Environmental Impact Study – 5738 County Road 1, Prince Edward County, Ontario

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AzzoRypa GP Inc.

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1.0 Introduction

Cambium Inc. (Cambium) was retained by AzzoRypa GP Inc.to conduct an Environmental Impact Study at 5738 County Road 1, in Prince Edward County (County), Ontario (Figure 1). The proposed development includes 10 tiny cottages (less than 236 sf. in size each) by way of a Zoning By-law Amendment. Based on the proposed development, the entire property will be considered the Site for this report.

The following Environmental Impact Study (EIS; the Study) serves to address potential impacts to natural heritage features identified during the preliminary development review process, as required by the Provincial Planning Statement (PPS). The Site contains or is adjacent to (within 120 m of) the following mapped natural heritage and/or hydrologic features: woodlands and provincially significant wetlands (Figure 1). The Site is within Ecoregion 6E of Ontario (Crins, Gray, Uhlig, & Wester, 2009). The Site is outside of Settlement Area boundaries.

The Site is within the jurisdiction of the Quinte Conservation Authority (QCA) and their regulated area overlaps a portion of the Site. The regulated area is located on the north and northwest position of the Site. As the Site contains wetlands, the Study will consider regulations on development as imposed by the local Conservation Authority's Regulation under the Conservation Authorities Act, 1990.

The Endangered Species Act, 2007 (ESA) protects endangered and threatened species and their habitats from harm or destruction. Habitat for endangered and threatened species is also afforded protection under provincial natural heritage policy; however, it is ultimately the proponent's responsibility to ensure that no harm to these species or their habitats occurs during their planned activities. This Study includes a habitat-based screening for species of conservation concern to determine if the Site has suitable habitat for any provincially or federally listed species at risk (SAR).

This Study has been prepared to meet application submission standards for the proposed development of the Site, and includes: the results of the background review, a description of methods used to collect site specific natural heritage information, and a summary of field

investigations conducted on the Site. Information has been compiled to characterize the existing form and function of natural heritage features on and adjacent to the Site and provide an evaluation of the significance and sensitivity of those features. Furthermore, an assessment of potential for impacts to these features in relation to the proposed development is provided. Data was interpreted in accordance with provincial and municipal policies and regulations to determine potential constraints to development, to guide the decision-making process and address approval authority requirements.

1.1 Terms of Reference

The Terms of Reference (TOR) were circulated to QCA and a response was received on October 17, 2023. A record of the correspondence is included in Appendix A.

1.2 Summary of Proposed Development

The Site is approximately 30.4 hectares, comprised of agricultural crop fields with areas of vacant land located on the southern portion and a wooded area with wetland located on the northern portion. A residential dwelling is located on the southern portion of the property. Surrounding properties are agricultural or rural in land use.

The proposed development consists of 10 tiny home cottages which will not exceed 236 square feet, each. A Conceptual Site Plan is provided in Appendix B. This Site Plan is preliminary and was used for the purpose of scoping the Study. Note that future Site Plans submitted in support future permit applications should include the recommendations provided herein.

2.0 Natural Heritage Policy Context

The evaluation of the form and function of natural heritage features present on, and adjacent to, the Site was undertaken to meet the requirements of the following legislation, plans and policies:

- Provincial Planning Statement (PPS), 2024
- O. Reg. 41/24: Prohibited Activities, Exemptions and Permits
- County of Prince Edward Official Plan, 2021 and County of Prince Edward Comprehensive Zoning By-law 1816-2006 (updated 2022).
- *Endangered Species Act* , 2007 (ESA)
- *Fisheries Act*, 2019
- *Species at Risk Act* (SARA)
- *Migratory Birds Convention Act*, 1994 (MBCA)
- *Invasive Species Act*, 2015

This Study includes an assessment of conformity of the proposed development with relevant natural heritage policies. A summary of policy conformity is included in Section 7.0.

2.1 Provincial Planning Statement, 2024

The PPS provides direction on matters of provincial interest related to land use planning and development. Section 4.1 of the PPS 2024 protects the form and function of eight types of significant natural heritage features, which include:

- significant wetlands in Ecoregions 5E, 6E, and 7E
- significant coastal wetlands
- significant woodlands in Ecoregions 6E and 7E
- significant valleylands in Ecoregions 6E and 7E

- significant wildlife habitat (SWH)
- significant areas of natural and scientific interest (ANSI)
- fish habitat
- habitat of endangered and threatened species
- coastal wetlands in Ecoregions 5E, 6E, and 7E

Given their significance, development and site alteration are prohibited within provincially significant wetlands (PSW) in Ecoregions 5E, 6E, and 7E and within significant coastal wetlands. Development and site alteration in fish habitat and the habitat of endangered and threatened species shall only be permitted in accordance with provincial and federal requirements. Development and site alteration within other natural heritage features and on lands adjacent to all natural heritage features may be permitted if it is demonstrated that there will be no negative impacts on the feature or its ecological function. The PPS defines “development” as the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act. “Site alteration” means activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site.

Section 4.2 of the PPS protects the quality and quantity of water, including the form and hydrologic function of sensitive surface water features and sensitive ground water features. Focus is given to maintaining hydrologic linkages and functions at the watershed scale to minimize potential negative impacts, including cross-jurisdictional and cross-watershed impacts of development. Mitigative measures and/or alternative development approaches should be considered for development near water features.

2.2 Conservation Authority Regulation

“Conservation Authorities are community-based watershed management agencies, whose mandate is to undertake watershed-based programs to protect people and property from flooding, and other natural hazards, and to conserve natural resources for economic, social and environmental benefits” (Conservation Ontario, 2022).

Quinte Conservation Authority (QCA) regulates these features under Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits under the Conservation Authorities Act.

2.3 Official Plan and Zoning By-Law

The land use designations and zoning of the Site are summarized in Table 1:

Table 1 Summary of Municipal Official Plan and Zoning By-law Designations

Source	Designation / Zoning
Official Plan – County of Prince Edward, 2021, Schedule A	Environmental Protection Area, Shore Land
Zoning By-Law 1816-2006	Environmental Protection – Provincially Significant Wetlands (EP-W), Tourist Commercial (TC-58-H)

A summary of conformity with the relevant policies is included in Section 7.0.

2.4 Endangered Species Act, 2007

Species listed as endangered or threatened on the Species at Risk in Ontario (SARO) list, and their habitats, are protected under the provincial *Endangered Species Act* (ESA) (Government of Ontario, 2007). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing or taking a member of a species listed as endangered, threatened, or extirpated. Section 10(1) of the ESA prohibits the damage or destruction of habitat of species listed as endangered or threatened. Protection of special concern species is provided through designation of their habitat as significant wildlife habitat (SWH), a provincially protected natural heritage feature. Species at risk (SAR) are discussed throughout this report, as applicable.

2.5 Fisheries Act

The Department of Fisheries and Oceans Canada (DFO) administers the federal *Fisheries Act* which defines fish habitat as "*spawning grounds and other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes*" (Subsection 2(1)). Works within and adjacent to lakes, watercourses, and other bodies of water containing fish have the potential to impact fish and/or fish habitat. The

Fisheries Act prohibits the harmful alteration, disruption, or destruction (HADD) of fish habitat (Subsection 35(1)), which is defined as "*any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes*".

As a result of amendments to the federal Fisheries Act in 2019, projects near water that could potentially impact fish or fish habitat may require DFO review. The primary purpose of the review is to determine whether HADD of fish habitat, as defined by the Act, can be avoided. The DFO Fisheries Protection Program provides a Decision Framework and guidance material applicable to these reviews (available on-line at www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html).

Fish habitat occurs in the following locations on or adjacent to the Site: Lake Consecon Marsh Provincially Significant Wetland and Lake Consecon.

2.6 Species at Risk Act

The federal *Species at Risk Act* (SARA) was adopted in 2002 to prevent endangered or threatened species from becoming extinct or extirpated, to help in the recovery of endangered, threatened and extirpated species, and to manage species of special concern to help prevent them from becoming endangered or threatened. Habitat which is deemed necessary for the survival/recovery of a listed wildlife species, referred to as Critical Habitat, is protected under Section 56 of the SARA. The SARA applies to all federal lands in Canada; however, at-risk aquatic and migratory bird species located on private property in Ontario also receive protection under the Act.

2.7 Migratory Birds Convention Act, 1994

The federal *Migratory Birds Convention Act* (MBCA) prohibits killing, capturing, injuring, taking or disturbing of the listed migratory birds. Including damaging, destroying, removing, or disturbing of nests of all migratory bird species that contain a live birds or viable eggs. In 2022, new *Migratory Birds Regulations* (MBR) were adopted that offer year-round protection for the nests of 18 migratory species, until the nest is deemed to be abandoned. Nest abandonment must be reported through the Abandoned Nest Registry, administered by Environment and Climate Change Canada (ECCC), if there is a need to damage, disturb, destroy or remove a

nest of a species listed in Schedule 1 of the MBR. The time period to confirm nest abandonment varies by species, and ranges from 12-36 months.

To ensure compliance with the MBCA during development, best management practices should be implemented to detect and avoid disturbances to active nests of listed species. Active nests are protected and should be left undisturbed until all young have fledged, the nest is determined by a professional to be inactive or abandoned.

3.0 Technical Approach and Data Collection Methods

3.1 Background Information Review

Supporting background information pertaining to the Site and surrounding landscape was compiled and reviewed, as part of a comprehensive desktop exercise, to better understand local biophysical conditions. Data was obtained from provincial, municipal, and other online resources to provide context to the development proposal, and to guide development of the site-specific work program. Field studies were subsequently conducted to verify and/or add detail to the high-level contextual information derived from these publicly available resources.

The comprehensive desktop review for this Site included the following resources:

- Land Information Ontario (LIO) database via the online Natural Heritage Areas: Make-a-Map tool (Ministry of Natural Resources and Forestry, 2022)
- Natural Heritage Information Center (NHIC) database: species at risk (SAR) occurrence records
- Aquatic Species at Risk distribution maps (Fisheries and Oceans Canada, 2022)
- Aquatic Resource Area Summary Data (Government of Ontario, 2022)
- Fish ON-Line (Ministry of Natural Resources and Forestry, 2022)

Mapped natural heritage features present in the general area of the Site are shown on Figure 1. A summary of background review results is provided in Table 2.

Table 2 Background Review Summary

Source	Location Reference	Relevant Records
LIO Geographic Database	Site and 120 m adjacent lands	Consecon Lake Marsh Provincially Significant Wetland (coastal wetland) Consecon Lake Woodlands
NHIC Database	18TP9973 18TP9974 18UP0073 18UP0074	Common Gallinule - NA Snapping Turtle - SC Grass Pickerel - SC Eastern Pondmussel - END Blanding's Turtle - THR Eastern Meadowlark - THR Piping Plover - END Wood Thrush - SC Eastern Wood-pewee - SC Bobolink - THR Western Chorus Frog - Great Lakes - St. Lawrence - Canadian Shield population - NAR Black Tern – SC Least Bittern - THR
Aquatic SAR distribution maps	Site and 120 m adjacent lands	Bridle Shiner Eastern Pondmussel

Note: THR = Threatened species on SARO list
END = Endangered species on SARO list
SC = Special concern species on SARO list

3.2 Consultation and Agency Correspondence

Regulatory agency consultation may involve input from Fisheries and Oceans Canada (DFO), the Ministry of Natural Resources and Forestry (MNRF), the Ministry of Environment, Conservation, and Parks (MECP), and/or the local Conservation Authority, as applicable. The MECP is responsible for administering the ESA and providing direction on potential compliance issues. MECP has prepared a guidance document titled *Client's Guide to*

Preliminary Screening for Species at Risk (Ministry of the Environment, Conservation and Parks, 2019). This document aims to “help clients better understand their obligation to gather information and complete a preliminary screening for SAR before contacting the Ministry”. This document was used to guide the SAR habitat-based screening for the Study.

No direct consultation with regulatory authorities was undertaken for this project due to the availability of site-specific data via publicly accessible resources.

3.3 Field Investigations

Ecological investigations were completed on the Site, through a single site visit, by a team of qualified ecologists to understand potential ecological constraints to development and opportunities for restoration/enhancement. Information gathered through the background review was used to guide the development of the fieldwork program and was supplemented with additional site-specific information gathered through various standard methodologies. Survey methodologies for each of the field investigations completed on the Site are described in the following sections.

All surveys were conducted by appropriately trained Cambium staff. Survey stations were GPS marked in the field. Data were documented manually, reviewed upon return to the office, and transposed to digital format for secure data management.

3.3.1 Ecological Land Classification and Vegetation Inventory

The Ecological Land Classification (ELC) System for Southern Ontario (Lee, et al., 1998) was used to classify vegetation communities on the Site. Definitions of vegetation types are derived from the ELC for Southern Ontario First Approximation Field Guide (Lee, et al., 1998) and the revised 2008 tables. ELC units were initially delineated and classified by orthoimagery interpretation. Field investigations served to confirm the type and extent of ELC communities on the Site through vegetation inventory, and soil assessment with a hand auger where vegetation types could not be classified based on vegetation alone. Where vegetation communities extended off the Site, classification was done through observation from property boundaries and publicly accessible lands.

Data includes the provincial status of plant species and vegetation communities, where such information exists. Sensitivity of individual vegetation species was evaluated based on the coefficient of conservatism (CC) which is a measure of the tolerance of a species to disturbance and fidelity to a specific habitat type; species with CC of 9-10 exhibit a high degree of fidelity to a narrow range of habitat parameters. The sensitivity of vegetation communities was evaluated through an assessment of various community attributes including age, habitat quality, degree of disturbance, presence of non-native/invasive species, and presence of sensitive plant species (plants with CC of > 9). A description of CC values is provided in Table 3.

Table 3 Coefficient of Conservatism (Adapted from Oldham et al. 1995)

Coefficient of Conservatism	Rank	Description
0 to 3	Tolerant	Found in a wide variety of plant communities, including disturbed sites.
4 to 6	Moderately Conservative	Typically associated with a specific plant community but tolerate moderate disturbance.
7 to 8	Conservative	Typically associated with a plant community in an advanced successional stage that has undergone minor disturbance.
9 to 10	Highly Conservative	Typically displaying a high degree of fidelity to a specific plant community or a narrow range of synecological parameters.

3.3.2 Wetland Boundary Delineation

In Ontario, wetlands are mapped and evaluated under the Ontario Wetland Evaluation System (OWES). Mapped evaluated wetlands have undergone extensive study and been assessed based on their form and function under four categories: Biological, Social, Hydrological, and

Special Features (Ministry of Natural Resources, 2022). Evaluated wetlands that score high enough are deemed Provincially Significant Wetlands (PSW). Evaluated wetlands that did not score high enough to be a PSW are called Locally Significant Wetlands (LSW). The province also maps unevaluated wetlands. These mapped wetlands are approximate; as such, they require field verification in order to confirm their presence and determine their boundaries.

The subject wetland was delineated following provincially approved methods outlined in the Ontario Wetland Evaluation System: Southern Manual, 3rd Ed. (Ministry of Natural Resources, 2022). Fieldwork was carried out by provincially certified Cambium staff. Wetland boundaries were initially delineated and classified by orthoimagery interpretation. The presence/absence of wetlands on the Site was confirmed through field investigations during the growing season (late May through October). Wetland boundaries were determined using the 50% wetland vegetation rule. Where vegetation-based delineation was inconclusive, soil assessment with a hand auger was used to confirm wetland boundaries. Wetland boundaries on the Site were marked with a hand-held GPS unit and staked/flagged in the field. Where wetland communities extend off the Site, classification was done through observation from property boundaries and publicly accessible lands.

3.3.3 Habitat-Based Wildlife Surveys

Given the scale of the proposed development, a habitat-based approach was used to assess potential impacts to wildlife, consistent with standard practice. General habitat information gathered through the field investigations was used to assess the connectivity of the Site with the surrounding landscape and evaluate the ecological significance of the local area. Cambium staff actively searched for features that may provide specialized habitat for wildlife. These searches included inspecting tree cavities, overturning logs, rocks and debris, and scanning for scat, browse, sheds, fur, etc. Any evidence of breeding, forage, shelter, or nesting was noted. Species habitat and nesting observations were documented and photographed.

4.0 Characterization of Natural Features and Functions

Data acquired through the background information review and field investigations is summarized in the following sections. Based on the information gathered, an assessment of significance has been completed to identify protected natural heritage and hydrologic features on and adjacent to the Site.

A summary of the field investigations completed on the Site is presented in Table 4. Representative Site photos are included within the Photo Log in Appendix D. Survey stations/areas are shown on Figure 2.

Table 4 Summary of Field Investigations

Date	Time On Site	Weather	Observer	Activities
2023-09-14	0915 - 1300h	15ºC, cloudy Wind: 2 Noise: 1	T. Jamieson	Ecological Land Classification Wetland Delineation General Wildlife Habitat Survey

Notes: Wind = Beaufort Wind Scale value (0 = 0-2 kph, 1 = 3-5 kph, 2 = 6-11 kph, 3= 12-19 kph, 4 = 20-30 kph, 5 = 31-39 kph, 6 = 40-50 kph). Noise is reported based on background noise levels: Index 0 – no appreciable effect, 1 – slightly affecting sampling, 2 – moderately affecting sampling, 3 – seriously affecting sampling, 4 – profoundly affecting sampling.

4.1 Landscape Position and Topography

The Site is located within the Mixedwood Plains Ecozone: Lake Simcoe Rideau Ecoregion 6E, which extends southward from a line connecting Lake Huron in the west to the Ottawa River in the east, including Ottawa, Kingston, Peterborough, Barrie, Tobermory, Kitchener, and Toronto. This Ecoregion is characterized by a mixed geology that includes both shallow soil areas such as alvar and bedrock plains, as well as deep soil areas such as the Oak Ridges Moraine. It falls within the Great-Lakes St. Lawrence Forest Region, including deciduous and mixed forests; however, over 50% of the landscape in this Ecoregion is currently in use as agricultural land (Lee, et al., 1998).

The topography of the site slopes to the north, towards Consecon Lake, with a steeper northwest slope in the west portion of the Site as identified on Schedule C of the Official Plan (Constraints Mapping – Steep Slope). The Site has frontage along the shoreline of Consecon

Lake. Elevations on-site range from 100.5 meters above sea level (masl) in the southeast corner of the Site to about 86.5 masl along the shoreline of Consecon Lake. Drainage features, including watercourses, were not observed on the Site. A road-side ditch is present along County Road 1 providing positive drainage to the roadway.

4.1.1 Historical Land Use

A review of historical aerial imagery for the Site area indicates the Site was mainly used for agricultural purposes in 1962 with the residential dwelling in the south portion of the Site present. The agricultural portion of the Site has been divided into four sections separated by hedgerows. The hedgerows were removed some time between 1962 and 1985. The portion of the site fronting onto Consecon Lake is forested and not used for agricultural purposes in the 1962 aerial imagery. This portion of the Site has remained unchanged.

4.2 Wetland Delineation

The background review revealed the presence of a PSW overlapping the boundaries of the Site to the north. The PSW was identified as the Lake Consecon Marsh PSW. The PSW is composed of two wetland types (8% swamp and 92% marsh) covering a total area of 189 ha. A portion of the PSW complex is located within the Site boundaries at the northeast portion of the property. The PSW provides breeding or feeding habitat for provincially significant species including Sedge Wren (*Cistothorus stellaris*), Common Tern (*Sterna hirundo*), Black Tern (*Chlidonias niger; SC*), Marsh Wren (*Cistothorus palustris*), and Blanding's Turtle (*Emydoidea blandingii; THR*) and regionally significant species including Green Heron (*Butorides virescens*).

Provincial mapping does not identify unevaluated wetland feature on or adjacent to the Site.

Two wetland communities were identified on the Site (Communities 4 and 6; Section 4.3) during field investigations. Wetland boundaries were determined in the field based on topography and the relative dominance of wetland indicator species (> 50% relative cover) and marked with a hand-held GPS. Soils were sampled within each of the wetland communities

and are detailed in Section 4.3 below. The following provides a summary of each wetland community:

- Community 4 consisted of a Silver Maple Mineral Deciduous Swamp (SWD3-2) located in the north and central north portion of the Site. This community was associated with the mapped PSW located at the northeast portion corner of the property. The boundaries were generally similar to those available in publicly available imagery, with some variation. Substrates had a Moderately Wet (6) moisture regime. This community was also dominated by Silver Maple (*Acer saccharinum*). Additional species included American Water-horehound (*Lycopus americanus*), Black Willow (*Salix nigra*), Broad-leaved Cattail (*Typha latifolia*), Canada Wood Nettle (*Laportea canadensis*), Eastern Marsh Fern (Thelypteris palustris var. pubescens), Fowl Mannagrass (*Glyceria striata var. striata*), Nodding Beggarticks (*Bidens cernua*), Purple Loosestrife (*Lythrum salicaria*), Red Ash (*Fraxinus pennsylvanica*), Red Maple (*Acer rubrum*), Red-osier Dogwood (*Cornus sericea*), and Sensitive Fern (*Onoclea sensibilis*).
- Community 6 consisted of a cattail mineral shallow marsh community (MAS2-1) located in the north and northwest portion of the Site. This community was a coastal wetland located on the shore of Consecon Lake. Due to the presence of standing water, substrate characterization was not possible; however, substrates appeared to consist of mineral soils. This community was dominated by Cattails (*Typha spp.*). Additional species included Black Willow (*Salix nigra*), Broad-leaved Arrowhead (*Sagittaria latifolia*), Nodding Beggarticks (*Bidens cernua*), Red-osier Dogwood (*Cornus sericea*), Sensitive Fern (*Onoclea sensibilis*), and Spotted Jewelweed (*Impatiens capensis*).

4.3 Vegetation Communities and Inventory

The vegetation communities on the Site are summarized in Table 5 and are mapped on Figure 2. A list of identified species and representative photos for each community are provided in Appendix E.

Table 5 Vegetation Communities

No.	ELC Code	Community Description	Community Type	S -Rank
1	CUM1-1	Dry – Moist Old Field Meadow	Terrestrial	-
2	FOD7-2	Fresh – Moist Ash Lowland Deciduous Forest	Terrestrial	S4S5
3	CUW1	Mineral Cultural Woodland	Terrestrial	-
4	SWD3-2	Silver Maple Mineral Deciduous Swamp	Wetland	S5
5	FODM11	Naturalized Deciduous Hedgerow	Terrestrial	-
6	MAS2-1	Cattail Mineral Shallow Marsh	Wetland	S5
7	CVC	Commercial and Institutional	Terrestrial	-
8	CVR	Residential	Terrestrial	-
9	AG	Agriculture	Terrestrial	-

Notes:
"-" indicates no community S-Rank is available.

A search for Butternut (*Juglans cinerea*; provincially endangered) was completed as part of the vegetation survey; five Butternut trees were identified on the Site (Figure 2).Further details are provided in Section 4.8.

4.3.1 Soil Characterization

Soil characterization was completed for wetland and transitional vegetation communities, where conclusive classification to vegetation type could not be completed based solely on vegetation. Soils were sampled using a hand auger, and moisture regimes were determined based on industry standard guidance. A summary of the soil characterization efforts on the Site is provided in Table 6, and soil core locations are illustrated on Figure 2.

Table 6 Soil Characterization Summary

No.	ELC Code	Soil Description	Effective Texture	Moisture Regime
1	CUW1	Less than 5 cm of LFH1 over silty clay with coarse fragments occurring at 47 cm. Mottling at 40 cm. Water table not encountered	5	Moist (5)
2	SWD3-2	25 cm of organics over clay to 57 cm. Mottles occurring at 25 cm. Gley observed at 47 cm. Water table encountered at 18 cm	6	Very moist (6)
3	FOD7-2	Less than 5 cm of LFH1. Silty clay to a depth of 40 cm overlaying silty very fine sand. Mottles occurring at 66 cm. Water table not encountered.	5	Dry – Very Fresh (≤3)

Notes:

1) Litter, Fibric, Humic (LFH) organic layer.

4.4 Significant Woodlands

In the past 200 years over 70 percent of woodland cover has been lost in Ecoregions 6E and 7E (Ministry of Natural Resources, 2010). The protection of woodland cover in southern Ontario is an important concern (Ministry of Natural Resources, 2010). Planning authorities are responsible for protecting significant woodlands within Ecoregions 6E and 7E in accordance with policies 4.1.4(b) and 4.1.8 of the PPS. The amount of woodland cover is high across the landscape within Ecoregion 5E. As such, the Natural Heritage Reference Manual and the PPS does not protect or designate significant woodlands within Ecoregion 5E.

Section 3.1.4 7) of The County of Prince Edward Official Plan (2021; the Official Plan) states that:

> *Development shall not be permitted within woodlands identified in Schedule 'B': Natural Features & Areas or any significant woodlands identified during the planning process through criteria in the Ministry of Natural Resources and Forestry's Natural Heritage Reference Manual.*

Schedule 'B' of the Official Plan does not map or designate significant woodlands on Site. As such, woodlands on the Site are not considered provincially significant.

4.5 Wildlife Survey Results

Incidental wildlife observations were recorded during the field visit. This included a predated turtle nest (Appendix D Photo #4) in the western portion of the Site in Community 3 (CUW1). The nest was in a gravelly patch of soil about 25 m from the water. The nest was believed to have been a Snapping Turtle nest based on the shape of the egg fragments.

4.6 Significant Wildlife Habitat

Significant Wildlife Habitat (SWH) guidance documents produced by the MNRF were used as a guide to identify and confirm SWH on the Site (MNR, 2000). The Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (Ministry of Natural Resources and Forestry, 2015) apply to the subject property. Information gathered during the background review and field investigations were compared to SWH criteria to evaluate the property for SWH. Based on our observations during field investigations and the ELC classifications described in Section 4.2, a portion of the Site meets the criteria for designation as SWH. Details on species of conservation concern and their protected habitats are provided in Section 4.8.

Provincial mapping indicates that Deer Wintering Habitat is not located on-site or within 120 m of the Site.

One confirmed significant habitat type was identified within the cultural woodland community (Community 3) on-site:

- Turtle Nesting Areas

The following candidate SWH types were identified within Consecon Lake and the associated Lake Consecon PSW on and adjacent to the Site:

- Waterfowl Stopover and Staging Areas (Aquatic)
- Turtle Wintering Area
- Colonially-nesting Bird Breeding Habitat (Tree/Shrub)
- Waterfowl Nesting Area

- Amphibian Breeding Habitat (Woodland)
- Amphibian Breeding Habitat (Wetland)
- Marsh Bird Breeding Habitat
- Terrestrial Crayfish
- Special Concern and Rare Wildlife Species (detailed in Section 4.8.2)

4.7 Fish and Fish Habitat

Consecon Lake, supports a fish community and provides a warmwater thermal habitat conditions. Appendix F includes a list of fish species known to occur in Consecon Lake, based on the background information review, and species-specific life history information.

The riparian area was Cattail Mineral Shallow Marsh (MAS2-1) (Community 6; Section 4.3) with Black Willow, Broad-leaved Arrowhead, Broad-leaved Cattail, Nodding Beggarticks, Red-osier Dogwood, Sensitive Fern, and Spotted Jewelweed.

4.8 Species of Conservation Concern

According to the Significant Wildlife Habitat Technical Guide (Ministry of Natural Resources, 2000), Species of Conservation Concern (SCC) include species that are identified as at risk by COSEWIC or on the SARO list, known rare species (provincially, regionally, locally), and species with populations in known decline. A list of SCC, including SAR, with potential to occur in the general vicinity of the Site has been compiled based on known species' ranges, habitat requirements, and review of background information sources (as listed in Section 3.1). In addition, the list has been augmented with direct field observations from the Study, as detailed in the previous sections. Cambium has employed a habitat-based screening to identify suitable habitat for species located on or adjacent to the Site. A detailed habitat suitability analysis is provided in Appendix C and a discussion of the results is provided below.

4.8.1 Endangered and Threatened Species

The habitat of endangered and threatened species is regulated under the ESA, 2007, and associated regulations. The following endangered and/or threatened species are known to occur in the regional area of the Site, and the habitat types occurring on the Site may support these species. Accordingly, a detailed evaluation of habitat type, size, and availability was completed, supplemented by targeted surveys where required, to determine whether the Site is actively used by any of the species listed below.

- Bobolink (*Dolichonyx oryzivorus*) – Threatened
- Eastern Meadowlark (*Sturnella magna*) Threatened
- King Rail (*Rallus elegans*) – Endangered
- Least Bittern (*Ixobrychus exilis*) – Endangered
- Pugnose Shiner (*Notropis anogenus*) – Threatened
- Blanding's Turtle (*Emydoidea blandingii*) – Threatened (Provincial); Endangered (Federal)
- Western Chorus Frog (*Pseudacris triseriata*) – Endangered (Federal)
- Tri-coloured Bat (*Perimyotis subflavus*) – Endangered
- Eastern Small-footed Myotis (*Myotis leibii*) – Endangered
- Little Brown Myotis (*Myotis lucifugus*) – Endangered
- Northern Myotis (*Myotis septentrionalis*) – Endangered
- Butternut (*Juglans cinerea*) – Endangered

Bobolink and Eastern Meadowlark are listed provincially as threatened. They utilize tall, grassy meadows, hayfields, and croplands for foraging and tend to nest in forage crops (hayfields and pastures), similar to those found in Community 9 and Community 1. Community 9 was found to be in row crops at the time of the field investigations, and therefore does not provide suitable habitat for this species. Community 1 provides suitable habitat but is too small (0.6 ha) to be utilized by these grassland birds. Better quality habitat is found for these grassland birds within

the wider landscape. No Bobolink or Eastern Meadowlark were observed during field investigations.

King Rail (provincially endangered), and Least Bittern (provincially threatened) are birds that prefer large areas of marshland. Community 3 and the adjacent Lake Consecon PSW may provide potential habitat for these species. None of these species were identified during field investigations. Given that the proposed development does not encroach into the wetlands on Site, no impacts to these species or their habitats are anticipated. As such, these species will not be discussed further in this report.

No records of Pugnose Shiner (provincially threatened) in Consecon Lake were revealed during the background review. However, aquatic species at risk mapping indicates Pugnose Shiner is found (or potentially found) within Wellers Bay located to the east (Fisheries and Oceans Canada, 2022). Consecon Lake connects to Wellers Bay via a watercourse that passes through the town of Consecon. As such, there is potential for the Pugnose Shiner to occur within Consecon Lake. Given that the proposed development does not encroach into the fish habitat on Site, no impacts to this species or its habitat are anticipated. As such, this species will not be discussed further in this report. Mitigation strategies and best management practices regarding indirect impacts to fish habitat are discussed in Section 5.1.

Community 6 and Consecon Lake provides potential foraging, basking, and overwintering habitat for turtles, including Blanding's Turtle (provincially threatened). The development does not propose to encroach into this habitat; therefore, no direct impacts to this habitat is anticipated. No Blanding's Turtles were observed during field investigations. However, turtles utilize upland areas for nesting, preferring open habitats with coarse soils, such as those found in areas of Community 3 along the shoreline. A predated turtle nest (unknown species) was observed in Community 3 during the field investigation (Appendix D). Nesting turtles should be sufficiently protected provided the recommendations in Section 5.3 are adhered to.

Potential habitat for Western Chorus Frog (federally endangered) can be found in Communities 4 and 6, and the associated Lake Consecon Marsh PSW. No Western Chorus Frogs were observed during field investigations. While Western Chorus Frog is federally listed

as threatened it is not listed provincially on the SARO list, or currently afforded species or habitat protection under provincial legislation. Further, given that the proposed development does not encroach into the wetland habitat on Site, no impacts to this species or its habitat are anticipated. As such, this species will not be discussed further in this report. Mitigation strategies and best management practices regarding indirect impacts to wetlands are discussed in Section 5.1.

The Site may provide habitat for the following endangered bat species: Tri-coloured Bat, Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis, Eastern Red Bat, Hoary Bat and Silver-haired Bat. Cavity trees for bats to roost were not observed during the General Wildlife Survey. Open areas of the Site, such as Community 6, may be used as foraging habitat by these species. As there is no proposed development or site alteration in Community 6, negative impacts to SAR bats or their habitat is not anticipated. No SAR bats or evidence of bats was observed on the Site. Avoidance and mitigation measures relating to the general protection of bats are provided in Section 5.3.

Butternut is listed as endangered both federally and provincially. Butternut trees naturally grow in a variety of treed and open habitats in Ontario. They occur along fencerows, within treed riparian zones, on the lower slopes of treed ravines, and in and around mixed deciduous woodlots and forests, where they grow beneath canopy openings, near forest edges and along forest roads. Trees occur on rich, moist, well-drained loams and on well-drained rocky soils, especially of limestone origin. Cultivated Butternut trees may be present in additional habitats such as manicured gardens and parks. Five Butternut trees were observed in Community 5 and discussed above in Section 4.3.

4.8.2 Special Concern Species

Species of special concern are protected through the designation of their habitat as Significant Wildlife Habitat. The following special concern species are known to occur in the regional area of the Site, and the habitat types occurring on the Site may support these species. Accordingly, a detailed evaluation of habitat type, size, and availability was completed, supplemented by

targeted surveys where required, to determine whether the Site is actively used by any of the species listed below.

- Black Tern
- Eastern Wood-Pewee (*Contopus virens*)
- Grasshopper Sparrow (*Ammodramus savannarum*)
- Bridle Shiner (*Notropis bifrenatus*)
- Grass Pickerel (*Esox americanus*)
- Eastern Musk Turtle (*Sternotherus odoratus*)
- Midland Painted Turtle (*Chrysemys picta marginata*) - Federal
- Northern Map Turtle (*Graptemys geographica*)
- Snapping Turtle (*Chelydra serpentina*)
- Eastern Milksnake (*Lampropeltis triangulum*) - Federal
- Eastern Ribbonsnake (*Thamnophis sauritus*)
- Monarch Butterfly (*Danaus plexippus*) – Federally endangered
- Yellow-banded Bumble Bee (*Bombus terricola*)
- Eastern Pondmussel (*Ligumia nasuta*)

Habitat requirements for the Black Tern are similar to those for King Rail and Least Bittern (Section 4.8.1). No Black Tern or King Rail were observed during field investigations. Given that the proposed development does not encroach into the wetlands on Site, no impacts to this species or its habitats are anticipated. As such, this species will not be discussed further in this report. Mitigation strategies and best management practices regarding indirect impacts to wetlands are discussed in Section 5.1.

Eastern Wood-pewee lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests with little understorey vegetation (COSEWIC, 2012). Potential habitat for

Eastern Wood-pewee can be found in Communities 2 and 4. No Eastern Wood-pewee were observed during the field investigations.

Grasshopper Sparrow are a small grassland bird that share similar habitat requirements to Eastern Meadowlark and Bobolink. As discussed above (Section 4.8.1), the only potentially suitable plant community (Community 1) was relatively small, and more preferrable habitat may be found on adjacent lands. No Grasshopper Sparrow were identified during field investigations.

Consecon Lake provides potential habitat for Bridle Shiner and Grass Pickerel. According to aquatic SAR mapping (Fisheries and Oceans Canada, 2022), Bridle Shiner is found (or potentially found) within Consecon Lake. NHIC mapping (Ministry of Natural Resources and Forestry, 2022) revealed records of Grass Pickerel in the region of the Site. Given that the proposed development does not encroach into the fish habitat on Site, no impacts to these species or their habitats are anticipated. As such, these species will not be discussed further in this report. Mitigation strategies and best management practices regarding indirect impacts to fish habitat are discussed in Section 5.1.

Consecon Lake and the associated wetland communities provide potential habitat for Eastern Musk Turtle, Midland Painted Turtle, Northern Map Turtle, and Snapping Turtle. The Midland Painted Turtle is federally listed as special concern but is not listed provincially on the SARO list, or currently afforded species or habitat protection under provincial legislation. As stated previously (Section 4.8.1), given that the proposed development does not include encroachment into Lake Consecon or the associated wetland communities, no direct impact to these species or their habitat is anticipated. However, the Site may provide potential nesting opportunities for these species, and an old, predated turtle nest was observed in Community 3 (Appendix D). Nesting turtles should be sufficiently protected provided the recommendations in Section 5.3 are adhered to.

The Eastern Milksnake tends to use open habitats such as rocky outcrops, fields and forest edges. This species was recently delisted as a SAR in Ontario. As such, this species is not discussed further in this report.

Eastern Ribbonsnake is semi-aquatic and most frequently found along wetland edges. Quiet, shallow water with low surrounding cover is preferred, although areas with good exposure to sunlight are also required. Gravid females may move away from water before nesting, as females and juveniles are occasionally found in upland areas. Given the Site's proximity to Consecon Lake and the presence of wetland communities on and adjacent to the Site (Communities 4 and 6), the Site may provide potential habitat for Eastern Ribbonsnake.

The Monarch Butterfly is listed as special concern provincially and endangered federally. It uses a variety of habitats with wildflowers throughout its lifecycle. Monarchs require the presence of milkweed (*Asclepias spp.*) to support larval development. Common Milkweed (*Asclepias syriaca*) was identified in Communities 1, 3, and 5. No adult Monarchs or Monarch caterpillars were identified during the field investigations.

The Yellow-banded Bumble Bee is a habitat generalist inhabiting woodlands, meadows, grasslands, farmlands, and able to collect pollen and nectar from a variety of plant genera (COSEWIC, 2015) As such, all of the open and semi-open habitats on the Site and adjacent lands provide potential habitat for these species. No Yellow-banded Bumble Bees were observed during field investigations.

Aquatic SAR mapping indicates that Eastern Pond Mussel is found (or potentially found) in Consecon Lake. No Eastern Pond Mussels were observed during field investigations. Given that the proposed development does not encroach into Consecon Lake, no impacts to this species or its habitat are anticipated. As such, this species will not be discussed further in this report. Mitigation strategies and best management practices regarding indirect impacts to Lake Consecon are discussed in Section 5.1.

5.0 Impact Assessment and Mitigation Measures

The proposed development includes construction of 10 tiny cottages (less than 236 sf. in size each) by way of a Zoning By-law Amendment.

In summary, the following protected features were identified on and adjacent to the Site:

- Lake Consecon Marsh PSW, Consecon Lake, and Fish Habitat
- Significant Wildlife Habitat
- Potential habitat of Endangered and Threatened Species

No other natural heritage features protected by provincial policy were confirmed on or adjacent to the Site.

The following sections address potential impacts to protected features identified on and adjacent to the Site that may result from the proposed development and Site alteration. Mitigation measures and best management practices have been recommended to ensure that the integrity of the existing natural features is protected and/or enhanced and that the associated functions are not negatively impacted during or following construction.

5.1 Lake Consecon Marsh PSW, Consecon Lake, and Fish Habitat

No development is proposed within the Lake Consecon Marsh PSW, Consecon Lake or the associated fish habitat. As such, no direct impacts to these features are anticipated in relation to the proposed development.

A 50 m development setback is recommended for the PSW on the Site, as shown on Figure 3. The 50 m setback is considered sufficient to protect the existing form and function of hydrologic features provided that the area be maintained as an ecological buffer (i.e., area where no vegetation removals or grading is allowed). No development (i.e. erection of structures) should be performed within the 50 m wetland setback.

The disturbance of soils during construction may increase the potential for indirect impacts to these features through increased erosion and sedimentation. Indirect impacts should be

sufficiently mitigated provided the erosion and sedimentation best management practices outlines in Section 5.4 are adhered to.

The construction of buildings, roads, and parking lots can result in an increase in runoff. Runoff has the potential to impact water quality in Consecon Lake and the associated Lake Consecon Marsh PSW. As such, a site-specific stormwater management has been developed for Site. Best management practices regarding runoff and impacts to water quality are provided in Section 5.4.

5.2 Significant Wildlife Habitat

The following text provides a discussion of the ‘candidate’ or ‘confirmed’ types of SWH that have been identified at the Site or on adjacent lands based on the analysis presented in Appendix G. None of the off-Site habitats are expected to be impacted as a result of the proposed development, as detailed throughout Section 5.2.1 to 5.2.10.

5.2.1 Confirmed Turtle Nesting Area

One predated turtle nest, likely a Snapping Turtle nest, was observed in Community 3. Open habitats within 100 m of wetlands connected to watercourses have potential to provide Turtle Nesting Areas SWH. It is noted that the identified turtle nesting area is located within the recommended 50 m wetland setback. No development or site alteration is proposed within these areas and no impacts are anticipated to Turtle Nesting Areas SWH. Impacts to nesting turtles can be sufficiently mitigated provided the best management practices provided in Section 5.4 are adhered to.

5.2.2 Candidate Waterfowl Stopover and Staging Areas (Aquatic)

As discussed in Section 4.6, one wetland on-site (Community 3), and Lake Consecon Marsh PSW on-site and adjacent to the north, has potential to provide this SWH type. No development is proposed within these areas. No indirect impacts to these areas are anticipated, provided the overall best management practices in Section 5.4 are adhered to.

5.2.3 Candidate Turtle Wintering Areas

As discussed in Section 4.6, the Lake Consecon Marsh PSW has potential to provide Turtle Wintering SWH. No development is proposed within this area. As such no direct impacts to this habitat are anticipated. No indirect impacts to these areas are anticipated, provided the overall best management practices in Section 5.4 are adhered to

5.2.4 Candidate Colonially-nesting Bird Breeding Habitat (Trees/Shrubs)

The woodlands of Community 4 on Site provide potential habitat for colonially-nesting breeding birds SWH. The proposed development does not include encroachment into this area. As such, no direct or indirect impacts to this habitat are anticipated, provided the overall best management practices in Section 5.4 are adhered to.

5.2.5 Candidate Waterfowl Nesting Area

There is potential suitable habitat for waterfowl nesting area SWH in Community 3, Community 4, and Lake Consecon Marsh PSW. No development is proposed within these areas. No indirect impacts to these areas are anticipated, provided the overall best management practices in Section 5.4 are adhered to.

5.2.6 Candidate Amphibian Breeding Habitat (Woodland)

The woodlands of Community 4 on Site provide potential amphibian breeding SWH. The proposed development does not include encroachment into this area. As such, no direct or indirect impacts to this habitat are anticipated, provided the overall best management practices in Section 5.4 are adhered to.

5.2.7 Candidate Amphibian Breeding Habitat (Wetland)

The wetlands on Site, and the adjacent Lake Consecon Marsh PSW provide potential amphibian breeding SWH. The proposed development does not include encroachment into these areas. Development and site alteration will be located outside of the wetland and the 50 m wetland setback. As such, no direct impacts to this habitat are anticipated. No indirect

impacts to these areas are anticipated, provided the overall best management practices in Section 5.4 are adhered to.

5.2.8 Candidate Marsh Bird Breeding Habitat

Potentially suitable habitat exists on Site within Community 3 and Community 4, as well as within the Lake Consecon Marsh PSW on-site and adjacent to the north. No development is proposed within these areas. No indirect impacts to these areas are anticipated, provided the overall best management practices in Section 5.4 are adhered to.

5.2.9 Candidate Terrestrial Crayfish Habitat

Potentially suitable habitat exists on Site within Community 3 for terrestrial crayfish. No development is proposed within this area. No indirect impacts to these areas are anticipated, provided the overall best management practices in Section 5.4 are adhered to.

5.2.10 Special Concern and Rare Wildlife Species

The Site and adjacent lands provide potential habitat for the following species of special concern: Eastern Wood-Pewee, Grasshopper Sparrow, Eastern Musk Turtle, Northern Map Turtle, Snapping Turtle, Eastern Ribbonsnake, Monarch Butterfly, and Yellow-banded Bumble Bee.

Birds

As mentioned previously, Communities 2 and 4 provide potential habitat for Eastern Wood-pewee. The proposed development does not include encroachment into these communities. As such, no impacts to Eastern Wood-pewee or their habitat are anticipated.

Potential Grasshopper Sparrow habitat is limited on the Site and more preferrable habitat is in the wider landscape (Section 4.8.2). The proposed development will not result in the impairment or elimination of habitat function for Grasshopper Sparrow. The grassland habitat beyond the development area will continue to support one or more of this species' life processes.

To prevent negative impacts to these species, avoidance measures should be implemented to schedule activities to occur outside of the species' reproductive period (i.e., courtship, mating, rearing young, feeding, resting, etc.). It is recommended that Site alteration and development be completed from August 1 to April 30 to avoid the species' reproductive period, as stated in Section 5.4.

Turtles and Snakes

Turtles and snakes are particularly vulnerable to construction-related impacts on sites adjacent to wetlands, watercourses, and waterbodies. Potential impacts to these species can be appropriately minimized and mitigated through the implementation of best management practices such as temporary wildlife exclusion fencing, inspections, stockpiling, and contractor awareness, as detailed in Section 5.4 (see Wildlife: Reptiles).

Invertebrates

Insect species such as Monarch Butterfly and Yellow-banded Bumble Bee have the potential to be present throughout the Site and adjacent lands, in areas where flowering plants support their foraging and reproductive requirements as pollinators. Future landscaping should include pollinator gardens as detailed in Section 6.0. Given that open habitats are abundant and will continue to exist to the east, west, and south of the Site, no negative impacts to this SWH type on the local landscape are anticipated in relation to the proposed development.

5.3 Habitat of Endangered and Threatened Species

The Site was screened for habitat of the following endangered / threatened species that may occur in the regional area of the Site: Bobolink, Eastern Meadowlark, Blanding's Turtle, Tri-coloured Bat, Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis, and Butternut.

Bobolink and Eastern Meadowlark

The proposed development will be focused on the western portion of the Site. During the Site visit Community 9 was observed to be agricultural row crops. Bobolink and Eastern Meadowlark will not utilize row crops for their life processes. As the habitat on the Site is not

suitable for Bobolink and Eastern Meadowlark, the proposed development will not result in harm to these species or their habitat. The proposed development is anticipated to comply with the Endangered Species Act and policy 4.1.7 of the PPS.

Blanding's Turtle

The proposed development will be located outside of the habitat of Blanding's Turtle. As such, the proposed development is not anticipated to result in negative impacts to Blanding's Turtle Habitat. Mitigation measures that address potential impacts to turtles in Section 5.2.10 should be sufficient to protect these species during construction activities.

Bats

Given the scale of the proposed development, tree clearing is expected to be minimal. No suitable cavity trees were identified during the field investigations; however, targeted habitat surveys were not conducted on Site. Potential habitat for SAR bats may be present in the treed communities on Site. To avoid direct impacts to all bat species, the applicable best management practices outlined in Section 5.4 (see: Wildlife: Bats) should be followed. If applicable, select removal of trees should occur from October 1 to March 31 to avoid the active bat roosting period (April 1 to September 30). Provided these measures are implemented, it is anticipated that proposed development can be carried out in a manner that is compliant with the ESA and associated regulations.

Butternut

As detailed in Section 4.3, Butternut was confirmed to be present on the Site. A 30 m development setback is recommended from these trees and is shown in Figure 3. It is noted that the identified butternut trees are located within the recommended 50 m wetland setback. Given that the proposed development does not include encroachment into the wetland or the wetland setback, the proposed development will not harm Butternut or their habitat.

5.4 Mitigation Measures and Best Management Practices

To minimize potential impact to the natural environment on and surrounding the Site, Cambium recommends that the mitigation measures and best management practices outlined in be implemented at the Site.

Table 7 Mitigation Measures and Best Management Practice Recommendations

Potential Impact	Recommended Best Practice
Erosion and Sedimentation	Prior to any construction activities taking place, it is essential that perimeter sediment fencing be installed around construction areas. Fencing should be properly keyed into the ground and securely fastened to vertical supports spaced ≤ 2 m apart. This key control measure will help prevent sediment from entering surface water features (i.e., wetlands and the watercourse) in the surrounding landscape. All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated. Any observed overland drainage channels originating from Site, that may or may not have arisen as a result of erosion, should be directed to a check dam structure, prior to discharging to off-site areas. Construction activities that require earthworks (e.g., grading, excavation, etc.) should be scheduled to avoid dates of heavy rainfall events and times of high runoff volumes.
Increase in Runoff - Impervious Surfaces	Runoff from the Site is expected to increase with the introduction of impermeable surfaces (i.e., building roofs, roadways, and walkways) and compacted surfaces with reduced infiltration capacity. Measures to increase infiltration of run-off from these surfaces should be encouraged and, where possible, included in the Site Plan for the development. Eavestrough downspouts should be directed to vegetated areas (such as lawn, or gardens) and not onto hardened surfaces, to encourage infiltration. The use of gravel laneways and parking areas would also increase the infiltration and reduce runoff from the Site.
Changes to Water Quality and Quantity	The Stormwater Management Plan prepared for the Site should addresses potential stormwater-related impacts to water quality and quantity of the surrounding wetlands and waterbody, through quality control measures.
Wildlife: Birds (Disturbance and Harm)	Nesting birds and their nests, eggs, and young are protected under the *Migratory Birds Convention Act, 1994*. Vegetation clearing on the Site should occur outside the breeding bird season, which extends from April 15 to August 15 in the local area (as per Environment and Climate Change Canada Guidelines). If vegetation clearing or construction is to occur between April 15 and August 15, the vegetation should be investigated by a qualified biologist to confirm if any active nests are present, prior to site alteration. Vegetation clearing can proceed within 2 days of the nest sweeps provided there are no active nests. If active nests are confirmed, the nests should be left undisturbed until young have

	fledged or the nest is determined to be inactive. Note that some birds nest on the ground and in low-lying vegetation and shrubs; therefore, all habitat types should be inspected prior to ground disturbance if removals are to occur during the breeding season.
Wildlife: Bats (Disturbance and Harm)	Tree removal should be limited to the building envelope to the extent possible. Small scale tree removal will not result in impairing or eliminating the function of habitat to support bat life processes provided the tree removal avoids occur from October 1 to March 31, outside of the active bat season (April 1 – September 30). If vegetation clearing or construction is to occur between April 1 and September 30, the vegetation should be investigated by a qualified biologist to confirm whether SAR bat habitat may be present. Presence or absence of habitat should be confirmed through acoustic monitoring following industry standard protocols prior to any tree removal during the active season for bats. Vegetation clearing can proceed provided absence is confirmed. These restrictions only apply if trees are being removed.
Wildlife: Reptiles (Disturbance and Harm)	Sediment fencing can function as wildlife exclusion fencing. To exclude wildlife from the Site, sediment fencing should be installed around the entire perimeter of the construction area prior to the earlier of May 1 or commencement of Site preparation to keep turtles and snakes from entering the construction area. This fencing should be made of light-duty sediment fence, staked at regular intervals, trenched-in at least 10-20 cm below ground, with an above ground height of at least 60 cm. The sediment fence should be inspected regularly to ensure that it remains in good condition: and any downed areas, rips, or holes should be repaired or replaced immediately. A designated point of ingress/egress should be identified, and a moveable barrier be constructed, to allow for the Site to fully remain enclosed while allowing vehicular access to the Site as needed. The construction area should also be actively inspected for turtles and snakes each day prior to the start of work throughout the duration of construction. As the Site is located adjacent to potential habitat for turtles, workers should be aware of the nesting season for turtles, which extends from May 15 to October 15. All stockpiled materials should be kept inside the exclusion fencing area and ideally should be covered and well secured around the base, to prevent turtles from nesting in loose substrates. Should any nesting turtles be encountered, work should stop immediately, and the turtle should be left to finish nesting undisturbed. The turtle should be photographed, and the nest marked to ensure it is not disturbed during construction, or until eggs have hatched (late August to October 15). If a nest is laid in a stockpile or

	other area that requires disturbance, Cambium should be contacted to determine if the nest can be relocated in accordance with provincial legislation. If any individuals are encountered, they should be photographed and allowed time to move out of harm's way.
Species at Risk (SAR; Threatened and Endangered)	SAR observations, including most species of snakes and turtles, should be reported to the Natural Heritage Information Centre (NHIC). If any individuals are encountered, they should be photographed and allowed time to move out of harm's way. SAR should not be handled by unauthorized individuals.
Spread of Invasive Species	Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands, woodlands, and watercourses. Best management practices to reduce the spread of invasive species include: 1. Revegetate with species native to the local area. 2. Request fill and compost from reputable sources that are conscious of the potential for the spread of invasive species via these media. 3. Get to know the most common invasive species in the area. 4. Brush off or clean any shoes, boots and equipment that have encountered invasive species before returning to the property. Equipment and vehicles coming into the work area should be free of soil and seeds that could introduce non-native and invasive species following the Clean Equipment Protocol for Industry: Inspecting and Cleaning Equipment for the Purposes of Invasive Species Prevention (Halloran, 2013) 5. Immediately eradicate invasive species if they are observed on the property. 6. Do not compost invasive species; put them in plastic bags and dispose of them in the garbage. 7. Do not dispose of lawn or garden clippings in the forest or wetlands to avoid species introductions. An excellent resource for identifying and controlling invasive species can be found through the Ontario Invasive Plant Council: Home - Ontario Invasive Plant Council (ontarioinvasiveplants.ca) (OIPC, 2022)
Anthropogenic Impacts – Noise	Noise is not expected to increase significantly because of the proposed development as it is consistent with the land use on the surrounding properties. Maintaining the wooded areas surrounding the natural features on the Site will serve to buffer wildlife within the natural areas from noise-related impacts.

	Temporary acute noise may occur during construction activities and should follow appropriate local noise by-laws. All equipment should be equipped with appropriate mufflers to mitigate noise levels during construction.
Anthropogenic Impacts – Lighting	Artificial lighting can have an impact on nocturnal movement of wildlife within natural areas. To minimize impacts to wildlife, it is recommended that outdoor lights be operated on timers, rather than by motion detection. Outdoor lighting associated with the development should be directed at the ground, rather than into the adjacent natural areas. Bulb wattage should be as low as practical while meeting the safety intent of the lighting. Lighting in common areas should be capped to direct light to the intended area of the ground to limit light pollution.
Anthropogenic Impacts – Domestic Animals	Access of domestic animals to natural areas can have a negative impact on local wildlife due to predation, harassment, and spread of illness and disease. Signage should be posted at trailheads and park areas to always keep pets on a leash, and to appropriately dispose of pet waste.

6.0 Opportunities for Restoration and Enhancement

The following opportunities for restoration and enhancement are present on the Site, in relation to the proposed Draft Plan:

- Enhancement of portions of designated wetland setback that are currently occupied by cultural vegetation.
- Enhancement in future SWM blocks, bioretention areas, constructed drainage swales
- Enhancement through creation of pollinator gardens

Planting of native trees, shrubs, and applying native seed mix would enhance the areas discussed above by improving local diversity and wildlife habitat (including habitat for at risk insects such as Monarch Butterfly and Yellow-banded Bumble Bee), promote infiltration of run-off, and increasing visual appeal. The specifics on the placement and arrangement of trees and shrubs for enhancement should be included in Landscape Plans during detailed design.

Cambium staff can assist with providing expertise on tree and shrub species selection as well as seed mix selection, to ensure species survival based on site suitability and soil characteristics. Specialized mixtures such as an ‘erosion control mixture’ contain wildflowers and grass species, which provide rapid vegetation cover. Other seed mixtures available include an Early Successional Dry Prairie Meadow Mix and Standard OBL Wetland Mix, which contain native species such as New England Aster, Black-eyed Susan, Boneset, Wool Grass, Soft Rush, Nodding Bur Marigold, Purple Stemmed Aster, Swamp Milkweed, Bebb’s Sedge and Spotted Joe-pyeweed. Common Milkweed seed should be added to any seed mix applied, to provide additional habitat for Monarch.

Cambium is available to provide technical input for restoration and enhancement activities on the Site.

7.0 Policy Conformity

7.1 Provincial Policies

Based on the key natural heritage and/or hydrologic features identified on or adjacent to the Site and the findings of the field investigations detailed herein, the proposed development of the Site is in conformity with the PPS. Conformity with applicable natural heritage policy is summarized in Table 8. Note that natural heritage and hydrologic feature types not relevant to the development application have been intentionally omitted from the tables below.

Table 8 PPS Policy Conformity Summary

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Significant Wetland in Ecoregions 5E, 6E and 7E or in the Canadian Shield north of Ecoregions 5E, 6E and 7E	Yes	Yes	Yes
	Explanation: No development is proposed within the Lake Consecon Marsh PSW; no negative impacts to the PSW are anticipated in relation to the proposed development provided the recommendations in Section 5.0 are implemented.		
Significant Woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)	No	No	N/A
	Explanation: No significant woodlands are present on or adjacent to the Site.		
Significant Wildlife Habitat	Confirmed & Candidate	Confirmed & Candidate	Yes

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
(including habitat of special concern species)	Explanation: No negative impacts to SWH are anticipated in relation to the proposed development provided the recommendations in Section 5.0 are implemented.		
Habitat of Threatened and Endangered Species	Potentially	Potentially	Yes
	Explanation: In accordance with provincial and federal requirements, no negative impacts to threatened or endangered species are anticipated in relation to the development provided the recommendations in Section 5.0 are implemented.		
Fish Habitat	Yes	Yes	Yes
	Explanation: No in-water work is proposed and no direct impacts to fish habitat are anticipated provided the recommendations in Section 5.0 are implemented.		

7.2 Municipal Policies

This Study was developed to meet the requirements of the Site-specific Terms of Reference developed following Policy 4.4.3.2.8 the County's Official Plan. The proposed development meets the intent of the applicable municipal planning policies relating to shorelines, through the implementation of a minimum 30 m wetland setback, as detailed in Section 5.1. No development, or site alteration will occur within the waterbody, wetland or 30 m setback. No other natural heritage features or areas mapped on the Schedules of the Official Plan are present on the Site or adjacent lands.

In addition, the proposed development meets the special provisions outlined in By-law No. 4624-2019 for Special Tourist Commercial Holding (TC-58-H) Zone, which states that all structures are to be located a minimum 50 m from all wetlands on and adjacent to the subject property, including Lake Consecon Provincially Significant Wetland.

7.3 Conservation Authority Policies

This Study was developed to meet the requirements of the Site-specific Terms of Reference that were circulated to QCA (see Appendix A). Cambium understands that based on recent regulatory changes, QCA will be commenting on this file related only to natural hazards. Detailed study of natural hazards may be better addressed in other technical studies for the Site that relate to topics such as geotechnical and/or stormwater management. The proposed development will be located entirely outside of the wetland and waterbody, associated minimum 30 m setback.

8.0 Summary of Recommendations

The following recommendations are provided for the proposed development:

1. All required approvals and permits should be obtained prior to the commencement of any Site alteration / construction activities.
2. All development setbacks identified herein should be included on all future Site Plans.
3. Prior to any construction activities taking place, it is essential that perimeter sediment fencing be installed around construction areas. Fencing should be properly keyed into the ground and securely fastened to vertical supports spaced ≤ 2 m apart. This key control measure will help prevent sediment from entering surface water features (i.e., wetlands and watercourses) in the surrounding landscape. All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated. Any observed overland drainage channels originating from Site, that may or may not have arisen because of erosion, should be directed to a check dam structure, prior to discharging to off-site areas.
4. Construction activities that require earthworks (e.g., grading, excavation, etc.) should be scheduled to avoid dates of heavy rainfall events and times of high runoff volumes.
5. Runoff from the Site is expected to increase with the introduction of impermeable surfaces (i.e., building roofs, roadways, and walkways) and compacted surfaces with reduced infiltration capacity. Measures to increase infiltration of run-off from these surfaces should be encouraged and, where possible, included in the Site Plan for the development. Eavestrough downspouts should be directed to vegetated areas (such as lawn, or gardens) and not onto hardened surfaces, to encourage infiltration.
6. The Stormwater Management Plan prepared for the Site should specifically address potential stormwater-related impacts to water quality and quantity of the surrounding wetlands and watercourses, through quality control measures.
7. Nesting birds and their nests, eggs, and young are protected under the *Migratory Birds Convention Act, 1994*. Vegetation clearing on the Site should occur outside the breeding

bird season, which extends from April 15 to August 15 in the local area (as per Environment and Climate Change Canada Guidelines).

8. The construction area should also be actively inspected for turtles each day prior to the start of work throughout the duration of construction from May 1 to October 15.
9. To exclude wildlife from the Site, sediment fencing should be installed around the entire perimeter of the construction area prior to the earlier of May 1 or commencement of Site preparation to keep turtles from entering the construction area. This fencing should be made of light-duty sediment fence, staked at regular intervals, trenched-in at least 10-20 cm below ground, with an above ground height of at least 60 cm. The sediment fence should be inspected regularly to ensure that it remains in good condition: and any downed areas, rips, or holes should be repaired or replaced immediately. A designated point of ingress/egress should be identified, and a moveable barrier be constructed, to allow for the Site to fully remain enclosed while allowing vehicular access to the Site as needed.
10. As the Site is located adjacent to potential habitat for turtles, workers should be aware of the nesting season for turtles, which extends from May 15 to October 15. All stockpiled materials should be kept inside the exclusion fencing area and ideally should be covered and well secured around the base, to prevent turtles from nesting in loose substrates. Should any nesting turtles be encountered, work should stop immediately, and the turtle should be left to finish nesting undisturbed. The turtle should be photographed, and the nest marked to ensure it is not disturbed during construction, or until eggs have hatched (late August – September). If a nest is laid in a stockpile or other area that requires disturbance, Cambium should be contacted to determine if the nest can be relocated in accordance with provincial legislation.
11. SAR observations, including most species of snakes and turtles, should be reported to the Natural Heritage Information Centre (NHIC). If any individuals are encountered, they should be photographed and allowed time to move out of harm’s way. SAR should not be handled by unauthorized individuals.

12. Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands, woodlands, and watercourses. Best management practices to reduce the spread of invasive species include:
    a) Revegetate with species native to the local area.
    b) Request fill and compost from reputable sources that are conscious of the potential for the spread of invasive species via these media.
    c) Get to know the most common invasive species in the area.
    d) Brush off or clean any shoes, boots and equipment that have encountered invasive species before returning to the property. Equipment and vehicles coming into the work area should be free of soil and seeds that could introduce non-native and invasive species following the Clean Equipment Protocol for Industry: Inspecting and Cleaning Equipment for the Purposes of Invasive Species Prevention (Halloran, 2013)
    e) Immediately eradicate invasive species if they are observed on the property.
    f) Do not compost invasive species; put them in plastic bags and dispose of them in the garbage.
    g) Do not dispose of lawn or garden clippings in the forest or wetlands to avoid species introductions.
13. Temporary acute noise may occur during construction activities and should follow appropriate local noise by-laws. All equipment should be equipped with appropriate mufflers to mitigate noise levels during construction.
14. Outdoor lighting associated with the development should be directed at the ground, rather than into the adjacent natural areas. Bulb wattage should be as low as practical while meeting the safety intent of the lighting. Lighting in common areas should be capped to direct light to the intended area of the ground to limit light pollution.

9.0 Closing

In closing, potential negative impacts associated with the proposed development and site alteration can be appropriately minimized, provided that the recommendations outlined in Section 8.0 are followed. The information presented herein demonstrates that the proposed development can be carried out in a way that will not adversely impact natural heritage and hydrologic features and function identified on or adjacent to the subject Site. Furthermore, the proposed development complies with applicable provincial policy.

Respectfully submitted,

Cambium Inc.

Signed by:
92F4B6B5A4FA43C...

Tanya Pulfer, M.Sc.
Project Manager / Senior Ecologist

DocuSigned by:
DD6F5C07A33A475...

Danielle Leal, B.Sc.
Project Coordinator / Ecologist

P:\18700 to 18799\18719-001 AzzoRypa GP Inc - EIS - 5738 County Road 1, PEC\Deliverables\REPORT - EIS Post Peer Review\Draft\2025-10-08 RPT EIS 5738 County Road 1 PEC - Updated.docx

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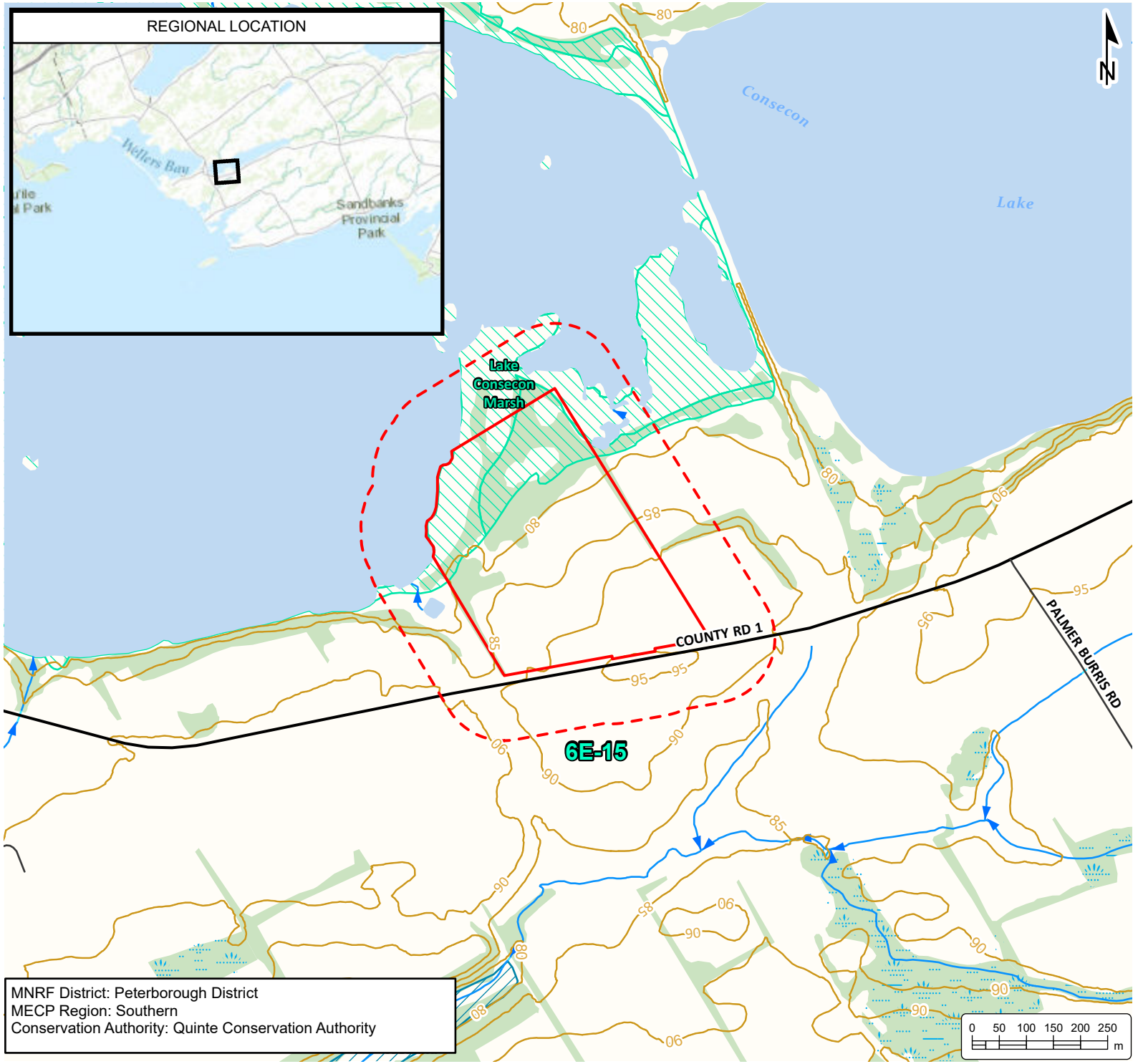
Glossary of Terms

ANSI: Area of Natural and Scientific Interest
ARA: Aquatic Resources Area
ARA: Aggregate Resources Act
AS: Agricultural System
ATK: Aboriginal Traditional Knowledge
BMA: Bear Management Area
BMP: Best Management Practice
CA: Conservation Authority
CEAA: Canadian Environmental Assessment Act/Agency
CFA: Canadian Forestry Association
CFIP: Community Fisheries Involvement Program
CFS: Canadian Forestry Service
CHU: Critical Habitat Unit
CH: Cultural Heritage
CLI: Canada Land Inventory
CLU: Crown Land Use
COSSARO: Committee on the Status of Species at Risk in Ontario
CR: Conservation Reserve
CWIP: Community Wildlife Involvement Program
CWS: Canadian Wildlife Service
DFO: Fisheries and Oceans Canada
EA: Environmental Assessment
EAA: Environmental Assessment Act
EAB: Emerald Ash Borer
EBR: Environmental Bill of Rights
EIA: Environmental Impact Assessment
EIS: Environmental Impact Study/Statement
ELC: Ecological Land Classification System
ELUP: Ecological Land Use Plan
END: Endangered species
EPA: Environmental Protection Act
ER: Environmental Registry
ESA: Endangered Species Act (2007)
ESA: Environmentally Sensitive Area
ESC: Erosion and Sediment Control
GIS: Geographic Information System
GLSL: Great Lakes – St. Lawrence
GPGGH: Growth Plan for the Greater Golden Horseshoe
GPS: Global Positioning System
HSA: Habitat Suitability Analysis
HSI: Habitat Suitability Index
KHA: Key Hydrologic Areas
KHF: Key Hydrologic Features
KNHF: Key Natural Heritage Features
LCFSP: Licence to Collect Fish for Scientific Purposes
LIO: Land Information Ontario
LRIA: Lake and Rivers Improvement Act
LUP: Land Use Permit or Plan
MA: Management Area
MAFA: Moose Aquatic Feeding Area
MCEA: Municipal Class Environmental Assessment
MECP: Ontario Ministry of Environment, Conservation and Parks
MNRF: Ontario Ministry of Natural Resources and Forestry
NER: Natural Environment Report
NHIC: Natural Heritage Information Centre
NHIS: Natural Heritage Information System
NHS: Natural Heritage System
OBM: Ontario Base Map
OFIS: Ontario Fisheries Information System
OLI: Ontario Land Inventory
OMAFRA: Ontario Ministry of Agriculture, Food and Rural Affairs
OWES: Ontario Wetland Evaluation System
PPS: Provincial Planning Statement (2024)
PSW: Provincially Significant Wetland
RLUP: Regional Land Use Plan
RMP: Regional Management Plan
R.P.F.: Registered Professional Forester
SAR: Species at Risk
SARO: Species at Risk in Ontario
SC: Special Concern species

F&W: Fish and Wildlife
FA: Fisheries Act (Federal)
FEC: Forest Ecosystem Classification
FMP: Forest Management Plan
FRI: Forest Resources Inventory
FWCA: Fish and Wildlife Conservation Act
GGH: Greater Golden Horseshoe
GHP: General Habitat Protection
SWH: Significant Wildlife Habitat
SWM: Stormwater Management
THR: Threatened species
TOR: Terms of Reference
TPP: Tree Preservation Plan
WIA: Woodlands Improvement Act
WMU: Wildlife Management Unit

Appended Figures



ENVIRONMENTAL IMPACT STUDY

AZZORYPA GP INC.
5738 County Road 1,
Prince Edward County, Ontario

LEGEND

- Major Road
- Minor Road
- Contour 5m Interval (Major)
- Contour 5m Interval (Minor)
- Watercourse, Permanent
- Watercourse, Intermittent
- Provincially Significant Wetlands
- Locally Significant Wetlands
- Wetland Unevaluated
- Water Area
- Ecodistrict
- Wooded Area
- Site (approximate)
- Adjacent Lands (120m)

Notes:
- Base mapping features are © King's Printer of Ontario, 2022 (this does not constitute an endorsement by the Ministry of Natural Resources and Forestry or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

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Peterborough, Ontario, K9H 1E5
Tel: (705) 742.7900 Fax: (705) 742.7907
www.cambium-inc.com

LANDSCAPE SETTING AND POLICY AREAS

Project No.: 18719-001		Date: January 2024 Rev.:	
Scale: 1:10,000		Projection: NAD 1983 UTM Zone 18N	
Created by: DBB	Checked by: MW	Figure:	1

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Community Number	Description
1	CUM1-1 Dry - Moist Old Field Meadow Type
2	FOD7-2 Fresh - Moist Ash Lowland Deciduous Forest Type
3	CUW1 Mineral Cultural Woodland
4	SWD3-2 Silver Maple Mineral Deciduous Swamp Type
5	FODM11 Naturalized Deciduous Hedgerow
6	MAS2-1 Cattail Mineral Shallow Marsh Type
7	CVC Commercial and Institutional
8	CVR Residential
9	Agriculture

ENVIRONMENTAL IMPACT STUDY

AZZORYPA GP INC.
5738 County Road 1,
Prince Edward County, Ontario

LEGEND

- Soil Point
- Old Turtle Nest
- Butternut
- Contour 5m Interval (Major)
- Contour 5m Interval (Minor)
- Watercourse, Permanent
- Laneway
- Field Verified Wetland Boundary
- Field Verified Wetland
- Adjacent Lands (120m)
- Vegetation Communities
- Site (approximate)

Notes:
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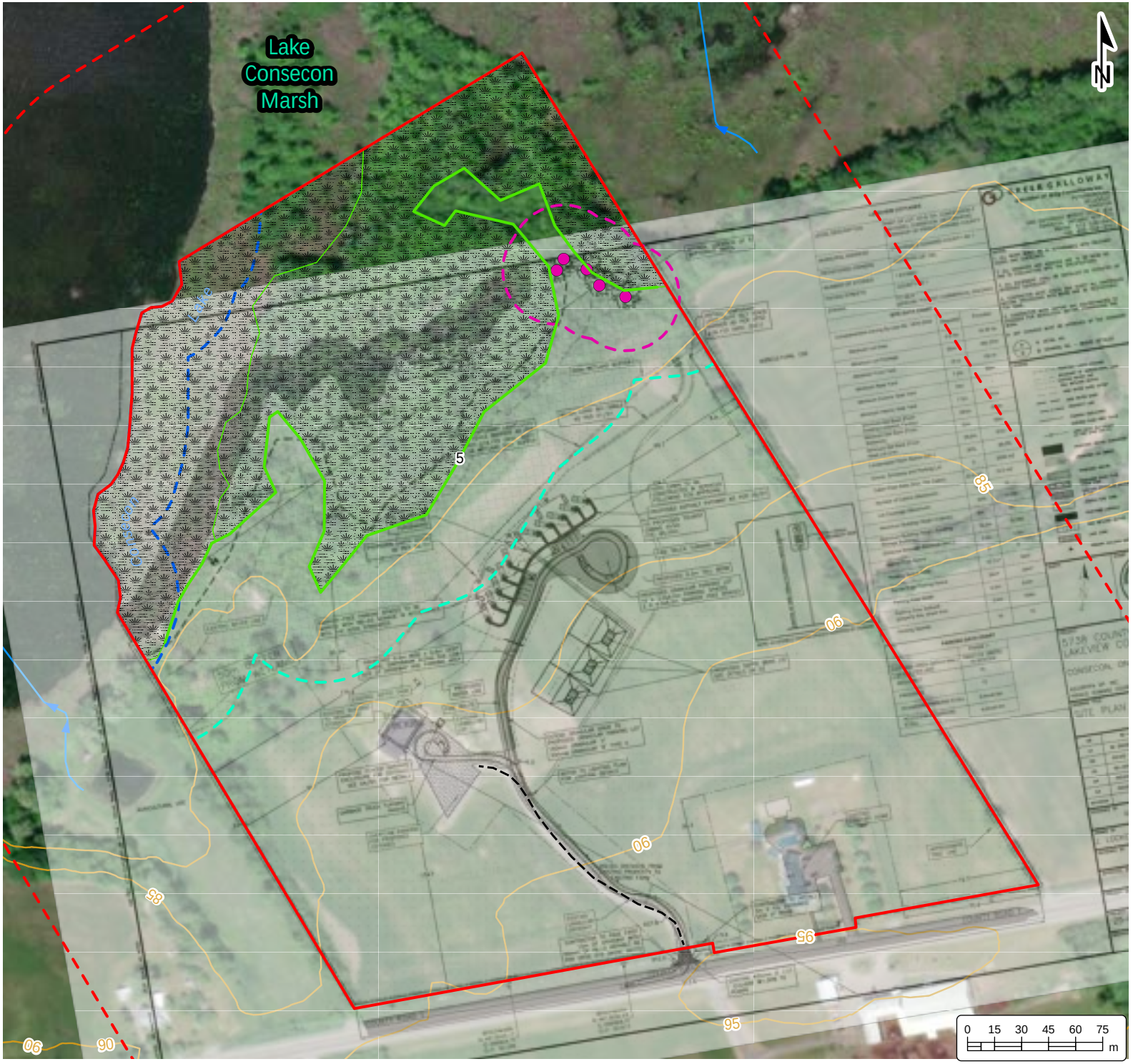
NATURAL HERITAGE FEATURES AND ECOLOGICAL SURVEY STATIONS

Project No.: 18719-001		Date: January 2024	Rev.:
Scale: 1:4,000		Projection: NAD 1983 UTM Zone 18N	
Created by: DBB	Checked by: MW	Figure: 2	



ENVIRONMENTAL IMPACT STUDY

AZZORYPA GP INC.
5738 County Road 1,
Prince Edward County, Ontario

LEGEND

- Butternut
- Contour 5m Interval (Major)
- Contour 5m Interval (Minor)
- Laneway
- Watercourse, Permanent
- Field Verified Wetland Boundary
- Butternut Setback (30m)
- Waterbody Setback (30m)
- Field Verified Wetland
- Wetland Setback (50m)
- Adjacent Lands (120m)
- Site (approximate)

Notes:
- Base mapping features are © King's Printer of Ontario, 2022 (this does not constitute an endorsement by the Ministry of Natural Resources and Forestry or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
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NATURAL HERITAGE CONSTRAINTS

Project No.: 18719-001		Date: September 2024	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 18N	
Created by: DBB	Checked by: MW	Figure: 3	

O:\GIS\MXDs\18700-18799\18719-001 AzzoRypa GP Inc - EIS - 5738 County Road 1 PEC\2023-09-01 EIS.aprx

Appendix A
Correspondence

From: Paul McCoy
To: David Fleming; Jason Sands
Cc: Matthew Wheeler; File
Subject: RE: Terms of Reference - 5738 County Road 1 PEC (18719-001)
Date: October 17, 2023 2:33:57 PM
Attachments: image003.jpg
image004.jpg
image005.png
image006.png
image007.png
image008.png
image009.png
image010.png
image011.png
image012.png
image013.png
image014.png
image015.png
image016.png

David
Our updated Shoreline Management Plan did not include Consecon Lake. Therefore there has been no changes to the regulated floodplain. However, it is one of 6 floodplain projects for this year. We should have a formally approved updated flood elevation for Consecon Lake by April of 2024.

Paul McCoy
Planning and Regulations Manager

P: 613-968-3434 or 613-354-3312 ext. 108
E: pmccoy@quinteconservation.ca

RR#2, 2061 Old Hwy #2, Belleville, ON K8N 4Z2
QuinteConservation.ca | **QuinteSourceWater.ca**

Working, living, and learning on the traditional territories of the Anishinabek, Huron-Wendat, and Haudenosaunee (Iroquois) peoples.

From: David Fleming <David.Fleming@cambium-inc.com>
Sent: Tuesday, October 17, 2023 10:35 AM
To: Paul McCoy <PMcCoy@quinteconservation.ca>; Jason Sands <jsands@Stonemills.com>
Cc: Matthew Wheeler <Matthew.Wheeler@cambium-inc.com>; File <file@cambium-inc.com>
Subject: Terms of Reference - 5738 County Road 1 PEC (18719-001)

Hi Paul and Jason,

Cambium has been retained to complete an Environmental Impact Study for a property located at 5738 County Road 1 in Prince Edward County (see screen shot below).

The flood elevation mapping in the Bay of Quinte and area has been revised by Quinte Conservation to account for the projected rising of Lake Ontario. Could you please provide us with the year the mapping was updated as well as any appliable line work for the property. It is anticipated that a Zoning By-Law Amendment will be submitted for the Site. A screen shot of the Site is included below for reference – The Site is identified as 5738 County Road 1 – with Consecon Lake Marsh (a Provincially Significant Wetland) located along the north property boundary of the Site.

1 – Background Review/Agency Consultation

Cambium will access readily available documents and information about the Site from private, municipal, provincial and federal sources, as applicable. Information obtained will include but will not be limited to: land use of the subject and adjacent properties; geological and soils records; watercourses and surface drainage mapping; fish community records; species at risk records; and, the location of any provincially identified features such as wetlands, woodlands, and/or Areas of Natural and Scientific Interest (ANSI). Ministry consultation may include Northern Development, Natural Resources and Forestry (NDMNRF) and/or the Ministry of Environment, Conservation, and Parks (MECP), as applicable. This information will be used to inform the subsequent field studies and associated reporting. Confirmation of the ToR is completed under Phase 1.

2 – Field Studies

Subject to the approved ToR, the following field investigations will be completed:

Activity	Details	Timing
General Wildlife Habitat Surveys	Single site visit to confirm existing conditions. Visual encounter surveys for evidence of breeding, foraging, sheltering, nesting, and/or movement.	August-September
Wetland Boundary Delineation	One survey during the growing season; MNRF Ontario Wetland Evaluation System (OWES) protocol; boundary to be marked with hand-held GPS, and flagged/staked, where required (e.g., within 30 m of proposed development). This delineation work will only be completed if this work was not previously undertaken. If delineation is required, the wetland boundary will be flagged/staked to be recorded with a GPS. An Ontario Land Surveyor can pick up the flagged/staked wetland boundary when their survey is being performed.	June to September

3 – Report and Figures

Our EIS report will include:

- An overview of applicable natural heritage policy and regulation;
- A summary of the background information collected;
- A summary of field investigations carried out, and associated protocols;
- Descriptions of natural heritage and hydrologic features identified on and adjacent to the Site;
- A habitat-based screening for species of conservation concern (including species at risk), supplemented by targeted survey results, where applicable;
- An assessment of significant wildlife habitat (SWH);
- A list of additional field investigations required to address regulatory requirements, where applicable (e.g., targeted surveys for species at risk where sensitive habitat is identified through the screening process);
- An overview of the proposed development and site alteration;
- Analysis of impacts, and discussion of mitigation, restoration, and/or compensation measures required to address study requirements. Additional best management practices and/or enhancement measures may be recommended, as appropriate;
- An evaluation and summary of conformity with applicable provincial, municipal, and Conservation Authority natural heritage policy;
- A comprehensive list of recommendations, for ease of transfer to Site Plan and Draft Plan agreements;
- Detailed mapping of survey stations/areas, natural features, key species observations, and field-verified boundaries; and,
- Detailed mapping of constraint areas including development setbacks and buffers.

Cambium would like to request comment on this ToR, and confirmation of approval as appropriate.

Please do not hesitate to contact me with any questions with regard to this project.

Kind Regards,
Dave

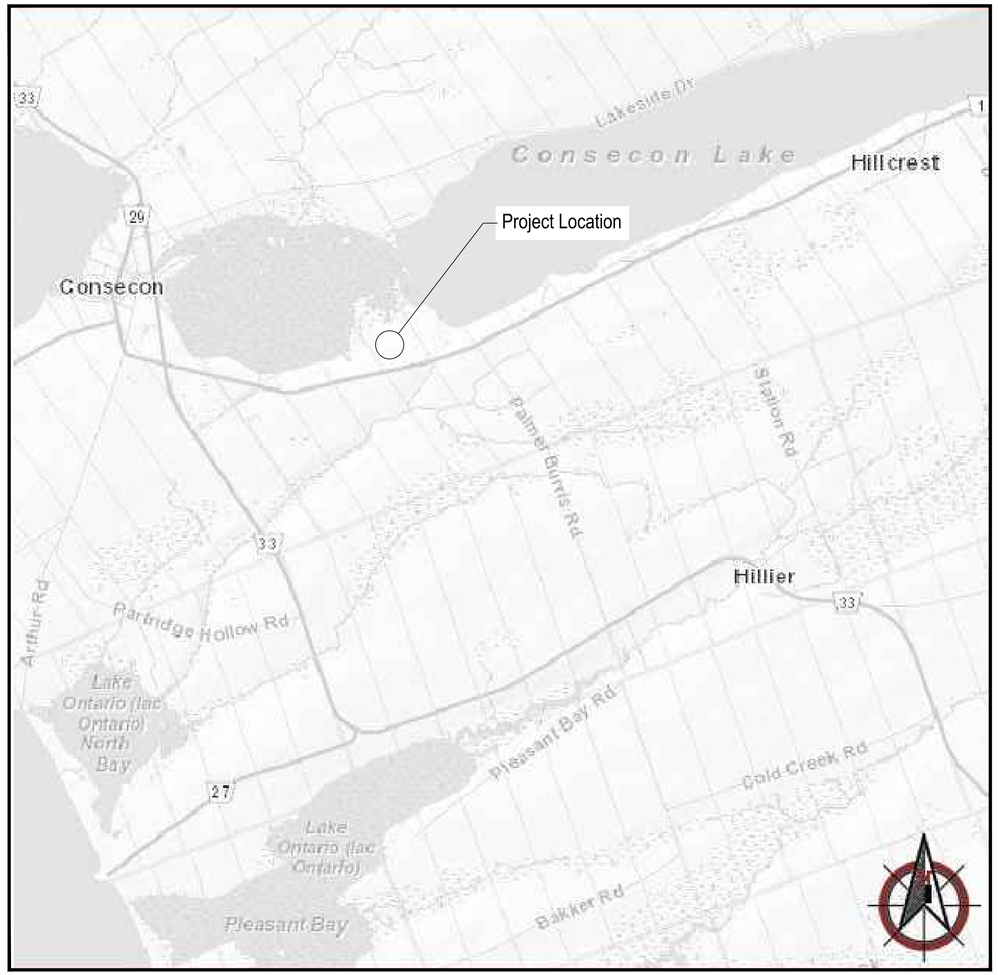
David Fleming,??B.Sc.,??Dipl.
Technical??Coordinator
Cambium - Peterborough
705.559.0208
866.217.7900
cambium-inc.com

Environmental | Building Sciences | Geotechnical | Construction Quality Verification

Appendix B
Conceptual Site Plans

5738 County Road 1

Site Plan Development



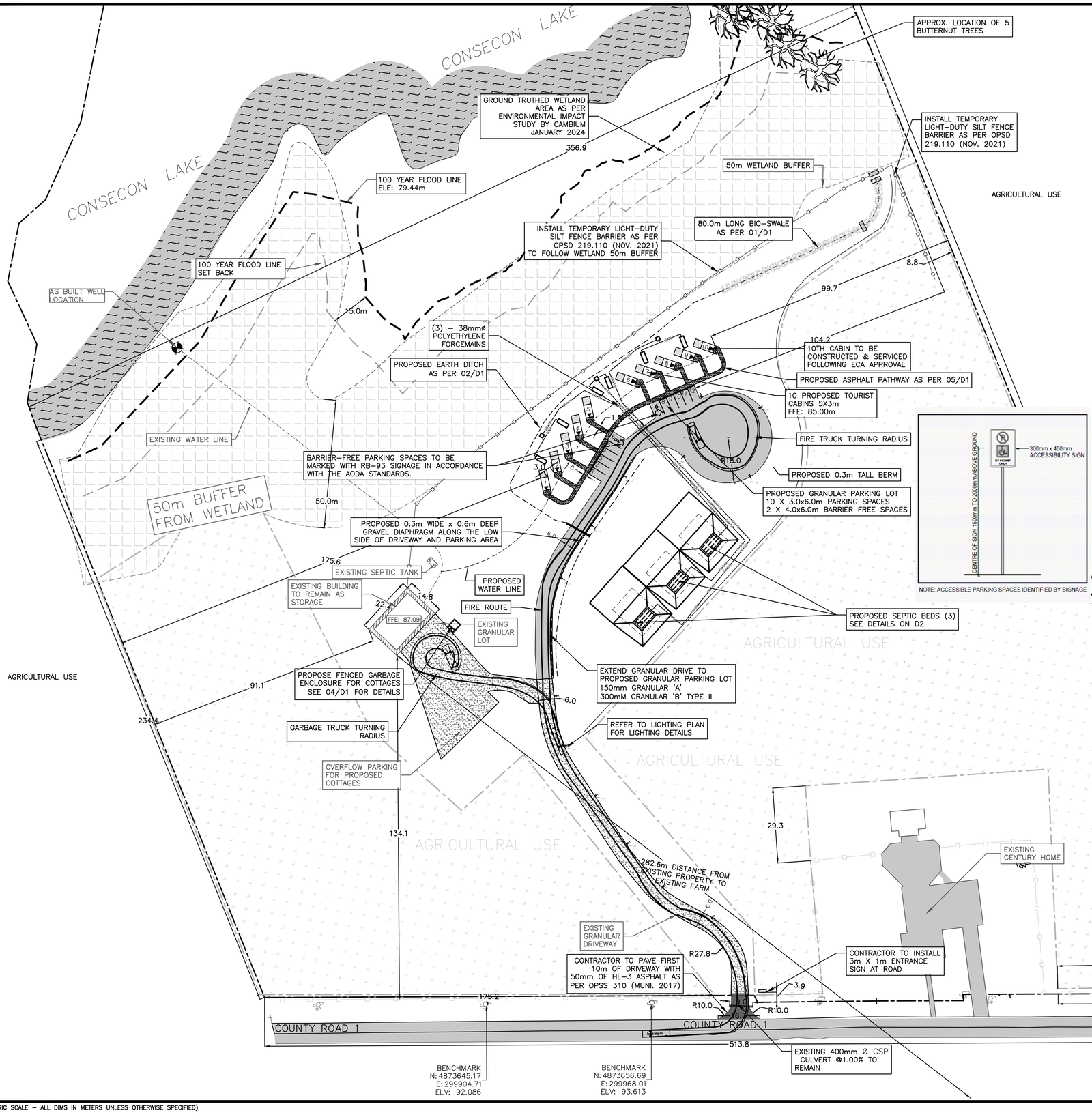
LIST OF DRAWINGS

C0	COVER
C1	SITE PLAN
C2	GRADING PLAN
D1	DETAILS
D2	PROPOSED SEPTIC SYSTEM DETAILS

GREER GALLOWAY
a division of Jp2g Consultants Inc.

5738 County Road 1
Site Plan Development

Greer Galloway Project No. 25-5-175A



LAKEVIEW COTTAGES	
LEGAL DESCRIPTION	PART OF LOT 103 & 104, CONCESSION 5 (BAYSIDE), CONSECON, GEOGRAPHIC TOWNSHIP OF PRINCE EDWARD COUNTY
MUNICIPAL ADDRESS	5738 PRINCE EDWARD COUNTY RD 1
REGISTERED OWNERS	AZZORYPA GP. INC.
NUMBER OF STORIES	1 STOREY
FACING STREETS	COUNTY RD 1
ZONING	TC-58-H (SPECIAL TOURIST COMMERICAL HOLDING)

SITE DATA CHART

Comprehensive Zoning By-Law No. 1816-2006	Required	Provided
Minimum Lot Area	0.8 ha	16.35 ha
Minimum Lot Frontage	60m	383.37m
Minimum Front Yard	15 m	134 m
Minimum Rear Yard	7.5m	50m
Minimum Exterior Side Yard	15m	-
Minimum Interior Side Yard	7.5m	91m
Minimum Set Back (From Existing Livestock Facility)	283m	283m
Minimum Set Back (From Wetlands)	50m	50m
Minimum Set Back (From West Lot Line)	55.6m	91m
Landscaped Open Space (Min.)	30%	96.9%
Gravel Driveway and Parking Lot	0	2506 m2
Cabin Floor Area (Max. Per Cabin)	22.0 m2	15.0 m2
Number of Cabins (Maximum)	10	10
Lot Coverage (Maximum)	30%	<0.5%
Maximum Building Height (Cabins)	5m	5m
Maximum Building Height (Existing Storage Building)	10.5m	8.23m
Distance Between Buildings (Min.)	3.0m	3.0m
Barrier Free Space	2	2
Parking Space Area	16.7m²	18m²
Barrier Free Parking Space	24m²	24m²
Parking Aisle Width	6.0m	6.0m
Parking Area Setback (property line, street line)	3.0m	104m
Parking Spaces	10	12

PARKING DATA CHART

	PHASE 1
COTTAGE AREA (220m2 Max.) 1 SPACE PER UNIT	150m² (10 UNITS) 10 SPACES
REQUIRED	10
PROVIDED	12
STANDARD PARKING STALL	3.0mx6.0m
ACCESSIBLE PARKING STALL	4.0mx6.0m

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640 CATARAQUI WOODS DRIVE #2A
KINGSTON, ONTARIO, K7P 2Y5
PHONE: 613-536-5420
FAX: 613-548-3793

NOTES:
1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
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A/B A DETAIL NO. B DRAWING NO. - WHERE DETAILED

LEGEND
- PROPOSED EARTH DITCHING
- BOUNDARY OF AGRICULTURAL LAND
- EXISTING WATER LINE
- 50m WETLAND BUFFER
- HIGH WATER MARK OFFSET
- HIGH WATER MARK
- PROPERTY LINE
- PARKING INDICATORS
- EXISTING PAGE-WIRE FENCE
- LIGHT DUTY SILT-FENCE AS PER OPSD 219.110
- PROPOSED GRAVEL DIAPHRAGM
- PROPOSED BIO SWALE
- PROPOSED GRAVEL
- PROPOSED ROCK FLOW CHECK DAM
- EXISTING GRANULAR DRIVEWAY & LOT
- AGRICULTURE ZONE
- PROPOSED ASPHALT
- 50m WETLAND BUFFER
- LAKE ZONE
- PRIMARY BUILDING ENTRANCE

NORTH

STAMP: LICENSED PROFESSIONAL ENGINEER K.T. HAWLEY 100149881 18/09/25 PROVINCE OF ONTARIO

PROJECT
5738 COUNTY ROAD 1 LAKEVIEW COTTAGES

CONSECON, ON

AZZORYPA GP. INC.
PRINCE EDWARD COUNTY, ON

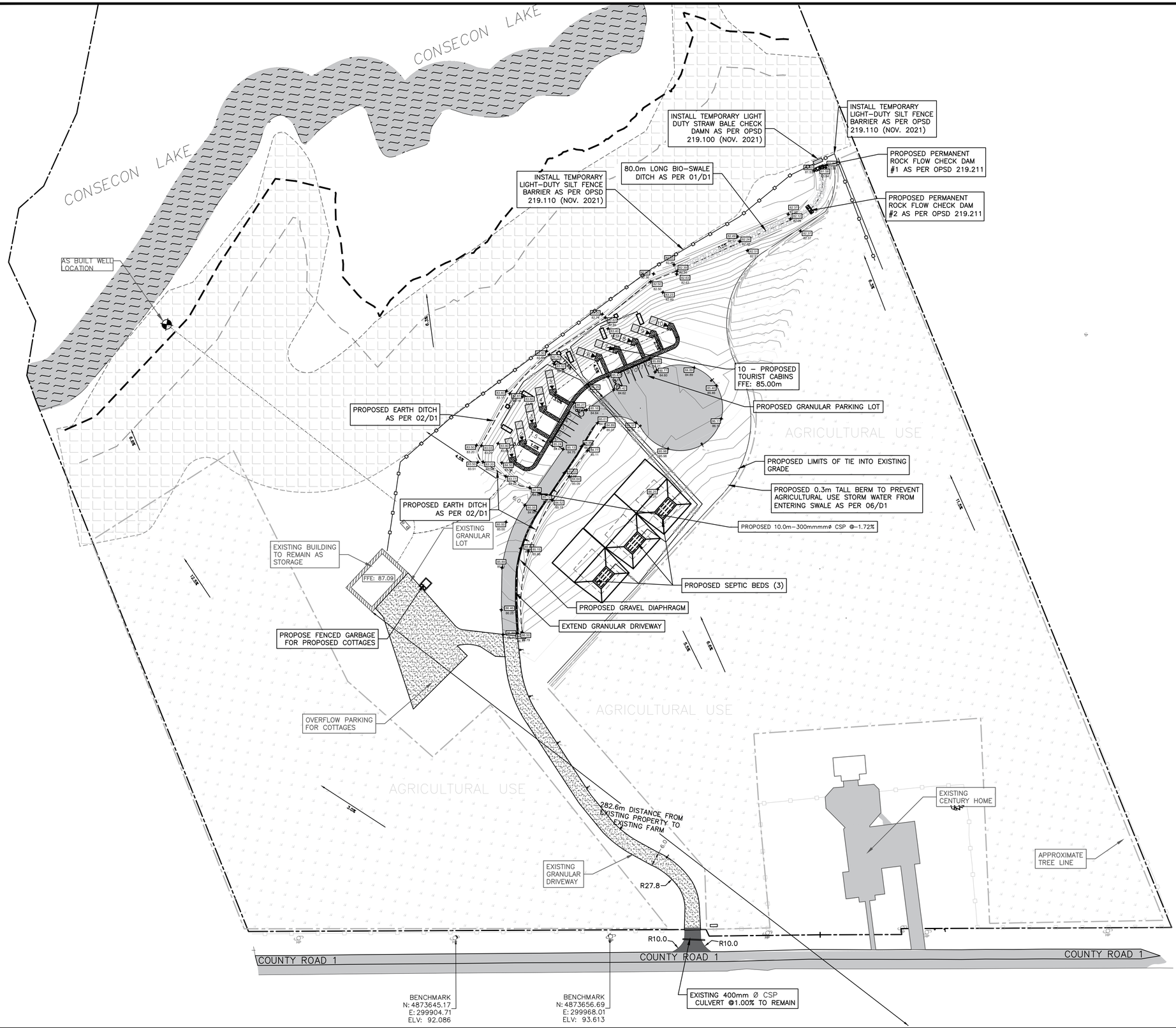
DRAWING TITLE
SITE PLAN

REVISION		DATE
08	RE-ISSUED FOR SPA	18/09/25
07	RE ISSUED FOR SITE PLAN APPROVAL	13/08/2025
06	ISSUED FOR SITE PLAN APPROVAL	18/12/24
05	RE-ISSUED FOR CLIENT REVIEW	01/10/24
04	ISSUED FOR CLIENT REVIEW	07/08/24
03	ISSUED FOR CLIENT REVIEW	26/07/24

DESIGNED BY: K. HAWLEY
DRAWN BY: J. LOCKERBIE/M. LAPLANTE BRADY
REVIEWED BY: A.HICKS
APPROVED BY: K. HAWLEY
PROJECT DATE: 10/06/2024 (DD/MM/YYYY)
PROJECT #: 25-5175A
SCALE: HOR: 1:750 VER: NTS
DRAWING #: C1

CAD OPERATOR:Martha.laplantebrady
CAD FILE: J:\S-Civil\2025\25-5175A - Ellicott Realty - 5738 County Road 1\05 Drawings\1 Ongoing\25-5175A - 5738 CR 1 - CURRENT.dwg
PLOT SCALE: AS NOTED
DATE PLOTTED: DD/MM/YYYY
GGC-A1

(METRIC SCALE - ALL DIMS IN METERS UNLESS OTHERWISE SPECIFIED)



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LEGEND

- PROPOSED / EXISTING SURFACE ELEVATION LABEL
- SLOPE LABEL
- PROPOSED EARTH DITCHING
- BOUNDARY OF AGRICULTURAL LAND
- EXISTING WATER LINE
- 50m WETLAND BUFFER
- HIGH WATER MARK OFFSET
- HIGH WATER MARK
- PROPERTY LINE
- PARKING INDICATORS
- EXISTING PAGE-WIRE FENCE
- LIGHT DUTY SILT-FENCE AS PER OPSD 219.110
- PROPOSED GRAVEL DIAPHRAGM
- PROPOSED BIO SWALE
- PROPOSED GRAVEL
- PROPOSED ROCK FLOW CHECK DAM
- EXISTING GRANULAR DRIVEWAY & LOT
- AGRICULTURE ZONE
- PROPOSED ASPHALT
- 50m WETLAND BUFFER
- LAKE ZONE

NORTH

STAMP: LICENSED PROFESSIONAL ENGINEER K. T. HAWLEY 100149851 18/09/25 PROVINCE OF ONTARIO

PROJECT
5738 COUNTY ROAD 1
THE LAKEVIEW IN PEC

CONSECON, ON

AZZORYPA GP. INC.
PRINCE EDWARD COUNTY, ON

DRAWING TITLE
GRADING AND SEDIMENT AND EROSION PLAN

REVISION		DATE
08	RE-ISSUED FOR SPA	18/09/25
07	RE-ISSUED FOR SPA	13/08/25
06	ISSUED FOR SITE PLAN APPROVAL	18/12/24
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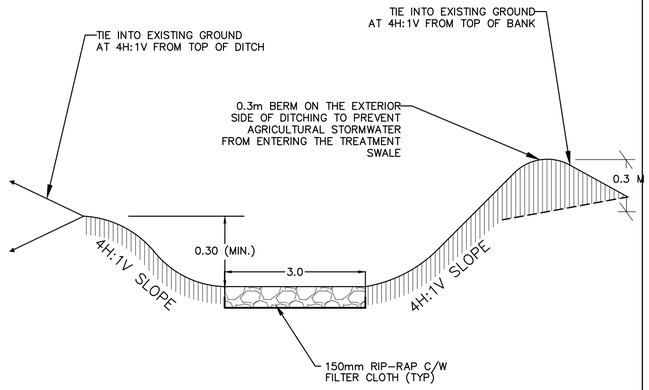
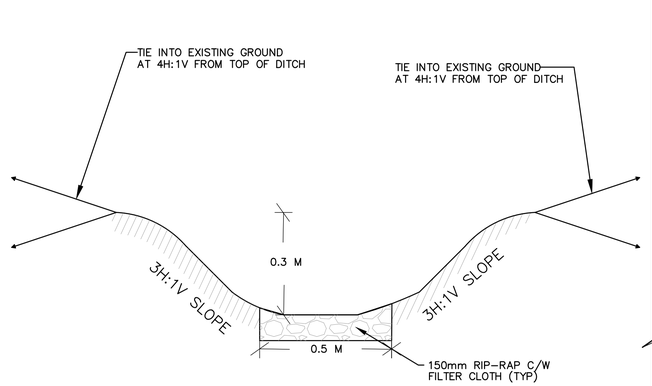


01 D1 'BIO SWALE
SCALE: N.T.S.



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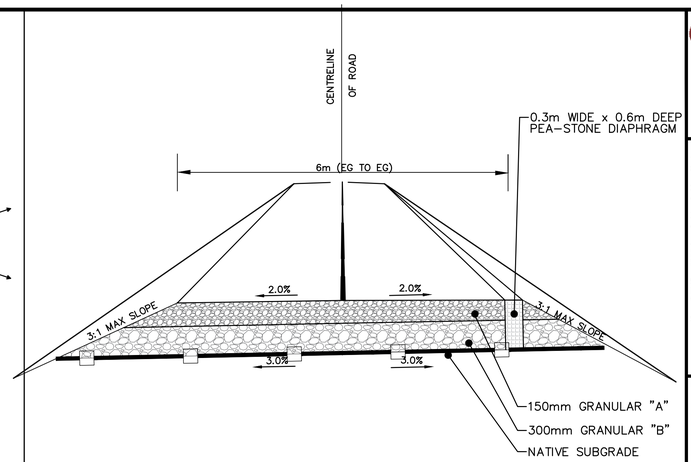
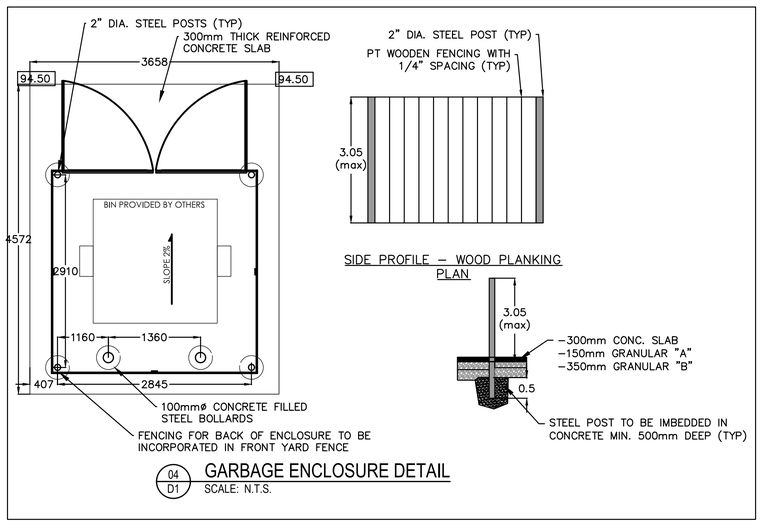
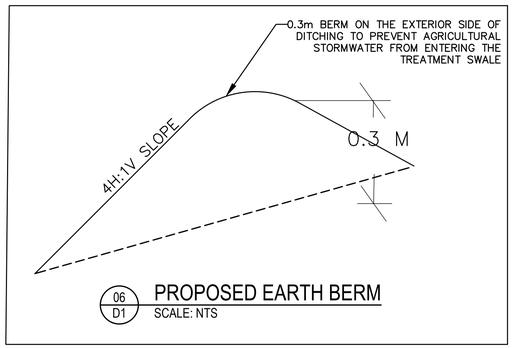
SCALE: N.T.S.



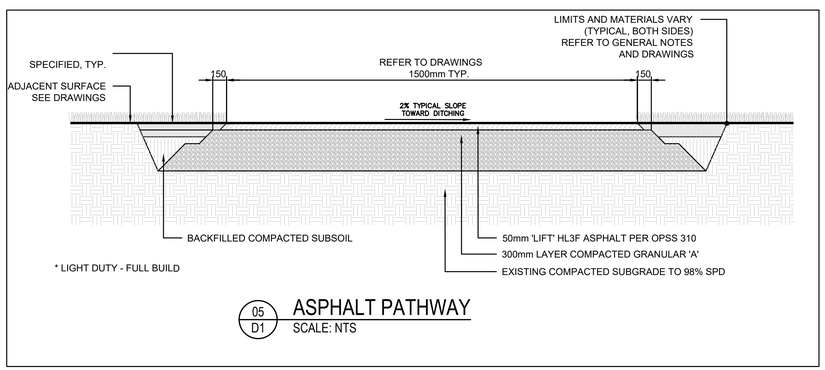
03 D1 'TYPICAL' ROAD CROSS SECTION
SCALE: N.T.S.



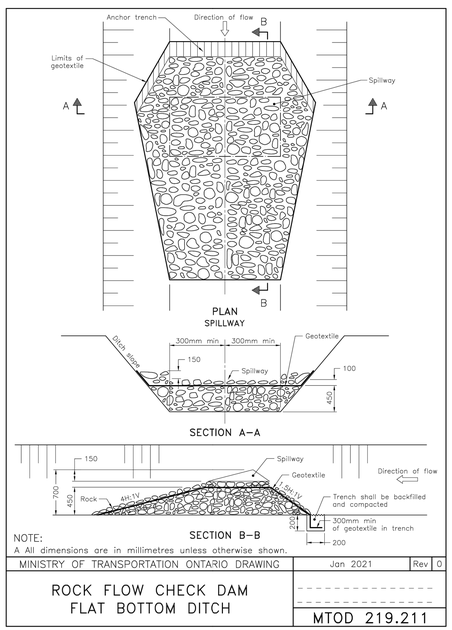
04 D1 GARBAGE ENCLOSURE DETAIL
SCALE: N.T.S.



06 D1 PROPOSED EARTH BERM
SCALE: NTS



05 D1 ASPHALT PATHWAY
SCALE: NTS



NOTE:
A All dimensions are in millimetres unless otherwise shown.

MINISTRY OF TRANSPORTATION ONTARIO DRAWING	Jan 2021	Rev 0
ROCK FLOW CHECK DAM FLAT BOTTOM DITCH		
	MTOD 219.211	

GENERAL

1. ALL WORKS TO BE INSTALLED IN ACCORDANCE WITH CURRENT PRINCE EDWARD COUNTY, ONTARIO BUILDING CODE AND, ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS UNLESS SPECIFIED OTHERWISE.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY ALL DIMENSIONS, SEWER INVERTS AND UTILITY LOCATES AND IDENTIFY POSSIBLE CONFLICTS.
3. ALL ENVIRONMENTAL PROTECTION MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
4. ANY TRAFFIC SIGNS OR INFORMATION SIGNS DAMAGED DURING CONSTRUCTION ARE TO BE REPLACED AT THE CONTRACTORS COSTS. ALL TRAFFICS SIGNS ARE TO BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION.
5. ALL UTILITY POLES TO BE BRACED AS NECESSARY.
6. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE DURING CONSTRUCTION.
7. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
8. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
9. ALL MATERIAL SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
10. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
11. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
12. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.
13. ALL SERVICES THAT ARE TO BE REMOVED, SHALL BE REMOVED FROM THE MAIN TO PROPERTY LINE.
14. THE CONTRACTOR IS RESPONSIBLE TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
15. EXCAVATED MATERIAL MAY BE USED TO COMPLETE TRENCH BACKFILLING, EXCEPT THAT NO BOULDERS SHALL BE ALLOWED. ALL COMPACTION OF TRENCH TO BE A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
16. SIDEWALKS ARE TO BE DEPRESSED AT ALL EXISTING ENTRANCES. MAXIMUM SLOPE OF 1:20 AS PER 80.23-ACCESSIBILITY FOR ONTARIAN'S WITH DISABILITIES ACT (2005).
17. THE CONTRACTOR SHALL IDENTIFY ALL SUB-PUMPS COMING FROM RESIDENCES AND SHALL NOTIFY THE CONTRACT ADMINISTRATOR IMMEDIATELY SHOULD A SUB-PUMP BE FOUND DISCHARGING INTO THE EXISTING SANITARY SYSTEM.
18. ALL RELEVANT OPSS & OPSD REFERENCED WITHIN THIS CONTRACT ARE TO BE THE CURRENT VERSION AT THE TIME OF TENDERING.

TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL/PEDESTRIAN SIGNING AS PER OTM.

GRADING

1. FINISHED SURFACES SHALL BE AT A MINIMUM GRADE OF 2% UNLESS OTHERWISE NOTED.
2. SLOPES IN LANDSCAPED AREAS SHALL NOT EXCEED 3:1.
3. ALL EXISTING ELEVATIONS AND GRADES ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO GRADING
4. UTILITIES ARE TO BE LOCATED PRIOR TO CONSTRUCTION
5. ALL GROUND SURFACES SHALL BE GRADED TO PREVENT PONDING AND WITHOUT LOW AREAS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
6. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING PROPOSED GRADES WITH CONFLICTS REGARDING THE PROPOSED STRUCTURES.
7. SUB-GRADE SHALL BE GRADED AT A MINIMUM OF 3%, UNTIL A LOWER DITCH IS ENCOUNTERED OR THE EXISTING SURFACE DRAINS AWAY FROM THE SLOPED SUB-GRADE.
8. ALL GRANULAR 'A' SHOULDERS SHALL BE SLOPED AT 6.0% UNLESS OTHERWISE NOTED.

SITE WORKS

1. WHERE IN EARTH SUBGRADE GRANULAR DEPTHS TO BE 150 MM GRANULAR A AND 300MM GRANULAR B TYPE 2. PROVIDE 3% CROSSFALL ON SUBGRADE.
2. CONCRETE CURB, AS PER OPSD 600.020.
3. CONCRETE SHALL BE CLASS C2, 30 MPA 28 DAY STRENGTH, 19MM COARSE AGGREGATE NOMINAL MAXIMUM SIZE, 6.0% TO 8.0% AIR CONTENT.
4. CONCRETE MATERIALS AND PROCUCTION AS PER OPSS 350, 351, 352, 353, 1301, 1302 AND 1350.
5. BOULEVARDS AND LANDSCAPE AREAS TO BE FINISHED WITH 100MM OF TOPSOIL AND NURSERY SOD, OR TO PRE-EXISTING CONDITION.
6. ASPHALT SHALL BE 50 MM HL8 BINDER COURSE AND 40 MM HL3 SURFACE COURSE AS PER OPSS 310 AND THE SPECIAL PROVISIONS IN THE CONTRACT DOCUMENTS. RESURFACING SHALL TAKE PLACE ALONG THE EXTENT OF PRINCETON PLACE.
7. IN ALL AREAS WHERE A JOINT IS REQUIRED BETWEEN PROPOSED AND EXISTING ASPHALT, THE JOINT SHALL BE A 1.0m STEP JOINT IF THE DEPTH OF PROPOSED ASPHALT EXCEEDS 60mm.
8. COMPACTION TESTING SHALL BE AS PER OPSS 501 AND AT THE DISCRETION OF THE CONTRACT ADMINISTRATOR FOR ALL GRANULAR MATERIAL INCORPORATED INTO THE WORK.
9. ASPHALT SHALL BE AS PER OPSS 310 (NOV 2017) AND OPSS 1150 (NOV 2010). THE PGAC SHALL BE 58-28.
10. A TOTAL OF 3 BULK ASPHALT SAMPLES SHALL BE TAKEN AS PER OPSS 310 (NOV 2017).
11. CONTRACTOR IS RESPONSIBLE FOR THE SHORING OF ALL EXCAVATIONS IF REQUIRED TO PROTECT ADJACENT INFRASTRUCTURE.
12. IN AREAS WHERE COMPACTION CANNOT BE ACHIEVED, THE CONTRACTOR SHALL USE NON-SHRINK FILL AS THE BACKFILL MATERIAL AS PER OPSS 1359 (NOV 2016).
13. PRIVATE WATER SERVICES SHALL COMPLY WITH OBC 7.1.2.5. MOE PIBS 6881e, DESIGN GUIDELINES FOR DRINKING WATER SYSTEMS

SEDIMENT AND EROSION CONTROL NOTE

1. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MONITORED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS, UNTIL ALL DISTURBED AREAS HAVE BEEN RE-VEGETATED THEN THE TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE REMOVED ONCE THE SITE HAS BEEN STABILIZED/COMPLETED OF SITE WORKS.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER EACH RAINFALL TO THE SATISFACTION OF THE CONSTRUCTION AUTHORITY.
3. ANY DISTURBED AREAS NOT SCHEDULED FOR FURTHER CONSTRUCTION WITHIN FORTY-FIVE (45) DAYS WILL BE PROVIDED WITH A SUITABLE TEMPORARY MULCH AND SEED COVER WITHIN SEVEN (7) DAYS OF COMPLETION.
4. REGARDLESS OF SITE SPECIFIC ITEMS DETAILED ON THE PLANS, THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES TO SUIT THE PROPOSED WORK METHODS TO CONTROL SEDIMENT FROM RUNNING OFF THE SITE PRIOR TO ANY DISTURBANCE.
5. FOLLOWING CONSTRUCTION, DISTURBED AREAS, AS WELL AS PROPOSED GRASSED AND VEGETATED SURFACES, SHALL BE REINSTATED AS SOON AS PRACTICAL. SUCH DISTURBED AREAS SHALL BE REINSTATED WITH TOPSOIL AND SOD AS PER OPSS 802 (NOV 2010) & OPSS 803 (NOV 2015).
6. ALL ROADS USED TO ACCESS THE SITE SHALL BE KEPT CLEAN TO THE SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS

ENVIRONMENTAL

1. WHILE UNDERTAKING CLEARING, DEMOLITION, EXCAVATION OR CONSTRUCTION THE OWNER AND THE CONTRACTOR SHALL BE VIGILANT FOR THE POTENTIAL PRESENCE OF UNDERGROUND FUEL TANKS, CONTAMINATED SOIL OR GROUNDWATER, BURIED WASTES OR ABANDONED WATER WELLS.
2. IF ANY OF THE ABOVE ARE ENCOUNTERED OR SUSPECTED, THE OWNER SHALL ENSURE THAT: ANY WASTES GENERATED BY SITE CLEAN-UPS ARE MANAGED IN ACCORDANCE WITH APPLICABLE LAWS AND STANDARDS;
3. CONSTRUCTION WASTES ARE NOT TO BE BURIED WITHIN THE PROPERTY THAT IS THE SUBJECT OF THIS AGREEMENT AND THAT THE OWNER AND THEIR CONTRACTORS REPORT ALL SPILLS TO THE MINISTRY OF THE ENVIRONMENT'S SPILLS ACTION CENTRE (1-800-268-6060) AND TO THE MUNICIPALITY (613 386-7351) FORTHWITH.
4. ALL SANITARY SEWER MAIN AND LATERALS ARE ASSUMED TO BE ASBESTOS CONDUIT. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT CONTAMINATES ARE CONTAINED AND THE REQUIREMENTS OF THE SPECIAL PROVISION FOR ASBESTOS MANAGEMENT ARE MET. ALL COSTS ASSOCIATED WITH MANAGEMENT OF SAID CONTAMINANTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

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STAMP
LICENSED PROFESSIONAL ENGINEER
K. T. HAWLEY
100149851
18/09/25
PROVINCE OF ONTARIO

PROJECT
5738 COUNTY ROAD 1
LAKEVIEW COTTAGES

CONSECON, ON

LAND & BOG
CONSECON, ON

DRAWING TITLE
DETAILS

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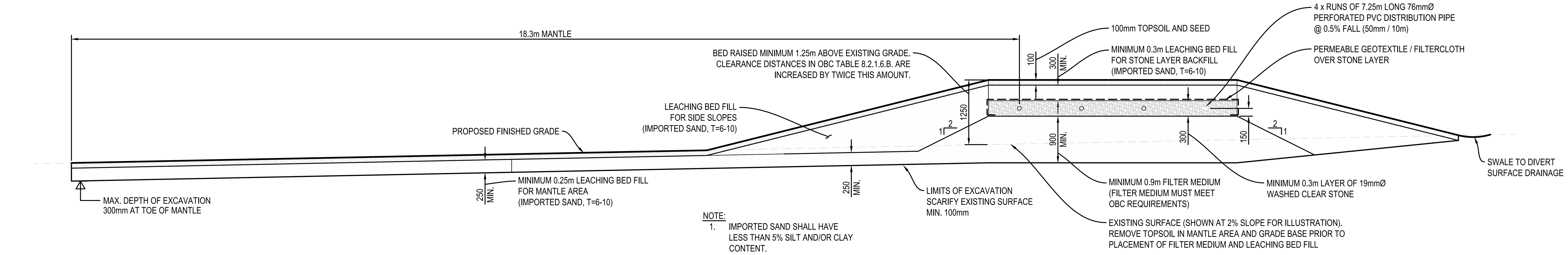

04 / D2 **DISTRIBUTION BED - SECTION**
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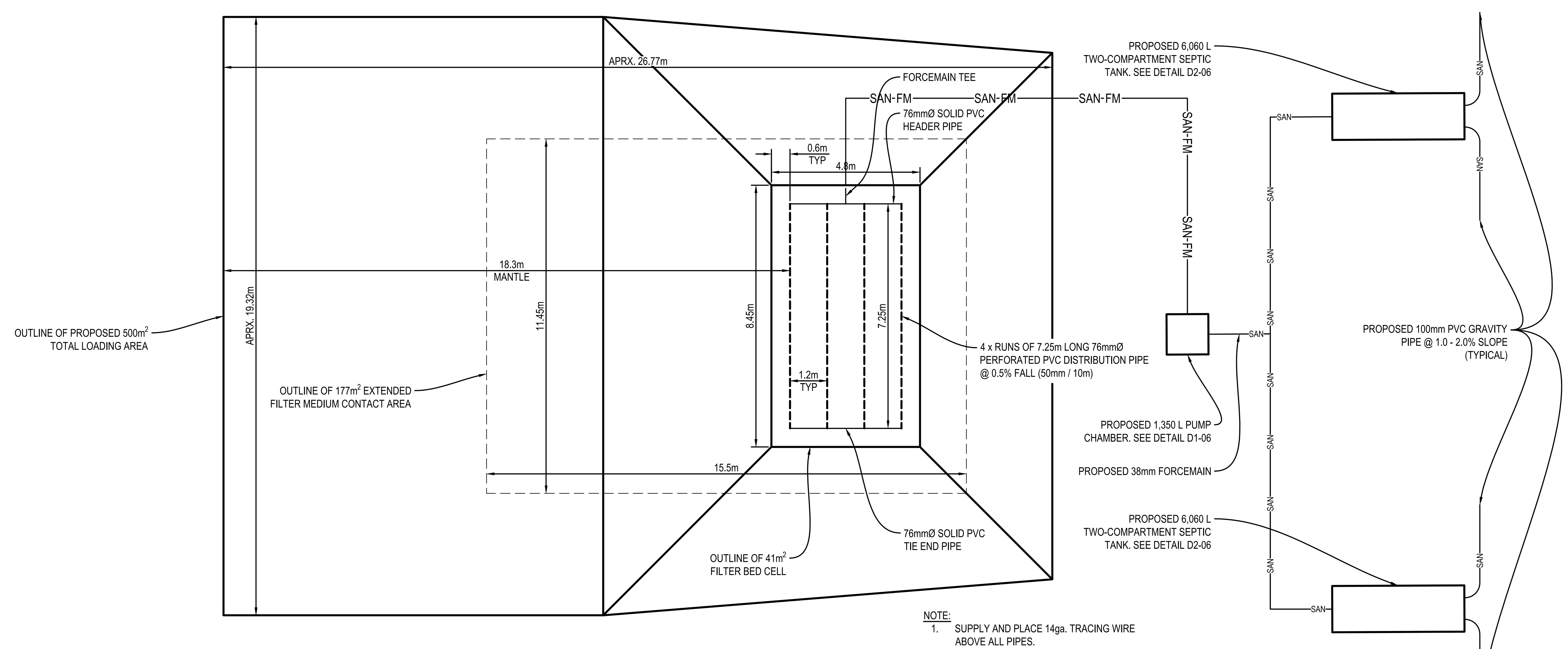
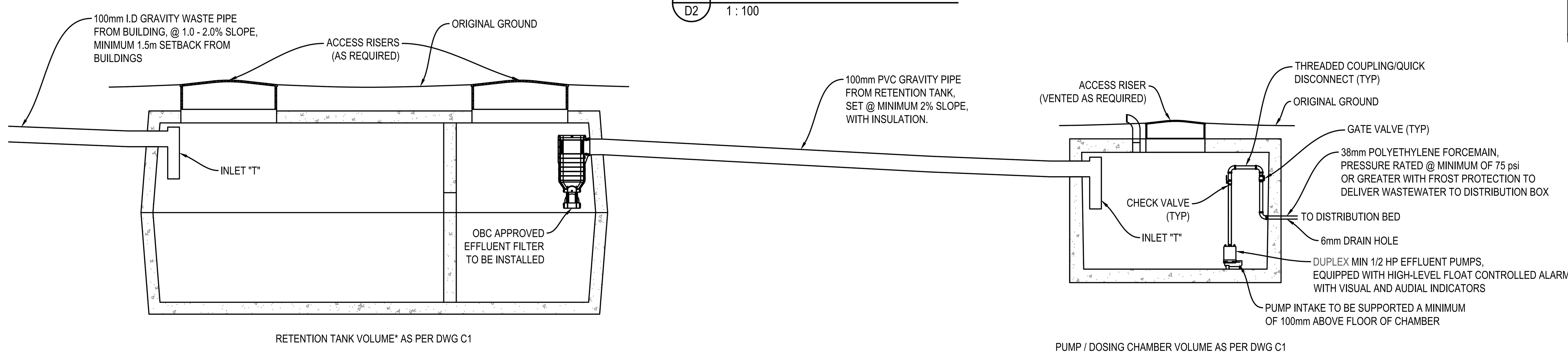


05 / D2 **DISTRIBUTION BED - PLAN**
1 : 100



TANK CONSTRUCTION / INSTALLATION NOTES:

1. TANK SUPPLIER IS TO BE CONSULTED WHEN LOCATION OF TANK IS SUBJECT TO VEHICULAR TRAFFIC OR EXCESSIVE EARTH PRESSURE. SUCH CASES MAY NECESSITATE ADDITIONAL REINFORCEMENT OF THE TANK(S) TO AVOID STRUCTURE FAILURE.
2. MAXIMUM DEPTH OF BURIAL OF TANK 600mm TO TOP OF LID UNLESS PRIOR APPROVAL FROM TANK MANUFACTURER RECEIVED.
3. ACCESS RISERS AND LIDS TO BE INSTALLED WHERE REQUIRED.
4. INSTALLATION SITE MUST BE ACCESSIBLE TO LARGE HEAVY CRANE EQUIPMENT:
   4.1. THIS AREA MUST BE FREE OF OVERHEAD WIRES, TREE LIMBS, OR OTHER ABOVE GRADE OBSTRUCTIONS WHICH COULD AFFECT NORMAL CRANE OPERATIONS.
   4.2. A FIRM FLAT LEVEL AREA OF SUFFICIENT SIZE TO ALLOW MANEUVERING ROOM FOR THIS TYPE OF EQUIPMENT MUST BE PROVIDED.
5. EXCAVATION WIDTH AND LENGTH SHOULD ALLOW FOR SAFE CLEARANCE ON ALL SIDES OF THE TANK:
   5.1. SOIL CONDITIONS MUST BE FIRM AND STABLE.
   5.2. TO MINIMIZE STRESS ON THE TANK OR CHAMBER, IT SHOULD BE PLACED ON A BASE OF GRAVEL OR CRUSHED STONE, MINIMUM 150mm THICK.
6. WHEN BACKFILLING:
   6.1. BACKFILL MATERIAL SHALL BE FREE OF BOULDERS OR LARGE STONES.
   6.2. THE WHEELS AND TRACKS OF BACKFILLING EQUIPMENT SHALL BE KEPT AT LEAST 1m AWAY FROM THE TANK OR CHAMBER.
   6.3. AT NO TIME SHALL HEAVY EQUIPMENT COME IN CONTACT WITH ANY PART OF THE TANK OR CHAMBER.
   6.4. DO NOT DROP BACKFILL ON THE TANK OR CHAMBER, OR INTO THE EXCAVATION FROM A HEIGHT GREATER THAN 1m.
   6.5. BACKFILL MUST BE PLACED IN LAYERS PROGRESSIVELY AGAINST THE FOUR SIDE WALLS OF THE TANK OR CHAMBER STRUCTURE.
7. TANKS ARE TO BE SEALED WITH BUTYL TAPE AT THE JOINTS.
8. TANKS ARE TO BE PROPERLY ANCHORED IN ORDER TO AVOID LIFT DUE TO HYDROSTATIC PRESSURE.

06 / D2 **RETENTION TANK AND PUMP CHAMBER DETAIL**
N.T.S.

GENERAL NOTES

1. CONTRACTOR RESPONSIBLE FOR ALL BUILDING PERMIT(S).
2. ALL PLASTIC PIPING SHALL HAVE CSA CERTIFICATION TO CAN/CSA-B137.6 (PRESSURE RATED PVC OR HDPE).
3. STONE AS PER OBC 8.7.3.3. DISTRIBUTION PIPE:
   3.1. THE LAYER OF STONE REQUIRED SHALL,
   a) BE COMPRISED OF WASHED SEPTIC STONE, FREE OF FINE MATERIALS, WITH GRADATION CONFORMING TO TABLE 8.7.3.3.A.,
   b) BE NOT LESS THAN 500mm IN WIDTH,
   c) EXTEND NOT LESS THAN 150mm BELOW THE DISTRIBUTION PIPE, AND
   d) EXTEND NOT LESS THAN 50mm ABOVE THE DISTRIBUTION PIPE.
4. THE TOP SOIL AND GRASS COVER FORM AN INTEGRAL PART OF THIS SEPTIC SYSTEM AND MUST BE ESTABLISHED IMMEDIATELY FOLLOWING CONSTRUCTION AND MAINTAINED.
5. NO TRAFFIC INCLUDING SNOWMOBILES, ATVs OR STRUCTURES ON MANTLE AREA.
6. SOIL NOT TO BE WORKED WHEN WET.
7. ALL PIPING IS TO HAVE 6-12 GAUGE TRACER WIRE FIXED TO PIPING.

ELECTRICAL NOTES:

1. ALL ELECTRICAL INSTALLATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE.
2. ELECTRICAL SERVICING FROM MAIN BUILDING.
3. PUMPS SHALL BE POWERED AND CONTROLLED BY OUTDOOR-RATED CONTROL CABINET.
4. TANK SHALL CONTAIN FLOAT SWITCHES TO INDICATE:
   a) HIGH LEVEL
   b) LOW LEVEL
   c) HIGH LEVEL FAILURE CONDITION
   d) LOW LEVEL FAILURE CONDITION
4. PUMPS SHALL BE COMMANDED ON ACCORDING TO "HIGH LEVEL" FLOAT, AND COMMANDED OFF ACCORDING TO "LOW LEVEL" FLOAT.
5. CONTROL CABINET SHALL PROVIDE THE FOLLOWING VISUAL AND AUDIAL TROUBLE INDICATIONS:
   a) ONE INDICATOR PER PUMP INDICATING ABNORMALITY HIGH OR ABNORMALITY LOW ELECTRICAL SUPPLY CURRENT.
   b) ONE INDICATOR WHICH LATCHES "ON" UPON ABNORMAL SIGNAL FROM ANY PUMP, INDICATOR SHALL REMAIN "ON" UNTIL MANUALLY RESET.
   c) ONE INDICATOR FOR HIGH LEVEL FAILURE CONDITION.
   d) ONE INDICATOR FOR LOW LEVEL FAILURE CONDITION.

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NOTES:
1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

A/B — A DETAIL NO. — B DRAWING NO. – WHERE DETAILED

LEGEND

NORTH

STAMP
LICENSED PROFESSIONAL ENGINEER
K. T. HAWLEY
100149851
18/09/25
PROVINCE OF ONTARIO

PROJECT
5738 COUNTY ROAD 1
LAKEVIEW COTTAGES

CONSECON, ON

LAND & BOG
CONSECON, ON

DRAWING TITLE
PROPOSED SEPTIC DETAILS

REVISION		DATE
08	RE-ISSUED FOR SPA	18/09/25
07		
06		
05	RE-ISSUED FOR SPA	13/08/25
04	RE-ISSUED FOR SPA	11/07/25
03	ISSUED FOR SITE PLAN APPROVAL	18/12/24

DESIGNED BY: S. HIGH
DRAWN BY: S. HIGH/M. LAPLANTE BRADY
REVIEWED BY: A. HICKS
APPROVED BY: K. HAWLEY
PROJECT DATE: 10/06/2024 (DD/MM/YYYY)
PROJECT #: 25-5175A
SCALE: HOR: 1:750 VER: NTS
DRAWING #: D2

(METRIC SCALE – ALL DIMS IN METERS UNLESS OTHERWISE SPECIFIED)

Appendix C

Species of Conservation Concern Screening

APPENDIX: Species of Conservation Concern - Prince Edward County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Birds								
Bank Swallow	*Riparia riparia*	THR	SC	S4B	The Bank Swallow is a small songbird of around 12 cm long with a distinctive dark breast band, that flies with quick and erratic wingbeats (1). It nests in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. This can include banks of rivers and lakes, bluffs, active sand and gravel pits, road cuts and stockpiles of soils. However, they prefer sand-silt substrates for excavating their nest burrows. They often use large wetlands as communal nocturnal roosts post-breeding or during wintering periods (2).	No	Known to occur in the general area	No further consideration required
Barn Swallow	*Hirundo rustica*	THR	THR	S4B	The Barn Swallow is a mid-sized songbird with steel-blue backs and wings, glossy in males, and a line of white spots across its upper tail. It lives in a variety of open habitats for foraging, such as grassy fields, pastures, certain agricultural crops, shorelines, cottage areas, wetlands, or subarctic tundra (2). They prefer to nest within human made structures such as barns, bridges, and culverts. Barn Swallow nests are cup-shaped and made of mud, typically attached to horizontal beams or vertical walls underneath an overhang (1).	No	Known to occur in the general area	No further consideration required
Black Tern	*Chlidonias niger*	No Status	SC	S3B	The Black Tern is a small waterbird with a forked tail, straight pointed bill, slender shape, and black head during breeding season. It builds floating nests in loose colonies in shallow marshes, with a preference for cattails. They breed primarily in the marshes along the edges of the Great Lakes, but may also use wetlands further north if suitable (1).	Yes: on-site	Known to occur in the general area	Potential significant wildlife habitat on-site
Bobolink	*Dolichonyx oryzivorus*	THR	THR	S4B	The Bobolink is a mid-sized songbird of tan colour with black stripes, except for males during summer breeding season who are black with a white back and yellow collar. It prefers tall, grassy meadows, hayfields and some croplands, and feeds (largely on insects) on the ground in dense grasses (1). It tends to nest in forage crops: hayfields and pastures dominated by species including clover, bluegrass, and broadleaf plants (2).	Yes: adjacent lands only	Known to occur in the general area	Potential habitat for endangered or threatened species on-site
Canada Warbler	*Cardellina canadensis*	THR	SC	S4B	The Canada Warbler is a small songbird with bright yellow underparts and bluish-grey back and tail (1). It can be found in a variety of forest types, but is most abundant in moist, mixed forests with a well-developed, dense shrub layer. Nests are usually located on or near the ground on mossy logs, and along stream banks (3).	No	Known to occur in the general area	No further consideration required
Cerulean Warbler	*Setophaga cerulea*	END	THR	S3B	The Cerulean Warbler, a small songbird, is blue-green with white eyebrows and two prominent white wing bars (1). It requires relatively large tracts of mature deciduous forest (>100 ha), and nests in older, second-growth deciduous forests. During breeding season, it is found in relatively large tracts of mature deciduous forests that feature large, tall trees and an open understorey (4).	No	Known to occur in the general area	No further consideration required
Chimney Swift	*Chaetura pelagica*	THR	THR	S4B,S4N	The Chimney Swift is a small bird, between 12 and 14 cm, with a brown, cigar-shaped body, slender wings, and an erratic flight pattern. Prior to settlement, the Chimney Swift would mainly nest in cave walls and hollow trees. Now, it is found mostly near urban and suburban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. They also tend to stay in habitat close to the water (1).	No	Known to occur in the general area	No further consideration required

APPENDIX: Species of Conservation Concern - Prince Edward County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Common Nighthawk	*Chordeiles minor*	THR	SC	S4B	The Common Nighthawk is a medium-sized bird with long, pointed wings, a long tail with a notch, and and large eyes. Its plumage of dark brown with black and white specks blends with its roost site. It is typically found in open areas such as gravel beaches, rock outcrops and burned woodlands, that have little to no ground vegetation. This species can also be found in highly disturbed locations such as clear cuts, mine tailing areas, cultivated fields, urban parks, gravel roads, and orchards (1).	No	Known to occur in the general area	No further consideration required
Eastern Meadowlark	*Sturnella magna*	THR	THR	S4B	The Eastern Meadowlark is a medium-sized migratory songbird with a bright yellow throat and belly, a black V shape on its chest, and a pointed bill. It prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields, human-use areas such as airports and roadsides, or other open areas. The Eastern Meadowlark can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses (1).	Yes: adjacent lands only	Known to occur in the general area	Potential habitat for endangered or threatened species on-site
Eastern Whip-poor-will	*Antrostomus vociferus*	THR	SC	S4B	The Eastern Whip-poor-will is a medium-sized bird with mottled brown and grey feathers to blend in with its surroundings, a large flattened head, and small bill. They are usually found in areas with a mix of open and forested areas such as patchy forests with clearings, forests that are regenerating after major disturbances, savannahs, open woodlands or openings in more mature forests. Breeding habitat is dependent on forest structure rather than composition, although common tree associations are pine and oak, and it nests directly on the forest floor (2). The species prefers to nest in semi-open or patchy forests with clearings as it forages in open areas and uses forested areas for roosting (1).	No	Known to occur in the general area	No further consideration required
Eastern Wood-Pewee	*Contopus virens*	SC	SC	S4B	The Eastern Wood-pewee is a species of 'flycatcher', a bird that eats flying insects. It grows to approximately 15 cm, has greyish-olive upper parts and pale bars on its wings. This species lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation (1). It typically creates nests on tree branches 2-12 m in height (2).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Grasshopper Sparrow	*Ammodramus savannarum*	SC	SC	S4B	The Grasshopper Sparrow is a small songbird with a streaked back, a white stripe down the center of its crown, a flattish head, and a conical beak. It inhabits open grasslands and prairies with well-drained soil, preferring areas that are sparsely vegetated. It will also nest in hayfields and pastures, as well as alvars and occasionally grain crops such as barley (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
King Rail	*Rallus elegans*	END	END	S2B	The King Rail is a large bird, standing at around 40 cm tall, with a long, curved bill, orange chest and neck, and black sides with vertical white bars. This species prefers densely vegetated freshwater marshes with open shallow water and shrub thicket areas. Current records for Ontario suggest that these birds prefer sites within coastal marshes of the Great Lakes. Most breeding pairs left in Ontario are found in wetlands bordering Lake St Clair or coastal marshes along Lakes Erie and Ontario (1).	Yes: on-site	Known to occur in the general area	Potential habitat for endangered or threatened species on-site

APPENDIX: Species of Conservation Concern - Prince Edward County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Least Bittern	*Ixobrychus exilis*	THR	THR	S4B	The Least Bittern is a small member of the heron family, reaching around 30 cm in length. It has brown and beige plumage with chestnut patches on its wings (1). The species nests in marshes (> 5 ha) and swamps dominated by emergent vegetation, preferably cattails, interspersed with patches of woody vegetation and open water. Although Least Bitterns usually nest in larger marshes territorial individuals have been found in marshes as small as 0.4 ha. They require dense vegetation and open water with stable levels within 10 m for nesting, and access to clear, open water for foraging (3).	Yes: on-site	Known to occur in the general area	Potential habitat for endangered or threatened species on-site
Loggerhead Shrike	*Lanius ludovicianus*	END	END	S2B	The Loggerhead Shrike is a small bird with a black, hooked bill, grey crown, and white throat and chest. This species has specific habitat requirements that are dependent on active livestock grazing, or grassland areas that have naturally short grass cover (i.e. alvar communities). They also require spiny, multi-branched shrubs, or barbed fencing, to catch prey. They prefer grassland habitats that have sporadic occurrences of low trees and shrubs; particularly hawthorn species, which are used as part of their feeding behaviour (1).	No	Known to occur in the general area	No further consideration required
Red-headed Woodpecker	*Melanerpes erythrocephalus*	END	END	S4B	The Red-headed Woodpecker is a mid-sized bird, at around 20 cm long, with a vivid red head, neck and breast as well a strong bill. The species can be found in open woodland and woodland edges, often near man-made landscapes such as parks, golf courses and cemeteries. These areas must contain a large number of dead trees for perching and nesting (1).	No	Known to occur in the general area	No further consideration required
Rusty Blackbird	*Euphagus carolinus*	SC	SC	S4B	The Rusty Blackbird, a medium-sized songbird with pale, yellow eyes and a slender black bill, has recently been listed as special concern both federally and provincially. The species breeds in habitats dominated by coniferous forest with wetlands nearby including bogs, marshes, and beaver ponds. In Ontario, their breeding range is found in the Hudson Bay Lowlands and northern Boreal Shield ecozones. During the winter, it can be found in wet woodlands, swamps, and pond edges plus often foraging in agricultural lands (1).	No	Known to occur in the general area	No further consideration required
Short-eared Owl	*Asio flammeus*	SC	SC	S2N,S4B	The Short-eared Owl has a large round head with small tufts of feathers, long wings, a short tail, and cryptic colouring of brown streaks. This species is found in scattered pockets across the province where suitable open habitat, including grasslands, tundra, peat bogs and marsh, can be found in sufficient quantities. Adults build nests on the ground in grassy areas and occasionally agriultural fields (1). The main factor influencing their choice in habitat is believed to be an abundance of their food source, primarily rodents and other small mammals (2).	No	Known to occur in the general area	No further consideration required
Wood Thrush	*Hylocichla mustelina*	THR	SC	S4B	The Wood Thrush is a medium-sized songbird of around 20 cm with rusty brown coloured upper parts and white underparts with large dark spots. It breeds in deciduous and mixed forests with moderate understories, shade and abundant leaf litter where it forages for food, including larval and adult insects as well as plant material. They prefer moist stands of trees with well-developed undergrowth and tall trees for perches (1).	No	Known to occur in the general area	No further consideration required
Fish								

APPENDIX: Species of Conservation Concern - Prince Edward County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
American Eel	*Anguilla rostrata*	No Status	END	S1?	The American Eel is a long, slender bodied fish, with one long fin extending down the back and around the tail, and two small pectoral fins. It has thick lips, and a protruding lower jaw that extends out above the upper jaw. At the juvenile stage, they swim up the St. Lawrence River to reach Lake Ontario and connected tributaries where they will remain for 8 to 23 years before migrating back to their spawning grounds. In Ontario, the American eel prefers mud, sand or gravel substrates during the juvenile stage when they reside primarily in the benthic zone of waterbodies. More mature eels are able to thrive in most environments provided there is available cover during daylight hours, and the habitat is accessible (2).	No	Known to occur in the general area	No further consideration required
Bridle Shiner	*Notropis bifrenatus*	SC	SC	S2	The Bridle Shiner is a small minnow with a slender body of up to 6 cm long, and a small mouth extending back to the lower edge of its eye. Adults of this species are silvery, often blue-green, with a paler underbelly. They live in clear, unpolluted streams, rivers, and lakes typically with an abundance of vegetation and prefer warm water with a sand, silt, or organic debris bottom (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Deepwater Sculpin	*Myoxocephalus thompsonii*	SC	-	S1	The Deepwater Sculpin grows tup to 8 cm in length, and has eyes on top of its head, a large mouth, three dark bands on its pectoral fins, and lacks true scales. This species inhabits the bottoms of cold, highly oxygenated lakes (2).	No	Known to occur in the general area	No further consideration required
Eastern Sand Darter	*Ammocrypta pellucida*	THR	END	S2	The Eastern Sand Darter, a member of the perch family, is a slender fish with a faintly coloured translucent body marked with dark spots. It grows between 4-7 cm in length. The species prefers shallow lakes, streams, and rivers with sandy bottoms (1).	No	Known to occur in the general area	No further consideration required
Grass Pickerel	*Esox americanus*	SC	SC	S3	Like other members of the pike family, the Grass Pickerel has a long, cylindrical body with a long snout and forked tail. Colouration may vary, but often consists of several thin, dark, wavy vertical bars along the sides. The fins are dusky to yellow-green. Adults have a dark bar extending below the eye. Grass Pickerel are found in wetlands, pond, slow moving streams and shallow bays of larger lakes with warm, shallow, clear water and abundant aquatic vegetation. In Ontario, Grass Pickerel is found in coastal wetlands in the Great Lakes and tributaries of Lake St. Clair, Lake Erie, Lake Huron, the Niagara River, Lake Ontario and the St. Lawrence River, and inland in the Severn River system (2).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Lake Sturgeon	*Acipenser fulvescens*	No Status	END	S2	The Lake Sturgeon, a large freshwater fish, has an extended snout with four whisker-like organs hanging near the mouth and is dark to light brown or grey on its back and sides with a lighter belly. In Ontario, this fish is found in the rivers of the Hudson Bay Basin, the Great Lakes basin, and their connecting waterways. Lake Sturgeon's live almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel and are usually found at depths of 5 to 20 m. They spawn in relatively shallow, fast-flowing water or if available deeper water habitat as well (1).	No	Known to occur in the general area	No further consideration required
Pugnose Shiner	*Notropis anogenus*	THR	THR	S2	The Pugnose Shiner is a small, slender minnow reaching 5-6 cm in length. Its body is a silver colour with pale yellow markings on its back and dark stripe along its side. They also have small, upturned mouths and large eyes. The Pugnose Shiner inhabits lakes and calm poritons of rivers or creeks with clear water and sandy, mud, or organic bottoms, and preferably an abundance of aquatic vegetation (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential habitat for endangered or threatened species on-site

APPENDIX: Species of Conservation Concern - Prince Edward County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
River Redhorse	*Moxostoma carinatum*	SC	SC	S2	The River Redhorse is large and thick-bodied, growing up to 80 cm, with a flat-topped head and prominent snout. Its tail fin is tinted red, its belly is white, its back is brown or olive coloured, and its sides are yellowish green or coppery. It can be found in medium to large sized rivers with substantial flows. Adult River Redhorses migrate in spring from deeper, slower moving pools to shallow riffle-run habitats with coarse substrate and faster flow (1).	No	Known to occur in the general area	No further consideration required
Spotted Gar	*Lepisosteus oculatus*	END	END	S1	The Spotted Gar is grows to more than 50 cm long, has a long beak-like mouth, and sharp teeth. Its body is brown and covered in dark spots hile its belly is olive-grey coloured. The species inhabits calm, clear pools, lakes, and bays with abundant aquatic plants and soft mud bottoms (2).	No	Known to occur in the general area	No further consideration required
Upper Great Lakes Kiyi	*Coregonus kiyi kiyi*	SC	SC	S3	The Upper Great Lakes Kiyi, a member of the whitefish subfamily, grows up to 25 cm, has silvery sides with pink or purple iridescence, a dark back, and white underside. Its lower jaw has a distinct projection, extending beyond the upper jaw. It can be found in clear, cold water at depths of 35 to 200 m (1).	No	Known to occur in the general area	No further consideration required
Herptiles								
Blanding's Turtle	*Emydoidea blandingii*	END	THR	S3	Blanding's Turtles are identifiable by their bright yellow throat and chin and domed shell. They spend the majority of their life cycle in the aquatic environment, usually in large wetlands or shallow lakes with high densities of water plants (1). These turtles prefer shallow, nutrient rich water with organic sediment and dense vegetation. They use terrestrial sites for travel between habitat patches and to lay clutches of eggs, often going hundreds of meters from their nearest water body. Blanding's Turtles nest in dry coniferous and mixed forest habitats, as well as fields and roadsides (2). From late October until the end of April, they hibernate in the mud at the bottom of permanent water bodies (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential habitat for endangered or threatened species on-site
Eastern Musk Turtle	*Sternotherus odoratus*	SC	SC	S3	The Eastern Musk Turtle is small with a narrow carapace, a dark brown body and two light stripes on each side of their head (5). It is a small freshwater turtle found primarily in slow moving water bodies with abundant emergent vegetation and mucky bottoms along the southern edge of the Canadian Shield within which they burrow into overwinter. Nesting sites vary, but must be close to the water and exposed to direct sunlight (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Midland Painted Turtle	*Chrysemys picta marginata*	SC	-	S4	The Midland Painted Turtle has a olive to black carapace with red or dark orange markings on the marginal scutes, as well as red and yellow stripes on the head and neck. The species uses a variety of waterbodies including, ponds, marshes, lakes and slow-moving creeks with a soft bottom and an abundance of basking sites and aquatic vegetation. This species usually hibernates on the bottom of waterbodies (5).	Yes: on-site and adjacent lands	Known to occur in the general area	No further consideration required
Northern Map Turtle	*Graptemys geographica*	SC	SC	S3	The Northern Map Turtle is a medium sized turtle identified by its carapace's map contour-like patterning. It lives in larger lakes and rivers, requiring high water quality to support their primary prey species: molluscs. This species can often be seen in large groups basking together on rocks and logs. In the winter, the Northern Map Turtle can be found hibernating on the bottom of slow-moving rivers (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Snapping Turtle	*Chelydra serpentina*	SC	SC	S3	The Snapping Turtle, with its large serrated carapace, small plastron, and spiked tail, is Canada's largest freshwater turtle (5). It spends the majority of its life in water, preferring shallow water with soft mud and leaf litter, and will travel upland to gravel or sandy embankments, roadsides, along railway lines or beaches to lay their eggs (1).	Yes: on-site and adjacent lands	Incidental observation on-site	Confirmed significant wildlife habitat on-site

APPENDIX: Species of Conservation Concern - Prince Edward County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Spiny Softshell	*Apalone spinifera*	END	END	S2	The Spiny Softshell can be easily distinguished since it is the province's only turtle with a flexible, leathery carapace. These turtles have long snouts, a yellow strip outlined in black along the head, an olive-grey or brown carapace, and may reach a size of up to 40 cm in length. They are typically found in rivers with soft bottoms, aquatic vegetation, and sandbars, but may also be found in lakes or impoundments. They nest in gravelly or sandy areas (5).	No	Known to occur in the general area	No further consideration required
Eastern Milksnake	*Lampropeltis triangulum*	SC	NAR	S4	The Eastern Milksnake's colouration is grey or tan with reddish alternating blotches otlines in black along its back and sides (5). It has recently been delisted from being a species at risk in Ontario (1). This species tends to use open habitats such as rocky outcrops, fields and forest edges. The preferred prey of milksnakes are mice, small rodents, and ground nesting birds which are amply found in and surrounding agricultural outbuildings. The milksnake is secretive and is not likely to be encountered during the day or at night while hunting (5).	Yes: on-site and adjacent lands	Known to occur in the general area	No further consideration required
Eastern Ribbonsnake	*Thamnophis sauritus*	SC	SC	S4	The Eastern Ribbonsnake is slender with three bright yellow stripes running down its back and sides and a white crescent in front of each eye. This snake is usually found close to water as they are strong swimmers, often fleeing predators by diving into shallow water. It prefers wetland habitats where its prey species, frogs and small fish, are abundant. Over winter, they congregate in underground burrows or rock crevices to hibernate (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Western Chorus Frog	*Pseudacris triseriata*	THR	-	S3	The Western Chorus Frog is small with a dark stripe running through its eye and a light stripe underneath (5). It is primarily a lowland terrestrial species that requires access to terrestrial and aquatic habitats in close proximity to one another. Relying on marshes and wooded wetlands adjacent to forested habitats, this species also requires isolated, predator free pools for breeding. Temporary pools, such as vernal pools in wooded areas, are preferred. This species hibernates terrestrially in a variety of environments, including leaf litter, wood debris, and vacant animal burrows (2).	Yes: on-site and adjacent lands	Known to occur in the general area	No further consideration required
Invertebrates								
Monarch Butterfly	*Danaus plexippus*	SC	SC	S2N,S4B	The Monarch is an orange and black butterfly with small white spots and a wingspan of around 10 cm. It relies on milkweed plants as a food source for growing caterpillars, but the adult butterflies forage in diverse habitats for nectar from wildflowers (1).	Yes: on-site	Known to occur in the general area	Potential significant wildlife habitat on-site
Yellow-banded Bumble Bee	*Bombus terricola*	SC	SC	S3S5	The Yellow-banded Bumble Bee is medium-sized, with a yellow and black abdominal band pattern. This species is considered a habitat generalist since it is able to use a variety of necatring plants and can tolerate a range of environmental conditions, including habitats such as mixed woodlands, grasslands, farmlands, and urban areas. Their nest sites are often found underground in abandoned burrows or decomposing logs.	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Eastern Pondmussel	*Ligumia nasuta*	SC	SC	S1	The Eastern Pondmussel is a freshwater mussel that can grow to 10 centimetres long. They must attach to a fish host, consuming nutrients off its body until becoming juvenile, but it is unknown which fish species act as hosts. Typically found in sheltered areas of lakes and in slow-moving areas of river and canals with sand or mud bottoms, the Eastern Pondmussel was once one of the most common mussels in the lower Great Lakes but there are now only two known populations in Canada: one in the delta of Lake St. Clair and the second in Lyn Creek, a small tributary of the upper St. Lawrence River (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Mammals								

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COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Tri-colored Bat	*Perimyotis subflavus*	END	END	S3?	The Tri-colored Bat is small, with pale brown with orange-red forearms, muzzle, and ears. It is named for the black, yellow, and brown hairs on its back. It is considered rare in this region of Ontario which is at the northernmost limit of the natural range. These bats prefer to nest in foliage, tree cavities and woodpecker holes, but are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Tri-colored Bats prefer an open forest habitat type in proximity to water (6).	Yes: on-site	Known to occur in the general area	Consideration required under the ESA
Eastern Small-footed Myotis	*Myotis leibii*	No Status	END	S2S3	The Eastern Small-footed Myotis has fur with black roots and shiny brown tips as well as very small feet. In the spring and summer, the Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects. They hibernate in winter, often in caves and abandoned mines choosing colder and drier sites than other similar bats (1).	Yes: on-site	Known to occur in the general area	Consideration required under the ESA
Little Brown Myotis	*Myotis lucifugus*	END	END	S4	The Little Brown Myotis has glossy brown fur and a fleshy projection covering the entrance to its ears. This species roosts in trees and buildings, often selecting attics, abandoned buildings and barns for summer colonies where they can raise their young. Little Brown Bats hibernate from October/November to March/April, most often in caves or abandoned mines that are humid and remain above freezing (1).	Yes: on-site	Known to occur in the general area	Consideration required under the ESA
Northern Myotis	*Myotis septentrionalis*	END	END	S3	The Northern Myotis has dull yellow-brown fur with pale bellies and long, rounded ears. This species is found in boreal forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October/November to March/April, most often in caves or abandoned mines (1).	Yes: on-site	Known to occur in the general area	Consideration required under the ESA
Eastern Red Bat	*Lasiurus borealis*	END	END	S4	The Eastern Red Bat has fur ranging from yellow-red to yellow-gray, and is one of Ontario's migratory bats. This species flies hundreds to thousands of kilometers every year to overwinter in the southern United States. The summer habitat of Eastern Red Bats is coniferous and deciduous forests of any age class, although they prefer to roost in mature trees higher than the surrounding canopy. Threats to this species include Wind energy developments, declines in their insect prey and habitat loss (9).	Yes: on-site	Known to occur in the general area	Consideration required under the ESA
Eastern Small-footed Myotis	*Myotis leibii*	No Status	END	S2S3	The Eastern Small-footed Myotis has fur with black roots and shiny brown tips as well as very small feet. In the spring and summer, the Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects. They hibernate in winter, often in caves and abandoned mines choosing colder and drier sites than other similar bats (1).	Yes: on-site	Known to occur in the general area	Consideration required under the ESA
Hoary Bat	*Lasiurus cinereus*	END	END	S4	The Hoary Bat Is the largest bat in Canada. It is identified by light fur around its face and neck and white-tipped hairs over most of its body. It is very widely distributed across Canada and Ontario. It migrates to southern North America to overwinter, and summer habitat in Ontario is deciduous forest, where it uses tree cavities as maternity habitat. This species is common in bat mortality events on wind energy developments, and is also threatend by declines in inset prey and habitat loss (10).	Yes: on-site	Known to occur in the general area	Consideration required under the ESA
Trees, plants, fungi and lichens								

APPENDIX: Species of Conservation Concern - Prince Edward County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
American Ginseng	*Panax quinquefolius*	END	END	S2	American Ginseng is a perennial plant which grows up to 60 centimetres in height. The leaves typically have five leaflets arranged in a whorl at the end of the leaf stem. The root looks like a gnarly parsnip. The flowers are an inconspicuous green-white in colour, but the berries are bright red and arranged in a cluster. In Ontario, the American Ginseng typically grows in rich, moist, and mature deciduous woods dominated by Sugar Maple, White Ash, and American Basswood. It typically grows in deep, nutrient rich soil over limestone or marble bedrock (1).	No	Known to occur in the general area	No further consideration required
Black Ash	*Fraxinus nigra*	No Status	END	S4	The Black Ash is a smaller-sized tree with a narrow crown, light grey and scaly bark, and green, oval leaflets on a central stalk. It grows everywhere in Ontario except for the far north, preferring moist climates and soils such as swampy woodlands or bogs (1).	No	Known to occur in the general area	No further consideration required
Butternut	*Juglans cinerea*	END	END	S2?	The Butternut is a medium sized tree reaching 30 m in height. It has large compound leaves with 11 to 17 leaflets. The fruit is oval, fuzzy and sticky. In Ontario, the Butternut prefers moist, well-drained soil, often along streams, or occasionally well-drained gravel sites. It grows alone or in small groups in deciduous forests (1).	Yes: on-site	Incidental observation on-site	Confirmed habitat for endangered or threatened species on-site
Climbing Prairie Rose	*Rosa setigera*	SC	SC	S3	The Climbing Prairie Rose has arching, climbing branches growing several metres long. Its leaves are alternate, compound, and its 3-5 leaflets are opposite. This rose's flower is large, pink, and five-petaled. It is typically found in open habitats with moist clay or clay-loam soils depending on periodic fire or other disturbance such as old fields, prairie remnants, shrub thickets, and abandoned agricultural land (1).	No	Known to occur in the general area	No further consideration required
Four-leaved Milkweed	*Asclepias quadrifolia*	No status	END	S1	The Four-leaved Milkweed is a leafy perrenial growing 20 to 80 cm tall with clusters of small, pink-white flowers. Its leaves are arranged in opposite pairs. It grows in dry woodlands dominated by tallgrass prairie herbs, bur oaks, and hickories, or woodland alvars dominated by red cedar and pasture grasses (1).	No	Known to occur in the general area	No further consideration required
Swamp Rose-mallow	*Hibiscus mosceutos*	SC	SC	S3	The Swamp Rose-mallow is a large wetland plant, reaching 2 m tall, with showy pink or white flowers, stems emerging from a shared root system, and alternate, serrated, variably shaped leaves (1;2). Its habitat in Ontario is restricted to shoreline marshes, commonly in deep-water cattail marshes, meadow marshes, or dyked wetlands with periodic flooding (1).	No	Known to occur in the general area	No further consideration required
Golden-eye Lichen (Great Lakes population)	*Teloschistes chrysophthalmus*	END	END	S2S3	The Golden-eye Lichen is orange and green-grey, and grows in the form of a small branching shrub. It can be identified by its orange fruiting bodies with marginal hair-like structures. This organism lives in well-lit, humid environments with nutrient rich substrates, often on the branches of trees. The known Great Lakes population is now restricted to within Sandbanks Provincial Park (1).	No	Known to occur in the general area	No further consideration required

References

1. Ministry of Environment, Conservation and Parks. (2022). Species at Risk in Ontario. Retrieved from https://www.ontario.ca/page/species-risk-ontario
2. Government of Canada. (2021). Species at Risk Public Registry. Retrieved from https://species-registry.canada.ca/index-en.html#/species?ranges=5&sortBy=commonNameSort&sortDirection=asc&pageSize=10
3. Committee on the Status of Endangered Wildlife in Canada. (2008).
4. Environment Canada. (2018).
5. Ontario Nature. (2020). Reptiles and Amphibians. Retrieved from https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/species/
6. University of Michigan Museum of Zoology. (2004).

Appendix D
Photographic Log

Photo 1 Looking north at building, September 2023.

Photo 2 Looking south towards Country Road 1 (Agricultural Field), September 2023.

Photo 3 Dock extending into marsh (Community 3), Consecon Lake beyond, September 2023.

Photo 4 Predated turtle nest (Community 2), September 2023.

Photo 5 Butternut #1, base highly impacted by canker, September 2023.

Photo 6 Butternut #1, trunk and crown impacted by canker, September 2023.

Photo 7 Butternut #2, minimal canker observed, September 2023.

Photo 8 Butternut #2, some decline in crown, September 2023.

Photo 9 Butternut #3, some canker around root/base of trunk, September 2023.

Photo 10 Butternut #3, crown in generally good shape, September 2023.

Photo 11 Butternut #4, three large stems, some canker around base, in good shape, September 2023.

Photo 12 Butternut #4, crown in good shape, September 2023.

Photo 13 Butternut #5, poor condition, small patch of canker on root, September 2023.

Photo 14 Butternut #5, no sign of canker in crown, September 2023.

Photo 15 Eastern portion of Site, row crops, September 2023.

Photo 16 Soil point 1, (Community 2), September 2023.

Photo 17 Soil point 2, (Community 4), September 2023.

Photo 18 Soil point 3, (Community 5), September 2023.

Appendix E

Vegetation Species List

Appendix E - Vegetation Community and Inventory

Common Name (Latin Name)	Vegetation Community						Rarity/Status			CoC
	1	2	3	4	5	6	Federal	Provincial		
							SARA	SARO	S-Rank	
Amethyst Aster (Symphyotrichum x amethystinum)		X							SNA	0
Alfalfa (Medicago sativa)						X			SNA	0
Alpine Bluegrass (Poa alpina ssp. alpina)		X							S4	10
Alternate-leaved Dogwood (Cornus alternifolia)					X				S5	6
American Water-horehound (Lycopus americanus)				X					S5	4
Basswood (Tilia americana)		X			X				S5	4
Bitternut Hickory (Carya cordiformis)					X				S5	6
Black Cherry (Prunus serotina var. serotina)					X				S5	3
Black Raspberry (Rubus occidentalis)	X	X							S5	2
Black Willow (Salix nigra)			X	X					S4	6
Bladder Campion (Silene vulgaris)		X				X			SNA	0
Broad-leaved Arrowhead (Sagittaria latifolia)			X						S5	4
Broad-leaved Cattail (Typha latifolia)			D	X					S5	1
Bull Thistle (Cirsium vulgare)	X								SNA	0
Butternut (Juglans cinerea)					X		END	END	S2?	6
Calico Aster (Symphyotrichum lateriflorum var. lateriflorum)	X				X				S5	3
Canada Anemone (Anemonastrum canadense)					X				S5	3
Canada Bluegrass (Poa compressa)		X							SNA	0
Canada Goldenrod (Solidago canadensis var. canadensis)	X	X			X	X			S5	1
Canada Horseweed (Erigeron canadensis)						X			S5	0
Canada Thistle (Cirsium arvense)						X			SNA	0
Canada Wood Nettle (Laportea canadensis)				X					S5	6
Catnip (Nepeta cataria)	X					X			SNA	0
Chokecherry (Prunus virginiana var. virginiana)					X				S5	2
Climbing Bittersweet (Celastrus scandens)					X				S5	3
Common Apple (Malus pumila)		X							SNA	0
Common Burdock (Arctium minus)						X			SNA	0
Common Milkweed (Asclepias syriaca)	X	X				X			S5	0
Common Mullein (Verbascum thapsus ssp. thapsus)						X			SNA	0
Common Prickly-ash (Zanthoxylum americanum)					X				S5	3
Common Ragweed (Ambrosia artemisiifolia)						X			S5	0
Common Timothy (Phleum pratense ssp. pratense)	X								SNA	0
Common Viper's Bugloss (Echium vulgare)						X			SNA	0
Curled Dock (Rumex crispus)		X							SNA	0
Eastern Marsh Fern (Thelypteris palustris var. pubescens)				X					S5	5
Eastern Red Cedar (Juniperus virginiana var. virginiana)		X			X				S5	4
Eastern Tall Goldenrod (Solidago altissima var. altissima)	X								S5	1
European Buckthorn (Rhamnus cathartica)	D	X			X	X			SNA	0
Fowl Mannagrass (Glyceria striata var. striata)				X					S5	3
Green Foxtail (Setaria viridis var. viridis)	X								SNA	0
Grey Dogwood (Cornus racemosa)						X			S5	2
Kentucky Bluegrass (Poa pratensis ssp. pratensis)		X							SNA	0
Little-leaved Linden (Tilia cordata)	X								SNA	0
Manitoba Maple (Acer negundo)	X	X			X	X			S5	0
New England Aster (Symphyotrichum novae-angliae)		X				X			S5	2
Nodding Beggarticks (Bidens cernua)			X	X					S5	2
Panicled Aster (Symphyotrichum lanceolatum)		X							S5	3
Poison Ivy (Toxicodendron radicans)	X	X			X				S5	2
Purple Loosestrife (Lythrum salicaria)				X					SNA	0
Red Ash (Fraxinus pennsylvanica)				X	D				S4	3
Red Clover (Trifolium pratense)	X	X				X			SNA	0
Red Maple (Acer rubrum)				X					S5	4
Red-osier Dogwood (Cornus sericea)	X	X	X	X					S5	2
Reed Canarygrass (Phalaris arundinacea var. arundinacea)	X								S5	0
Riverbank Grape (Vitis riparia)	X	X			X	X			S5	0
Sensitive Fern (Onoclea sensibilis)			X	X					S5	4
Silver Maple (Acer saccharinum)				D					S5	5

Appendix E - Vegetation Community and Inventory

Common Name (Latin Name)	Vegetation Community						Rarity/Status			CoC
	1	2	3	4	5	6	Federal	Provincial		
							SARA	SARO	S-Rank	
Smooth Brome (Bromus inermis)	X	X			X	X			SNA	0
Smooth Sumac (Rhus glabra)		X							S5	7
Spiny Plumeless Thistle (Carduus acanthoides ssp. acanthoides)						X			SNA	0
Spotted Jewelweed (Impatiens capensis)			X						S5	4
Staghorn Sumac (Rhus typhina)	X					X			S5	1
Sugar Maple (Acer saccharum)		X							S5	4
Tall Goldenrod (Solidago altissima)		X			X	X			S5	1
Tufted Vetch (Vicia cracca)		X							SNA	0
Virginia Creeper (Parthenocissus quinquefolia)	X	X			X	X			S4?	6
White Ash (Fraxinus americana)	X								S4	4
White Elm (Ulmus americana)		X							S5	3
White Heath Aster (Symphyotrichum ericoides var. ericoides)		X				X			S5	4
Wild Basil (Clinopodium vulgare ssp. vulgare)	X								S5	4
Wild Carrot (Daucus carota)	X					X			SNA	0
Zigzag Goldenrod (Solidago flexicaulis)	X								S5	6

Notes:

CoC - Coefficient of Conservatism. Assigned on a a scale of 1-10, with 0 being the least conservative and 10 being the most conservative.

SARA - Species at Risk Act

SARO - Species at Risk in Ontario

SC - Special Concern

THR - Threatened

END - Endangered

NAR - Not at risk

S-Rank - Provincial rank used by the Natural Heritage Information Centre to prioritize protection efforts

S1 - Extremely rare in Ontario

S2 - Very rare in Ontario

S3 - Rare to uncommon in Ontario

S4 - Considered to be common in Ontario

S5 - Species is widespread in Ontario

SNA - Not Applicable (typically introduced species)

"?" - Indicates uncertainty in classification due to lack of information

Appendix F
Fish Species List

Appendix F - Fish Species List and Life History Information

Family	Common name	Scientific name	Source	S-Rank	SARA	ESA	Tolerance [1]	Thermal Regime [1]	Spawning Months [1]	Spawning Habitat Preferences [2]													
										Water depth (m)				Cover		Substrate							
										0-1	1-2	2-5	5+	Submergent Vegetation	Emergent vegetation	Bedrock	Boulder	Cobble	Rubble	Gravel	Sand	Silt	Clay	Hard-pan Clay
Centrarchidae	Bluegill	*Lepomis macrochirus*	MNRF	S5			Intermediate	Warmwater	June-August	X	X	X	-	high	high	-	-	-	-	high	high	medium	-	-
Amiidae	Bowfin	*Amia calva*	MNRF	S4			Intermediate	Warmwater	May-June	X	X	-	-	high	high	-	-	-	-	-	high	high	-	-
Ictaluridae	Brown Bullhead	*Ameiurus nebulosus*	MNRF	S5			Intermediate	Warmwater	May-June	X	X	-	-	medium	medium	-	-	-	-	-	high	high	high	-
Salmonidae	Cisco	*Coregonus artedi*	MNRF	S5			Intolerant	Coldwater	November-December	X	X	X	X	-	-	-	medium	high	high	high	high	medium	medium	medium
Cyprinidae	Common Carp	*Cyprinus carpio*	MNRF	SNA			Tolerant	Warmwater	May-August	X	X	-	-	high	high	-	-	-	medium	medium	medium	high	-	-
Sciaenidae	Freshwater Drum	*Aplodinotus grunniens*	MNRF	S5			Tolerant	Warmwater	May-July	X	X	X	X	low	low	medium	medium	medium	medium	medium	medium	Medium	medium	medium
Centrarchidae	Largemouth Bass	*Micropterus salmoides*	MNRF	S5			Tolerant	Warmwater	May-June	X	X	-	-	medium	high	-	-	-	low	low	high	high	high	-
Esocidae	Northern Pike	*Esox lucius*	MNRF	S5			Intermediate	Coolwater	March-May	X	X	-	-	-	high	-	-	-	low	low	high	high	-	-
Centrarchidae	Pumpkinseed	*Lepomis gibbosus*	MNRF	S5			Intermediate	Warmwater	May-August	X	X	-	-	high	high	-	-	-	-	high	high	-	medium	-
Centrarchidae	Rock Bass	*Ambloplites rupestris*	MNRF	S5			Intermediate	Coolwater	May-June	X	X	-	-	low	low	-	-	high	high	high	medium	medium	medium	-
Centrarchidae	Smallmouth Bass	*Micropterus dolomieu*	MNRF	S5			Intermediate	Coolwater	May-June	X	X	-	-	low	low	medium	-	-	high	high	medium	-	-	-
Percidae	Walleye	*Sander vitreus vitreus*	MNRF	S5			Intermediate	Coolwater	April-June	X	X	X	X	low	low	high	high	high	high	high	high	-	-	high
Catostomidae	White Sucker	*Catostomus commersoni*	MNRF	S5			Tolerant	Coolwater	April-June	X	X	-	-	low	low	-	-	-	medium	high	medium	-	-	-
Percidae	Yellow Perch	*Perca flavescens*	MNRF	S5			Intermediate	Coolwater	April-May	X	X	X	X	medium	medium	-	-	-	medium	high	high	medium	medium	-

Note:

A dash (-) indicated that the species was not reported to utilize a particular depth stratum, cover or substrate.

Tolerance refers to the ability of a species to adapt to environmental perturbations or anthropogenic stresses.

1 Eakins, R. J. (2018). Ontario Freshwater Fishes Life History Database. Version 4.81. Online database. (http://www.ontariofishes.ca), accessed 26 July 2018

2 Lane, J. A., Minns, C. K., & Portt, C. B. (1996). Spawning habitat characteristics of Great Lakes fishes (p. 47). Fisheries and Oceans Canada.

Appendix G

Significant Wildlife Habitat Assessment

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes
Seasonal Concentration Areas of Animals					
Waterfowl Stopover and Staging Areas (Terrestrial)	Ducks	Cultural Ecosites: CUM1, CUT1	Fields that flood during spring (mid-March to May).	N	No suitable habitat for Waterfowl Stopover and Staging Areas (Terrestrial) is present on the Site. Fields present on-site were confirmed to have no flooding during March to May.
Waterfowl Stopover and Staging Area (Aquatic)	Ducks, Geese	Marshes, Swamps, Shallow Water Ecosites: MAS1,MAS2, MAS3, SAS1 SAM1, SAF1, SWD1 to SWD7,	Ponds, marshes, lakes, bays, coastal inlets, and watercourses. Sewage treatment ponds and storm water ponds **not** SWH Reservoir managed as a large wetland or pond/lake qualifies.	Y: Candidate	High quality habitat exists in the open water within Lake Consecon Marsh PSW and Community 3. Waterfowl were not observed at the time of the survey.
Shorebird Migratory Stopover Area	Shorebirds	Beaches, Dunes, Meadow Marshes: BBO1, BBO2, BBS1, BBS2 BBT1, BBT2, SDO1, SDS2, SDT1, MAM1 to MAM5	Shorelines of lakes, rivers and wetlands. Sewage treatment ponds and storm water ponds **not** SWH.	N	No suitable habitat observed during survey.
Raptor Wintering Area	Eagles, Hawks, Owls	Hawks/Owls - Combination of Forest and Cultural Ecosites: FOD, FOM, FOC, CUM, CUT, CUS, CUW Bald Eagle: Forest or swamp close to open water (hunting ground): FOD, FOM, FOC, SWD, SWM, SWC	Raptor wintering sites: >20ha, with a combination of forest and upland. Idle/Fallow/Meadow (>15ha) with adjacent woodlands. Eagle sites: open water, large trees and snags for roosting.	N	None observed during survey. Site does not mees size criteria
Bat Hibernacula	Big Brown Bat, Tri-coloured Bat	Caves, Crevices: CCR1, CCR2, CCA1, CCA2	Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Buildings and active mine sites **not** SWH.	N	No suitable habitat observed during survey.
Bat Maternity Colonies	Big Brown Bat, Silver-haired Bat	Deciduous or mixed forests and swamps: FOD, FOM, SWD, SWM	Mature deciduous and mixed forest stands with >10/ha; large trees >25 cm DBH with cavities.	N	No suitable habitat observed during survey.
Turtle Wintering Area	Turtles	SW, MA, OA, SA, FEO, BOO	Free water beneath ice. Soft mud substrate. Permanent water bodies, large wetlands, bogs, fens with adequate DO.	Y: Candidate	Potentially suitable habitat exists in Community 3 and Lake Consecon Marsh PSW
Reptile Hibernaculum	Snakes	Habitat may be found in any ecosite other than very wet ones. Five-lined Skink: FOD and FOM, FOC1, FOC3	Below frost line in burrows, rock crevices, rock piles or slopes, stone fences, abandoned stone foundations. Conifer or shrub swamps/swales, poor fens, depressions in bedrock with accumulations of sphagnum moss or sedge hummock ground cover. Skink: mixed forest with rock outcrop openings; granite bedrock with fissures.	N	No suitable habitat observed during survey.
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Cliff Swallow, Northern Rough-winged Swallow	Eroding banks, sandy hills/piles, burrow pits, steep slopes, cliff faces, bridge abutments, silos, barns. CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1	Exposed soil banks, **not** a licensed/permitted aggregate area. Does **not** include man-made structures (bridges or buildings), or recently (2 yrs) disturbed soil areas (berms, embankments, soil/aggregate stockpiles).	N	No suitable habitat observed during survey.
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Great Blue Heron, Black-crowned Night Heron, Great Egret, Green Heron	SWM2, SWM3, SWM5, SWM6, SWD1 to SWD7, FET1	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and emergents may be used. Nests in trees are 11 to 15 m from ground, near top of the tree.	Y: Candidate	Candidate Habitat - Community 4
Colonially-nesting Bird Breeding Habitat (Ground)	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	Rocky island or peninsula in lake or river. Close to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird). MAM1 – 6; MAS1 – 3; CUM, CUT, CUS	Gulls and terns nesting on islands or peninsulas with open water or marshy areas. Brewers Blackbird colonies are found on the ground in low bushes close to streams and irrigation ditches within farmlands.	N	No suitable habitat observed during survey.
Migratory Butterfly Stopover Area	Painted Lady, Red Admiral, **Special Concern:** Monarch	Combination of open and forested ecosites (need one from each). Field: CUM, CUT, CUS Forest: FOC, FOD, FOM, CUP	Minimum of 10 ha, located within 5 km of Lake Ontario. Combination of field and forest, undisturbed sites, with flowering species (preferred nectar plants).	N	No suitable habitat observed during survey.
Landbird Migratory Stopover Areas	All migratory songbirds. All migrant raptor species.	FOC, FOM, FOD, SWC, SWM, SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. If multiple woodlands are located along the shoreline, those Woodlands <2km from Lake Ontario are more significant. Include a variety of habitats; forest, grassland and wetlands.	N	Community 4 does not meet size criteria
Deer Yarding Areas	White-tailed Deer	FOM, FOC, SWM, SWC, CUP2, CUP3, FOD3, CUT	Stratum I: core deer yard - coniferous forest; 60% canopy cover with pine, hemlock, cedar, spruce. Stratum II: mixed or deciduous forest with plenty of browse available, may include agricultural areas.	N	No suitable habitat observed during survey.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes
Deer Wintering Congregation Areas	White-tailed Deer	FOC, FOM, FOD, SWC, SWM, SWD	When movement is not constrained by snow depth (20cm) Woodlots > 100 ha and used annually.	N	No suitable habitat observed during survey.
Rare Vegetation Communities					
Cliffs and Talus Slopes		TAO, TAS, CLO, CLS, TAT, CLT	Cliff: near vertical bedrock >3m in height; Talus Slope: coarse rock rubble at the base of a cliff	N	No suitable habitat observed during survey.
Sand Barren		SBO1, SBS1, SBT1	Sand Barrens >0.5 ha. Vegetation can vary from patchy and barren to continuous meadow, thicket--like, or tree covered (less than 60%). Less than 50% vegetation cover are exotic species.	N	No suitable habitat observed during survey.
Alvar	*Indicator species: Carex crawei, Panicum philadelphicum, Eleocharis compressa, Scutellaria parvula, Trichostema brachiatum,* Loggerhead Shrike	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Alvar >0.5 ha. Level, mostly unfractured calcareous bedrock with mosaic or rock pavements and bedrock overlain with thin veneer of soil. Vegetation cover varies from patchy to barren with <60% tree cover.	N	No suitable habitat observed during survey.
Old Growth Forest		FOD, FOC, FOM, SWD, SWC, SWM	Woodland areas 30 ha or greater or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.	N	No suitable habitat observed during survey.
Savannah		TPS1, TPS2, TPW1, TPW2, CUS2	No minimum size; A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60% with less than 50% cover of exotic species. Remnant sites (railway right-of-ways) are **not** SWH.	N	No suitable habitat observed during survey.
Tallgrass Prairie		TPO1, TPO2	No minimum size; An open Tallgrass Prairie habitat has < 25% tree cover. Less than 50% cover of exotic species. Remnant sites (railway right-of-ways) are not SWH.	N	No suitable habitat observed during survey.
Other Rare Vegetation Communities		Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps. Review Appendix M	N	No suitable habitat observed during survey.
Specialized Habitat for Wildlife					
Waterfowl Nesting Area	Ducks	Upland habitats adjacent to: MAS1 to MAS3, SAS1, SAM1, SAF1, MAM1 to MAM6, SWT1, SWT2, SWD1 to SWD4	Extends 120 m from a wetland or wetland complex. Upland areas should be at least 120 m wide. Wood Ducks and Hooded Mergansers use cavity trees (>40cm dbh) in woodlands.	Y: Candidate	Potentially suitable habitat exists in Community 3, Community 4, and Lake Consecon Marsh PSW
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey, Bald Eagle	FOD, FOM, FOC, SWD, SWM, SWC directly adjacent to riparian areas	Nesting areas are associated with waterbodies along forested shorelines, islands, or on structures over water.	N	No suitable habitat observed during survey.
Woodland Raptor Nesting Habitat	Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Red-shouldered Hawk, Barred Owl, Broad-winged Hawk	All forested ELC ecosites. Forests, swamps, and conifer plantations: FOD, FOM, FOC, SWD, SWM, SWC, CUP3	Natural or conifer plantation woodland/forest stands >30 ha with > 10 ha interior habitat. Stick nests.	N	None observed during survey. Site does not mees size criteria
Turtle Nesting Areas	Midland Painted Turtle, Snapping Turtle, Northern Map Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within: MAS1 to MAS3, SAS1, SAM1, SAF1, BOO1	Nest sites close to water, within open sunny areas with soil suitable for digging. Sand and gravel beaches. Nesting areas on sides of roads are not SWH.	Y: Confirmed	Suitable loose substrates for turtle nesting, including in gravel/sand beaches and forests, were observed portions Community 3. Turtle nesting evidence was observed in Community 3. However, species and numbers of nesting individuals could not be confirmed through the observation of nests.
Seeps and Springs	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp.	Seeps/Springs are areas where ground water comes to the surface.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream/river system.	N	None observed during survey.
Amphibian Breeding Habitat (Woodland)	Woodland Frogs and Salamanders	FOC, FOM, FOD, SWC, SWM, SWD	Wetland, pond or woodland pool of >500 m^2 within or adjacent (within 120m) to wooded areas (no min. size). Woodlands with permanent ponds or those containing water until mid-July are preferred.	Y: Candidate	None observed during survey. Potentiall suitable habitate exists within Community 4.
Amphibian Breeding Habitat (Wetlands)	Toads, Frogs, and Salamanders	SW, MA, FE, BO, OA and SA. Typically isolated (>120m) from woodland ecosites, however larger wetlands may be adjacent to woodlands.	Wetlands >500m^2 isolated from woodland ecosites with high species diversity. Permanent water bodies with abundant vegetation for bullfrogs.	Y: Candidate	None observed during survey. Potentiall suitable habitate exists within Community and Lake Consecon Marsh PSW.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes
Woodland Area-Sensitive Bird Breeding Habitat	Birds: Yellow-bellied Sapsucker Red-breasted Nuthatch, Veery, Blue-headed Vireo, Northern Parula, Black-throated Green Warbler, Blackburnian Warbler, Black-throated Blue Warbler, Ovenbird, Scarlet Tanager, Winter Wren, Special Concern: Cerulean Warbler Canada Warbler	FOC, FOM, FOD, SWC, SWM, SWD	Large mature (>60 years) forest stands or woodlots > 30 ha. Interior forest habitat of >200 m from forest edge.	N	None observed during survey. Site does not mees size criteria
Habitat of Species of Conservation Concern					
Marsh Bird Breeding Habitat	American Bittern, Virginia Rail, Sora, Common Moorhen, American Coot, Pied-billed Grebe, Marsh Wren, Sedge Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan	MAM1 to MAM6, SAS1, SAM1, SAF1, FEO1, BOO1 For Green Heron: SW, MA and CUM1 sites.	Wetlands with shallow water and emergent aquatic vegetation.	Y: Candidate	Potentially suitable habitat exists in Community 3, Community 4, and Lake Consecon Marsh PSW
Open Country Bird Breeding Habitat	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier, Savannah Sparrow, Short-eared Owl	CUM1, CUM2	Grassland/meadow >30 ha. Not being actively used for farming. Habitat established for 5 years or more.	N	None observed during survey. Site does not mees size criteria
Shrub/Early Successional Bird Breeding Habitat	Brown Thrasher, Clay-coloured Sparrow, Field Sparrow, Black-billed Cuckoo, Eastern Towhee, Willow Flycatcher, Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large field areas succeeding to shrub and thicket habitats > 10 ha. Areas not actively used for farming in the last 5 years.	N	None observed during survey. Site does not mees size criteria
Terrestrial Crayfish	Chimney or Digger Crayfish; (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish; (*Cambarus Diogenes*)	MAM1 to MAM6, MAS1 to MAS3, SWD, SWT, SWM, CUM1 sites with inclusions of the aforementioned.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish	Y: Candidate	Potentially suitable habitat exists in Community 3.
Special Concern and Rare Wildlife Species	Any species of concern or rare wildlife species (S1-S3, SH) plant and animal.	Any ELC code.	Presence of species of concern or rare wildlife species identified within 1 or 10 km grid (NHIC).	Y	Special Concern and Rare Wildlife Species were not observed during the survey. Further details are provided in Appendix C.