat Maternity Colonies	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	Studies Confirm: confirmed use by >10 Big Brown Bats or >5 adult female Silver-haired Bats Area of SWH Defined As: entire woodland/forest ELC or 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.
Turtle Wintering Areas	Midland Painted Turtle Special Concern: Northern Map Turtle, Snapping Turtle	Snapping and Midland Painted Turtles: Community classes SW, MA, OA, SA, ELC Community Series FEO, BOO Northern Map Turtle: 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	Studies Confirm: 5 over-wintering Midland Painted Turtles, or 1 or more overwintering Northern Map Turtles or Snapping Turtles Area of SWH Defined As: 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. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Reptile Hibernaculum	Snakes: Eastern Gartersnake, Northern Watersnake, Northern Red-bellied Snake, Northern Brownsnake, Smooth Green Snake, Northern Ring-necked Snake Special Concern: Five-lined Skink, Milksnake, Eastern Ribbonsnake	Snakes: any forest ecosite other than very wet ones; talus, rock barrens, crevice, cave, and alvar sites; rock piles or slopes, stone fences, crumbling foundations Skink: Community Series FOD, FOM and Ecosites FOC1, FOC3	Snakes: sites with access below the frost line, wetlands with hummocks Skink: mixed forests with rock outcrops providing cover rock overlaying granite bedrock with fissures	Studies Confirm: use by ≥5 individuals from one species or use by individuals from ≥2 species; congregation of ≥5 individuals from one species or individuals from ≥2 species near potential hibernacula; if SC species are present site is SWH; any active skink hibernaculum Area of SWH Defined As: feature containing hibernacula plus 30m radius	Site investigations did not document any evidence that this function occurs within the study area. No further assessment provided - not SWH.
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	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	Studies Confirm: 1 or more nesting sites with ≥8 Cliff Swallow pairs and/or Rough-winged Swallow Pairs during the breeding season Area of SWH Defined As: colony and 50m radius from peripheral nests	Site investigations did not document any activity by the listed indicator species. No further assessment provided - not SWH.
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	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	Studies Confirm: ≥5 active Great Blue Heron or other listed species nests Area of SWH Defined As: colony plus 300m radius or extent of forest ecosite containing colony or any island <15ha with a colony	The study area does not contain any features that may 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	
Colonially-nesting Bird Breeding Habitat (Ground)	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 Brewer's Blackbird: close to watercourses in open fields	Gulls and Terns: rocky islands or peninsulas in open water, marshy areas Brewer's Blackbird: near streams and irrigation ditches in farmland	Studies Confirm: >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 Area of SWH Defined As: colony plus 150m radius or extent of ecosites containing colony or 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.
Migratory Butterfly Stopover Areas	Painted Lady, Red Admiral Special Concern: 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	Studies Confirm: >3000 Monarch Use Days (days a site is used * the number of individuals), or >3000 Monarch Use Days with Painted Ladies or Red Admirals present Area of SWH Defined As: n/a	The study area is located outside of applicable distance from Lake Ontario shoreline. No further assessment provided - not SWH.
Landbird Migratory Stopover Areas	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	Studies Confirm: use by > 200 birds/day with > 35 species, and at least 10 species recorded on 5 different survey days Area of SWH Defined As: n/a	The study area is located outside of applicable distance from Lake Ontario shoreline. No further assessment provided - not SWH.
Deer Yarding Areas	White-tailed Deer	Community Series FOM, FOC, SWM, SWC and Ecosites CUP2, CUP3, FOD3, CUT	Stratum I: coniferous forest with >60% canopy cover Stratum II: mixed or deciduous forest surrounding Stratum I	Confirm Studies: mapping by MNRF Area of SWH Defined As: 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	Confirm Studies: mapping by MNRF, all woodlots >100ha are significant Area of SWH Defined As: n/a	NA - see category above.
Category 2: Rare Vegetation Communities					
Cliffs and Talus Slopes		Community Series TAO, CLO, TAS, CLS, TAT, CLT	Any cliff > 3m or talus slope	Confirm Studies: any ELC for cliffs or talus slopes Area of SWH Defined As: 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	Confirm Studies: confirmed ELC for Sand Barrens, <50% exotic vegetative cover Area of SWH Defined As: n/a	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Alvar	Indicator species: 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	Confirm Studies: >0.5ha, at least 4 indicator species, <50% exotic vegetative cover, in good condition Area of SWH Defined As: 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	Studies Confirm: dominant trees are >140 years old, no recognizable forestry activities Area of SWH Defined As: combined ecosites or ecoelements with old growth characteristics	The estimated age of on-site woodlands is not sufficient to be considered old growth. 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	Studies Confirm: ≥1 Savannah indicator species and <50% exotic vegetative cover Area of SWH Defined As: 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	
Tallgrass Prairie	See Appendix N of the Significant Wildlife Habitat Technical Guide.	TPO1, TPO2	Dominated by prairie grasses, <25% tree cover	Studies Confirm: ≥1 Prairie indicator species Area of SWH Defined As: ecosite	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Other Rare Vegetation Communities		Provincially Rare S1, S2, and S3 vegetation communities in Appendix M of the SWHTG	Beaches, Fens, Forest, Marsh, Barrens, Dunes, Swamps	Studies Confirm: confirmed ELC from Appendix M of the SWHTG Area of SWH Defined As: ELC	No rare vegetation communities have been identified within the study area. No further assessment provided - not SWH.
Category 3: Specialized Habitats for Wildlife					
Waterfowl Nesting Area	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, or a cluster of ≥3 <0.5ha wetlands, adjacent upland areas at least 120m wide, trees >40cm dbh with nesting cavities	Studies Confirm: ≥3 nesting pairs from listed species excluding Mallards, or ≥10 nested pairs including Mallards, or active nesting American Black Ducks Area of SWH Defined As: wetland and 120m boundary, boundary may vary to provide nesting habitat	The study area does not contain any features that may be expected to support this habitat function. No further assessment provided - not SWH.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey Special Concern: Bald Eagle	Community Series FOD, FOM, FOC, SWD, SWM, SWC	Forested shorelines along lakes, ponds, rivers, or wetlands Osprey: nest at the top of tree Eagle: nest in notch of super canopy tree (Does not include nests on man-made structures)	Studies Confirm: one or more active nests in area, nest must be used annually, must be inactive ≥3 years to be non-significant Area of SWH Defined As: 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.

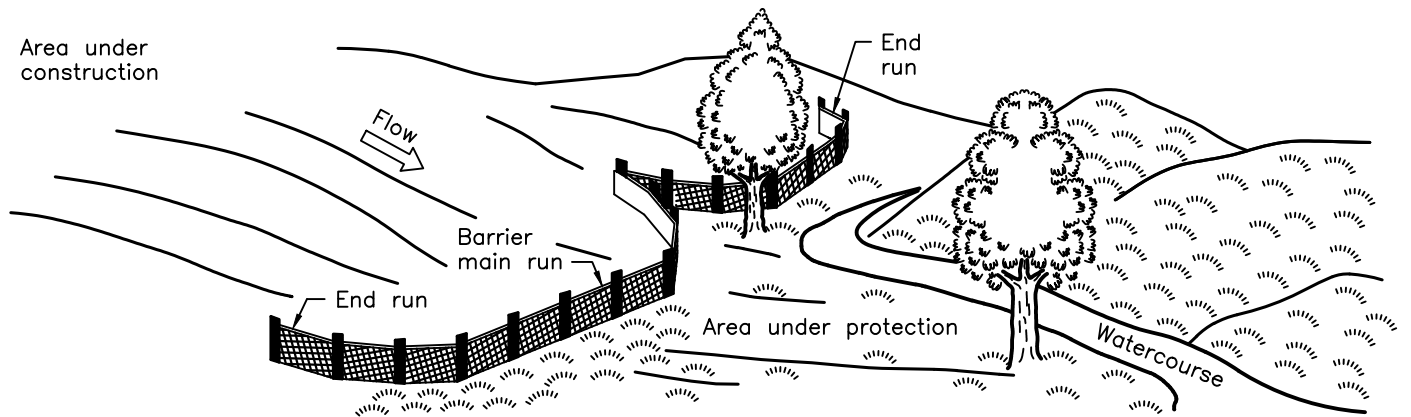
Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Woodland Raptor Nesting Habitat	Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Red-shouldered Hawk, Barred Owl, Broad-winged Hawk	All forested Ecosites, also 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	Studies Confirm: 1 or more active nests from listed species Area of SWH Defined As: 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 study area contains woodland areas but does not contain areas representing interior woodland habitat. No further discussion provided - not SWH.
Turtle Nesting Areas	Midland Painted Turtle Special Concern: 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	Studies Confirm: ≥5 nesting Midland Painted Turtles, or ≥1 nesting Northern Map Turtle or Snapping Turtle Area of SWH Defined As: 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.
Seeps and Springs	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	Studies Confirm: ≥2 seeps/springs Area of SWH Defined As: area containing seeps/springs	One seepage zone was identified in the northern portion of the subject property. See report for further discussion.
Amphibian Breeding Habitat (Woodland)	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 ² within 120m of a woodland	Studies Confirm: breeding by ≥1 listed newt/salamander species or ≥2 listed frog species with at least 20 adults or egg masses or ≥2 listed frog species with Call Level Codes of 3 Area of SWH Defined As: wetland plus 230m radius of woodland, including travel corridor	The study area does not contain any features that may support this habitat function. Two small woodland pools are present along the northern property boundary; however, both are approximately 200m ² , under the minimum size threshold for significance. No further assessment provided - not SWH.

Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Amphibian Breeding Habitat (Wetlands)	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 ² , bullfrogs require permanent waterbodies	Studies Confirm: breeding by ≥1 listed newt/salamander species or ≥2 frog/toad species with at least 20 adults or egg masses or ≥2 frog/toad species with Call Level Codes of 3 Area of SWH Defined As: ELC ecosite and shoreline are SWH	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Woodland Area-Sensitive Bird Breeding Habitat	Yellow-bellied Sapsucker, Red-breasted Nuthatch, Veery, Blue-headed Vireo, Northern Parula, Black-throated Green Warbler, Blackburnian Warbler, Black-throated Blue Warbler, Ovenbird, Scarlet Tanager, Winter Wren Special Concern: 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.	Studies Confirm: breeding pairs/nesting by ≥3 listed species, any site with breeding Cerulean Warblers or Canada Warblers Area of SWH Defined As: n/a	The study area contains woodland areas but does not contain areas representing interior woodland habitat. Surveys did not document sufficient diversity of indicator species to be considered significant. No further discussion provided - not SWH.
Category 4: Habitats of Species of Conservation Concern					
Marsh Bird Breeding Habitat	American Bittern, Virginia Rail, Sora, Common Moorhen, American Coot, Pied-billed Grebe, Marsh Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan Special Concern: Black Tern, Yellow Rail	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1, SAM1, SAF1, FEO1, BOO1 Green Heron: SW, MA, CUM1	Shallow water with emergent vegetation Green Heron: edge of sluggish streams, ponds, marshes sheltered by shrubs and trees	Studies Confirm: ≥5 nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes, or breeding by ≥5 of the listed species, or ≥1 pairs of Trumpeter Swans, Black Terns, Green Herons, or Yellow Rails Area of SWH Defined As: 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.
Open Country Bird Breeding Habitat	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier, Savannah Sparrow Special Concern: Short-eared Owl	CUM1, CUM2	Grassland areas >30ha, includes cultural fields and meadows, agricultural land not used for farming in last 5 years	Studies Confirm: nesting/breeding of ≥2 listed species or ≥1 breeding Short-eared Owls Area of SWH Defined As: contiguous grassland ELC	The study area does not contain any features that may be expected to support this habitat function. Multiple indicator species were documented; however, open field areas do not meet minimum area threshold for significance (30 ha). No further assessment provided - not SWH.

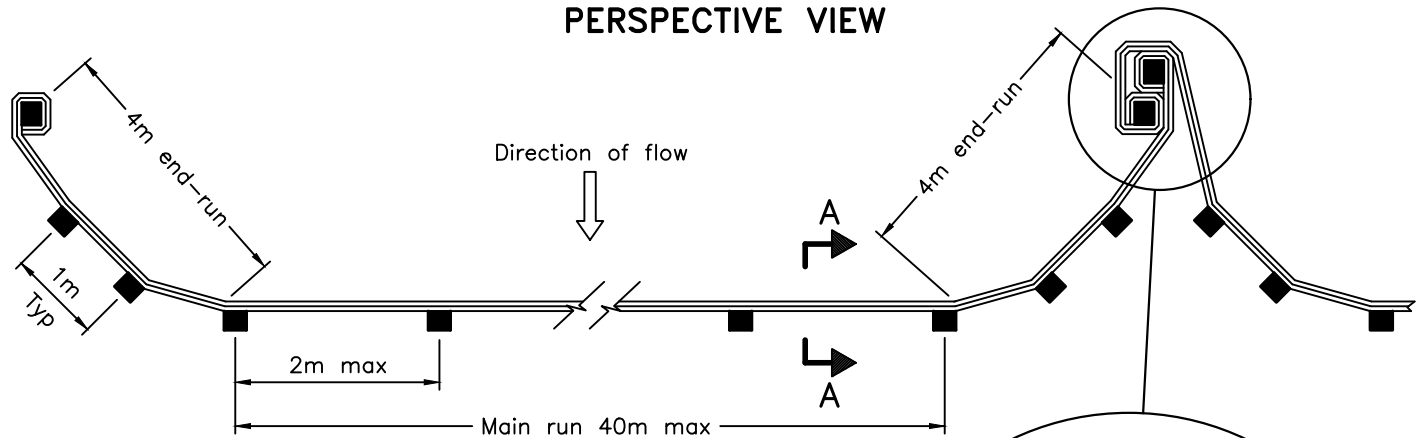
Habitat Type	Applicable/Indicator Species	Candidate SWH		Confirmed SWH	Discussion
		ELC Ecosites	Other Habitat Criteria	Defining Criteria	
Shrub/Early Successional Bird Breeding Habitat	Indicator Species: Brown Thrasher, Clay-coloured Sparrow Common Species: Field Sparrow, Black-billed Cuckoo, Eastern Towhee, Willow Flycatcher Special Concern: Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large fields >10ha succeeding to shrub and thicket, shrub thickets >10ha	Studies Confirm: nesting/breeding of ≥1 Indicated Species and at least 2 Common Species, or breeding Yellow-breasted Chat or Golden-winged Warbler Area of SWH Defined As: contiguous field/thicket ELC	The study area does not contain any features that may be expected to support this habitat function. Successional thicket areas are present but do not meet minimum area threshold for significance. No further assessment provided - not SWH.
Terrestrial Crayfish	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	Studies Confirm: ≥1 individuals or burrows in suitable habitat Area of SWH Defined As: area of ELC with burrows	No terrestrial crayfish burrows observed during on-site investigations.
Special Concern and Rare Wildlife Species	Species tracked by NHIC	n/a	ELC surrounding recorded occurrence	Studies Confirm: confirmation species is present Area of SWH Defined As: 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.
Category 5: Animal Movement Corridors					
Amphibian Movement Corridors	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	Studies Confirm: confirmed Amphibian Breeding Habitat-Wetland, at least 15m of vegetation on both sides of waterway or up to 200m wide Area of SWH Defined As: 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	Studies Confirm: confirmed Deer Wintering Habitat Area of SWH Defined As: corridors at least 200m wide with gaps <20m, with 15m of vegetation on both sides of waterways	N/A
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 6E					
6E-14 Mast Producing Areas	Black Bear	Community Series FOM, FOD	Woodland ecosites >30ha with mast-producing tree species (cherry, oak, beech)	Studies Confirm: 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 Area of SWH Defined As: n/a	N/A
6E-17 Lek	Sharp-tailed Grouse	CUM, CUT, CUS	Grassland >15ha adjacent to shrubland, grassland >30ha adjacent to deciduous woodland	Studies Confirm: confirmed courtship activities Area of SWH Defined As: field/meadow ecosites plus 200m radius	N/A

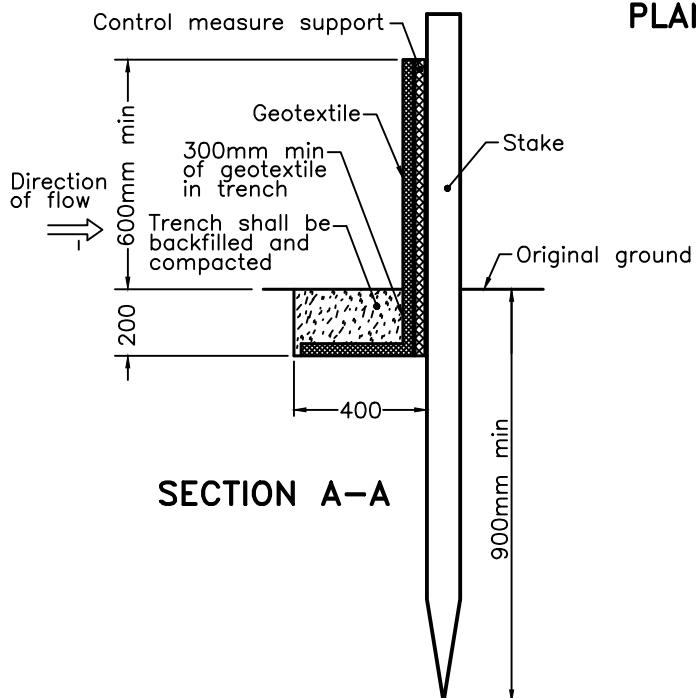
Appendix 7. Example Sediment & Erosion Control Fencing Standard.



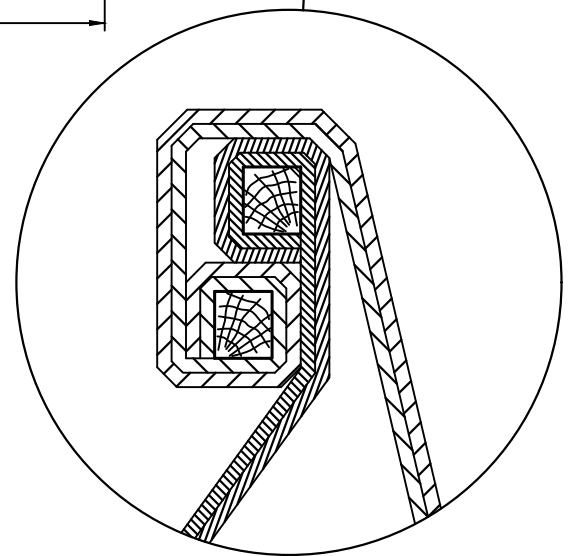
PERSPECTIVE VIEW



PLAN



SECTION A-A



JOINT DETAIL

NOTE:

A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2021

Rev 3

HEAVY-DUTY
SILT FENCE BARRIER

OPSD 219.130

