

Updated Environmental Impact Study
The Dune Lookout Resort
1874 County Road N0. 12
West Lake, Ontario

Prepared for:

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1. Introduction

The Greer Galloway Group was retained by West Lake Lodge Ltd., owner of the property located at 1874 County Road No. 12, legal description Parts 2 & 4, Plan 47R-290, Part of Lot 4, Concession South East Side of West Lake, Hallowell Ward, County of Prince Edward, Ontario to prepare an Environmental Impact Study (EIS) report in support of the redevelopment of the existing Resort. Figure 1, Site Location Plan, shows the location of the property.

This report has been prepared to identify and address potential negative impacts to the natural heritage features present in the subject property as required by Provincial Policy Statement (2020), the County of Prince Edward (The County), the Quinte Region Conservation Authority and applicable legislation. The County requires an EIS as outlined in Section 3.1.5.4 of the County's Official Plan which states that an EIS is required for development along Shoreline Buffers. This is to ensure water quality protection.

This report is undertaken to characterize the existing conditions of the property and adjacent lands and take in consideration the water quality of the water body by assessing background information obtained from agencies and a field assessment and the impact that the project will cause on the natural heritage features. **There was no direct communication with The County and Quinte Region Conservation Authority.** The report contains the information required for an EIS based on the County's Terms of Reference. This requires that the study:

- a. Identify and evaluate the nature and boundaries of any natural heritage features on or adjacent to the site that could be adversely affected by the proposed development;
- b. Describe and map proposed development activities;
- c. Predict the effects of the proposed development on the various components of the environment on and adjacent to the site, such as wildlife, fish, vegetation, soil, surface water, groundwater, air and any other relevant factors, taking into consideration effects during and after site disturbance;
- d. Identify and evaluate the significance of all predicted adverse and positive effects on the various environmental considerations including impacts to natural features and their ecological functions; and
- e. Recommend all measures that can be taken to avoid, reduce, or mitigate the predicted negative impacts.

2. Existing Conditions

The property is located at 1874 County Road No. 12, on the west side of the road, in the County of Prince Edward. It is 3.9 ha in size and irregular in shape. It is located approximately 8 km south of the Village of Bloomfield. Access to the resort is via County Road No. 12. The use of the property has been as a trailer park composed of three (3) small cottages and twenty (20) trailers. There is a private internal road that allows access to the dwelling, cottage/trailer area and the boat launch area from County Road No. 12. There are two driveways to access the dwelling. Also, there is a small beach area, a boat ramp, landscaping areas, garden, and natural areas. The Mayne Lane is outside the property but connects to the internal road. It is known that late in the summer after the site investigations were complete, the trailers, cottages and the docks were removed; therefore, buildings and structures still in the property consists of a single-family dwelling, a barn, accessory sheds, and a trailer box (See photos 1 to 5).

The water supply for the resort is obtained from two wells. The eastern well is located in the central part of the property and services the residential building having the 911 address 1866 County Road 12, and a few trailers on the property. The second water supply well is located about 30 m from the West Lake beside a pump shed.

Vegetation is present in the south part of the property, along the shore and as hedgerow in the trailers/cottages area. As previously mentioned, in the trailers/cottage area some dead trees, shrubs and herbaceous vegetation have been removed from the hedgerows and the land graded for the future development.

The property is bounded to the north by private residential and tourist commercial properties, to the south by private properties, to the east by County Road No. 12, agricultural fields, and a cemetery/church, and to the west by private residential properties and West Lake. On February 16, a notification was received from the project planner indicating that clearing of vegetation was carried out in the area where the villas will be located. Removal of vegetation was approved by Quinte Region Conservation Authority under permit No. REG0394-2023 dated February 16, 2024. Permit is included in Appendix A.

According to the Natural Heritage Information Centre (NHIC) Map from the Ministry of Natural Resources and Forestry (MNR), the property is not located within an Area of Natural and Scientific Interest (ANSI) or a Provincially Significant Wetland (PSW). The property is adjacent to West Lake. The closest PSW is to the north and Sandbanks Provincial Park is located south and west of the property. See Figure 2 for locations of the Significant Natural Heritage Features.

A photolog showing the existing conditions of the property is included in Appendix E.

3. Environmental Policy Context

This EIS report has been prepared with reference to the legislation and policies described in the following subsections:

Provincial Planning Statement

The Ontario Planning Act (1990) requires that planning decisions be consistent with the Provincial Planning Statement (PPS) that came into effect October 20, 2024. Section 4.1 of the PPS specifies policy related to protection of natural heritage features and functions.

Section 4.1.4 Development and Site Alteration shall not be permitted in:

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

Section 4.1.5 Development and Site Alteration shall not be permitted in:

- a. Significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);*
- b. Significant wildlife habitat; and*
- c. Significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.*

Section 4.16 states that development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

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

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

Section 2.2 of the PPS specifies policies related to protect, improve or restore the quality and quantity of water.

Section 2.2.2 states that development and site alteration shall be restricted in or near sensitive surface water features and groundwater features such that these features and their related hydrologic functions will be protected, improved or restored.

Species at Risk Act

The purposes of the Species at Risk Act (SARA) are to prevent wildlife species in Canada from disappearing; to provide for the recovery of wildlife species that are extirpated (no longer exist in the wild in Canada), endangered, or threatened as a result of human activity; and to manage species of special concern to prevent them from becoming endangered or threatened. A series of measures applicable across Canada provides the framework to accomplish these goals. Some of these measures establish how governments, organizations, and individuals in Canada work together, while others implement a species assessment process to ensure the protection and recovery of species.

Endangered Species Act

Species listed on the Species at Risk in Ontario (SARO) list as endangered or threatened are protected under the *Endangered Species Act, 2007* (ESA). 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 on the SARO list. Section 10(1) of the ESA prohibits the damage or destruction of habitat of a species listed as endangered or threatened on the SARO list.

Fisheries Act

In accordance with the Federal *Fisheries Act*, any in-water works that may cause “harmful, alteration, disturbance and destruction (HADD) of fish habitat”, requires review by the Department of Fisheries and Oceans (DFO). DFO Fisheries Protection Program provides a Decision Framework and guidance material to ensure compliance with provisions under the *Fisheries Act* and the *Species at Risk Act*.

Quinte Region Conservation Authority

The Quinte Region Conservation Authority (Quinte Conservation) regulates watercourses, wetlands, and hazardous lands (valleylands, shorelines, floodplains) under the Ontario Regulation 41/24, as made under Section 28 of the *Conservation Authorities Act*. The purpose of the regulation is to prevent and restrict development and site alterations near water and wetlands to protect the public from flooding, erosion and other natural hazards.

Conservation Authorities have Provincially delegated responsibilities to represent Provincial interests regarding natural hazards under Section 5.2 of the PPS (2024). Natural hazards include areas subject to flooding, prone to erosion, dynamic beaches, and unstable soil or bedrock. Generally, the policies of the PPS direct development to areas outside of hazard lands.

The Bay of Quinte and Lake Ontario Shoreline Management Plan (SMP) dated June 21, 2022, includes updates to Quinte Conservation’s hazard mapping for flooding, erosion, and dynamic beaches. As a result of the study, the 1:100-year flood plain elevation for the property on West Lake is reflected as 76.07 m CGVD28. Quinte Conservation’s setback for new development is a minimum 15 m from the 1:100-year flood plain of West Lake. In addition, Quinte Conservation requires for new development a minimum 6 m setback from the erosion hazard limit. As the property lies within the regulated area of West Lake (Ontario Regulation No. 41/24) the landowner will be required to obtain a permit prior to development (construction/filling/excavation/site grading) from Quinte Conservation (Quinte Conservation, 2024).

County of Prince Edward

The property is located within the jurisdiction of the County of Prince Edward. The County's Official Plan (July 8, 2021) describes the planning policies for the land use and their application to meet the specific needs of the communities. Schedule A-3: Land Use Designations of the County's Official Plan indicates the property has a land use of Shore Land.

The property is not within a natural core or linkage area identified in Schedule B of the County's Official Plan. No natural constraints are identified for the site and adjacent lands on Schedule C of the OP. Also, the property is within a groundwater recharge area identified in Schedule D of the County's Official Plan.

Development in the Official Plan is defined as the creation of new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act, but does not include activities that create or maintain infrastructure under an environmental process. Based on the definition of development. Section 3.1.5 Unmapped Natural Heritage Feature Policies applied. Policy 4 which states that *Permitted development proposals must be supported with an **Environmental Impacts Study (EIS)** in consultation with the MECP. This is to ensure water quality protection. The study will take into consideration the existing water quality of the water body, surface water run-off, impact and loading of phosphorus from septic systems, type of soils, stormwater management and nature of vegetation.*

The County's Official Plan Section 3.1.6 Constraint Area Policies, Steep Slopes indicates:

(1) Steep slopes (>25 % grade and a minimum 3 metres in elevation) and other escarpment features are part of the mosaic of natural features within the County, adding to its biodiversity and providing linkage functions for some species.

(2) Steep slopes are generally incompatible with development because of the difficulties in building on them. and because of the increased susceptibility to erosion that such development may cause.

(3) the protection of steep slopes and escarpments features will be encouraged by the County. The County will direct new development away from the areas identified as steep slopes. For major development, a specific analysis of how development activities within proximity of identified Steep Slope avoid or mitigate the impacts on those features will be required as part of the development review process.

The County of Prince Edward Comprehensive Zoning By-law 1816-2006 (October 23, 2006) establishes a land use designation of Rural 1 (RU1) where the tourist commercial uses are not permitted. Therefore, an amendment of the Zoning By-law will be required to change the land use from Rural 1 to Tourist Commercial. (See Figure 3. Land Use Designation).

4. Proposed Development

West Lake Lodge Ltd. is proposing to replace the use of the property from a trailer park to a Villas Resort. The redevelopment project will consist of twenty (20) 2-bedroom bungalow villas, one (1) guest amenity building; bike café and storage; porches, patios, docks, and an amenity deck; internal road, village parking, villa parking and office/café and dwelling parking; and landscape open space (including septic, sidewalks, landscape buffers and ex. driveway). The project proposed a single entrance to the property. The existing entrance in front of the existing dwelling will be converted into a pedestrian/cyclist pathway. The current dwelling will be converted to a building with multiple uses such as reception/office for the operation of the resort, a bike café and a dwelling unit. Also, a patio is proposed on the back of the dwelling. An additional storage building is proposed south of the existing dwelling. Figure 4 and Appendix B show the proposed Site Plan. The new development will occupy the area where the cottages and trailers were located. The existing forest area will be preserved; however, a walking trail has been made in this area. As development will be outside the setbacks from the flood plain and

the hazard limit, the shore vegetation will not be impacted. Based on the proposed configuration of the resort, some of the trees will be incorporated into the project. The septic disposal bed will be in the area covered with maintained grass. The internal road and parking areas are proposed to be surfaced with gravel.

There would be an increase in impervious areas due to the villas, amenity building, storage building, and patio.

The existing central dock (See photo 8) will be removed and replaced with a dock where the boat launch area is. A permit from Quinte Conservation will be required for this structure as it will be within the floodplain and hazard limit. No other structures or changes along the shoreline and adjacent riparian corridor are proposed.

Based on the results from the hydrogeological assessment performed for the property (Greer Galloway, 2024) the western well yield is sufficient to meet the water demand for the proposed development without causing effects in the neighbouring wells or natural features. The quality of the well water was found to be suitable as a potable water supply, though treatment will be required.

A large sewage disposal system (LSSDS) is proposed for treatment of the wastewater produced from the development. The LSSDS beds will be located on the northeast part of the property. To ensure sewage will not cause impacts to the water quality of West Lake, a tertiary treatment system is likely to be required.

Currently, there is not a storm water management system on the property. For the redevelopment, the storm water management brief (WSE Consulting, 2024) indicates that quantity control for the property is not required, and quality control will be provided through enhanced grass swales and lot level controls. Parking areas and driveways will be surfaced with gravel and the area around buildings and structures will be open space covered with grass and landscaping areas.

5. Study Approach

5.1 Study Area

The total area of the property is 3.9 ha. The study area for this EIS is the subject property and adjacent lands within 120 m radius of the property boundary. The study area does not include the area beyond the west boundary due to the presence of West Lake.

5.2 Background Information Review

The comprehensive desktop review included the following sources:

- Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF) Natural Heritage Information Centre (NHIC) geographic, species and natural areas information queries.
- Aquatic Species at Risk online Maps (Fisheries and Oceans Canada, 2022).
- Fish ON-Line (Ministry of Northern Development Natural Resources and Forestry) online mapping, 2022.
- Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature, 2022).
- Ontario Breeding Birds Atlas (OBBA) – First and Second Atlas, Birds Studies Canada.
- Atlas of the Mammals of Ontario (Dobbyn 1994).
- Geology, topography, hydrogeology, hydrology maps and reports.
- Existing aerial photography.
- County of Prince Edward Official Plan (July 8, 2021).
- County of Prince Edward Comprehensive Zoning By-law No. 1816-2006 (October 23, 2006).

5.2 Field Investigations

The natural features were evaluated through field investigations. Field investigations were carried out to determine the existing conditions of the natural features, document breeding birds and other wildlife, wildlife habitat, and determine the general characteristics of the study area. Sites visits were performed on June 15, July 11 and August 22, 2023, early in the morning between 7:30 am and 11:00 am, sunny, breezy and temperature above 20°C.

The following methodology was applied to evaluate the natural features:

5.3 Vegetation Community Mapping

Vegetation Communities were determined using a combination of aerial photography and field surveys. Aerial imagery allowed the delineation of distinct community boundaries and field assessments were used to collect data to classify each community type. The Ecological Land Classifications for Southern Ontario (Lee et al., 1998) and the 2008 list of vegetation types were used to classify the vegetation communities. All the vegetation communities within the study area were classified to at least the “ecosite” level. See Figure 5: Vegetation Communities.

5.4 Wildlife Surveys

Breeding bird surveys were performed during the site visits on June 15 and July 11, 2023. Breeding bird survey points were done early in the morning, breeze/ low wind speed, and absence of rain/fog as per the Ontario Breeding Bird Protocol (OBBA). The observations were performed for 5 minutes to determine the breeding evidence. Figure 5 shows the location of the survey points.

To determine the presence of suitable habitat for bats on the property, during the August site investigation the trees were inspected to determine presence of snags/cavities and/or urine stains and bat drops.

During the site investigations, all the observed species were documented, including birds, reptiles, amphibians, and mammals. Any sightings or signs (i.e. scat, tracks, vocalizations) indicating potential use of the site by wildlife was documented. Site assessments were performed from in the morning (7:30 am to 11:00 am) to observe wildlife, on warm days, and absence of rain.

5.5 Species at Risk

Species at Risk (SAR) included those species listed in the SARO and Schedule 1 of the SARA. An assessment was conducted to determine presence and potential habitat for SAR in the study area. An initial desktop review for potential Species at Risk (SAR) was conducted prior to the site investigations and during the preparation of the EIS report. The MNDMNRF online NHIC map was consulted to identify the SAR likely to be present in the property and adjacent land. The DFO aquatic species at risk mapping tool was consulted. Available information was reviewed for additional records of SAR. No species-specific surveys were conducted for SAR.

Habitat for turtles is not found in the property or immediate area adjacent to it; however, due to the sandy soils present in the property, the presence of turtle nesting (evidence of digging/trial nests and depredated nests) was assessed by inspecting the areas suitable for nesting.

6. Biophysical Features

6.1 Geology and Soils

The property is part of the Prince Edward Peninsula (Chapman and Putnam 1984). This region is separated from the mainland by the Bay of Quinte and is characterized by low relief and shallow soils. The geology consists of upper Middle Ordovician rocks that unconformably overlie Precambrian basement rocks of the Grenville Province. Overburden thickness is variable but generally thin over large portions of the County.

The surficial physiography of the area has resulted primarily from glacial activity that took place during the Late Wisconsinan Substage of the Quaternary period (circa 23,000 to 10,000 BP). During this time, there were repeated advances and retreats of glacial ice lobes removing pre-existing overburden and leaving the bedrock surface exposed or covered by only a thin mantle of unconsolidated sandy loam-textured material overlying Paleozoic bedrock (OGS, 2011).

The bedrock consists of limestones and shales laid down over older Precambrian-age rock beginning in the middle Ordovician (approximately 460 million years ago) as part of a continent-wide marine transgression. This transgression (a period of increasing sea levels) deposited, in order, the Shadow Lake, Gull River, Bobcaygeon, Verulam and Lindsay Formations (Armstrong and Carter, 2010). The Lindsay Formation is the uppermost bedrock unit beneath the property. It consists mainly of medium brown and grey, finely crystalline limestone, uniformly bedded with subequal thickness of pale to medium brown shale. These strata dip shallowly to the west (Carson, 1980). The property is within the upper member of the Lindsay Formation. Well records in the vicinity of the subject property indicate that bedrock occurs at depths of between 4.3 m and 14.6 m, with a median depth to bedrock of 11.3 m.

The Soils Map of Prince Edward County, Ontario, Report No. 10 (Richards & Morwick, 1948), indicates that the property consists of soils of the Brighton gravelly sand series containing in the surface stones and cobbles and underlying material composed of gravel and cobbles. The soils consist of well drained brown sand to sandy loam with stones. Test pit was excavated as part of the preliminary report to determine the capability of the property to receive and treat sewage from the proposed development. Test pit excavated on August 9, 2022 was 1.5 m below surface. No groundwater or bedrock was encountered. The soil found was described as fine to medium grained sand.

6.2 Topography and Drainage

The topography in the area is undulating to slightly rolling. Elevations in the property were determined using Ontario Base Mapping (MNRF) and the survey completed for the property (June 15, 2022), ranging from 75.5 to 82.5 metres Above Sea Level (mASL). The highest elevation is reported on County Road No. 12 and the lowest along the shoreline. Changes in topography along the property are gradual until close to the shoreline where changes in elevation are pronounced with steep slope along the shore. The property from the entrance at County Road No. 12 gradually slopes down from 82.5 mASL to 80.0 mASL. From this elevation to the wave up-rush limit (75.7 m), a steep slope is present. In the south part, the slope is almost vertical. Moderate slope is present where the existing boat launch ramp is located.

There are not wetlands or watercourse in or adjacent to the property. Following topography, surface drainage is to the west toward West Lake. The soil in the property is gravelly sandy loam with good drainage. Natural drainage occurs as most of the property is covered with grass and vegetation allowing infiltration of precipitation.

6.3 Hydrology and Hydrogeology

The property is adjacent to West Lake. There are no creeks or wetlands on or close to the property. Unevaluated wetlands are mapped approximately 380 m east from the property line. The West Lake Provincially Significant Wetland is located approximately 1.0 km north of the property and the Sandbanks Provincial Park ANSI (Life Science) is located approximately 1.1 km south/southwest of the property.

In the County of Prince Edward, the groundwater flow follows the land topography flowing outwards from the flat land toward the shorelines. Recharge in the area occurs due to the separation between the ground surface and the water table and to the presence of joints and fractures beneath shallow soils (Prince Edward County, 2012). In the area where the property is located, the groundwater flow direction is toward West Lake. Well records on a 0.3 km radius suggest the groundwater is encountered mostly within the overburden, with a median well yield of 26.5 L/min. The lake is also a source of potable water for the area. **The property is located outside of a Wellhead Protection Area (QRCA, 2023).**

6.4 Vegetation Communities

The property is located within the Picton Ecodistrict 6E-15 where the landscape is dominated by pasture and cropland. The vegetation in this district is diverse with deciduous forests comprise of sugar maple (*Acer saccharum*) and American beech (*Fagus grandifolia*). Associates include oak species, poplar species, paper birch (*Betula papyrifera*), ash species, American basswood (*Tilia americana*), butternut (*Juglans cinerea*), trembling aspen (*Populus tremuloides*), and large-toothed aspen (*Populus grandidentata*). In wetter sites red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), American elm (*Thuja occidentalis*), yellow birch (*Betula alleghaniensis*), black ash (*Fraxinus nigra*), and green ash (*Fraxinus pennsylvanica*) are common (Wester et al., 2018).

In general, the trees observed in the property within the different vegetation communities are in good to fair condition except for the ash trees which were observed dead or highly impacted by the emerald ash borer (EAB). Most of the trees for the other species identified are mature more than 10 m tall with small trees represented by individuals of Scots pine and young trees present mainly adjacent to the shoreline on the steep slope. In February 2024, dead trees were removed from the property.

Vegetation as hedgerow was found north and south of the property, along the shore and around the cottages/trailers, the dwelling and other structures (Photo 9 and 10).

Hedgerow (H) vegetation was found in the central part of the property where most of the cottages/trailers and the dwelling were located. Another hedgerow area was found south of the property between County Road No. 12 and the Cultural Woodland (Photo 11). The width of the hedgerow vegetation varied from a single individual to approximately 14 m. Trees, shrubs and herbaceous species were present in the hedgerows. Some areas under the trees were covered with maintained grass only. Tree species observed included Norway spruce (*Acer platanoides*), Scots pine (*Pinus sylvestris*), balsam poplar (*Populus balsamifera*), eastern white pine (*Pinus strobus*), black cherry (*Prunus serotina*), sugar maple (*Acer saccharum*), white ash (*Fraxinus americana*), eastern white cedar (*Thuja occidentalis*), black walnut (*Juglans nigra*), white spruce (*Picea glauca*), Manitoba maple (*Acer negundo*), and American elm (*Ulmus americana*). Shrub species include common lilac (*Syringa vulgaris*), white mulberry (*Morus alba*), common buckthorn (*Rhamnus cathartica*), European mountain ash seedlings (*Sorbus aucuparia*), and ornamental species. Herbaceous include common motherwort (*Leonurus cardiaca*), Canada goldenrod (*Solidago canadensis*), harlequin iris (*Iris versicolor*), wild carrot (*Daucus carota*), wormseed mustard (*Erysimum cheiranthoides*), common helleborine (*Epipactis helleborine*), peony (*Paeonia* sp.), star-flowered Solomon's seal (*Maianthemum stellatum*), broadleaf enchanter's nightshade (*Circaea lutetiana*), creeping bellflower (*Campanula rapunculoides*), yellow evening primrose (*Oenothera biennis*), bladder campion (*Silene vulgaris*), dame's rocket (*Hesperis matronalis*), creeping Charlie (*Glechoma hederacea*), riverbank grape (*Vitis riparia*), Virginia creeper (*Parthenocissus quinquefolia*), mosses, and grasses.

On February 16th under QC permit No. No. REG0394-2023 dated February 16, 2024, some dead trees, shrubs and herbaceous species were removed from the hedgerow located in the central part of the property.

Four (4) vegetation communities were identified in the property (Figure 5: Vegetation Communities). A description of each community is included below. A list of the plant species identified at the property is included in Appendix C.

SHTM1 – Mineral Treed Shoreline

This community is found covering the shore from the shoreline to the top of the slope (Photo 12). It is composed of native and non-native trees, shrubs and herbaceous species. Trees found are mainly mature species which include black willow (*Salix nigra*), eastern cottonwood (*Populus deltoides*), white birch (*Betula papyrifera*), eastern white cedar, green ash (*Fraxinus pennsylvanica*), sugar maple, Norway maple (*Acer platanoides*), red oak (*Quercus rubra*), basswood (*Tilia americana*), American elm, and littleleaf linden (*Tilia cordata*). Shrub species include chokecherry (*Prunus virginiana*), green ash saplings, and common buckthorn. Herbaceous species include silverweed (*Potentilla anserina*), garlic mustard (*Alliaria petiolata*), greater celandine (*Chelidonium majus*), common dandelion (*Taraxacum officinale*), wild black currant (*Ribes americanum*), hairy Solomon's seal (*Polygonatum pubescens*), herb Robert (*Geranium robertianum*), cleavers (*Galium aparine*), yellow wood-sorrel (*Oxalis stricta*), Canada goldenrod, great mullein (*Verbascum thapsus*), common red raspberry (*Rubus idaeus*), oak seedlings, common buckthorn seedlings, poison ivy (*Toxicodendron radicans*), bristly crowfoot (*Ranunculus pensylvanicus*), white campion (*Silene latifolia*), common milkweed (*Asclepias syriaca*), early meadow-rue (*Thalictrum dioicum*), harlequin iris, Philadelphia fleabane (*Erigeron philadelphicus*), peony, annual sowthistle (*Sonchus oleraceus*), butter-and-eggs (*Linaria vulgaris*), black medic (*Medicago lupulina*), wild teasel (*Dipsacus fullonum*), spotted touch-me-not (*Impatiens capensis*), false sunflower (*Heliopsis helianthoides*), pale smartweed (*Persicaria lapathifolia*), wild mint (*Mentha arvensis*), Canada thistle (*Cirsium arvense*), bitter nightshade (*Solanum dulcamara*), hedge bindweed (*Calystegia sepium*), creeping Charlie, riverbank grape, Virginia creeper, sedges, mosses, and grasses.

FOD6 – Fresh – Moist Silver Maple Deciduous Forest

This community is found south of the property (Photo 13). It is impacted as it is surrounded by residential development and County Road No. 12. The area adjacent to it has been cleared and is in the process of recovery. The ground in the forest is densely covered with grass and other herbaceous species. This community is not a swamp, the ground was observed dry during the site visits. The shrub layer is absent. It is mainly covered with mature silver maple trees. Herbaceous species include garlic mustard, common dandelion, poison ivy, greater celandine, cleavers, tall buttercup (*Ranunculus acris*), bitter nightshade, periwinkle (*Vinca minor*), orchard grass (*Dactylis glomerata*), smooth brome (*Bromus inermis*), common buckthorn seedlings, Norway maple seedlings, motherwort, common burdock, ornamental species, and Virginia creeper.

On February 16th under QC permit No. No. REG0394-2023 dated February 16, 2024, a walking trail made of woods chips obtained from the trees cut was made within this vegetation community.

CUW1 – Cultural Woodland

This community is found south of the property adjacent to the silver maple forest (Photo 14). It is composed of black locust (*Robinia pseudoacacia*), black walnut, and white spruce. The shrub layer is absent. The ground is densely covered with the same species as the silver maple forest.

MEMM3 – Dry – Fresh Mixed Meadow

Meadow vegetation was found in a small area in the southeast corner of the property within the forest. This area is in a stage of recovery as seedlings of trees were observed. Species found in this community include orchard grass, smooth brome, common milkweed, red clover (*Trifolium pratense*), chicory (*Cichorium intybus*),

king devil (*Hieracium caespitosum*), alfalfa (*Medicago sativa*), dog-strangling vine (*Vicetoxicum rossicum*), common yellow wood-sorrel, poison ivy, goat's-beard (*Tragopodon dubius*), ribgrass (*Plantago lanceolata*), common ragweed (*Ambrosia artemisiifolia*), curly dock (*Rumex crispus*), turkeyfoot (*Andropogon gerardii*), green foxtail (*Setaria viridis*), white heath aster (*Aster ericoides*), hedge bindweed, and summer grape (*Vitis aestivalis*).

During the site investigations two additional areas were observed with meadow vegetation; the largest area was where the septic system is proposed and the other between the driveway and the forest at the entrance of the property. The property owner indicated that vegetation in these areas is cut regularly. Therefore, these areas were not mapped.

6.5 Aquatic Habitat

The property is adjacent to West Lake. West Lake is an inland lake located on the north shores of Lake Ontario, west of Sandbanks Provincial Park. It was formed by baymouth sandbars separating West Lake from Lake Ontario (County of Prince Edward, 2012). According to the Fish ON-Line mapping system, the lake has an area of 1,534.4 ha with a maximum depth of 7.6 m and an average depth of about 2.7 m. West Lake is the largest lake in Prince Edward County. West Lake is described as a large lagoon that is connected to Lake Ontario by the navigation channel in Wellington. The lake currently has a significant development along the shoreline which includes active farms along the northern shore and dense residential, cottage and resort commercial development along the east and west shores. Therefore, the lake is vulnerable to pollution and eutrophication with septic systems and agricultural runoff as the issues of concern to water quality (Quinte Conservation, 2021).

Fish species documented to be found in the lake include largemouth bass (*Micropterus salmoides*), northern pike (*Esox lucius*), smallmouth bass (*Micropterus dolomieu*), and walleye (*Sander vitreus*) (Fish ON-Line, 2023). There are several creeks and streams that flow into West Lake as well as natural coastal wetlands. The largest creek discharging into the lake is the Bloomfield Creek. The Sandbanks Provincial Park is along the south and west sides of the lake. It features extensive sandy beaches and dunes. The northeastern shore of West Lake is recognized as a Provincially Significant Wetland.

The property has 263.2 m of frontage on West Lake. Beach area is limited as a steep slope is close to the area impacted by waves. The area between the edge of the water and the edge of the slope is covered with sand, gravel, cobbles, and some boulders (Photo 16). Some concrete blocks and mussel shells were observed. Most of the area is covered with vegetation. A lot of garbage was observed on the shore. The steep slope was covered with vegetation, but erosion is present. Tree roots were observed exposed due to erosion. The boat launch area close to the water was observed to be eroded, possibly due to wind, waves, and runoff from the upper land. Two docks were observed in the water, and several were on the shore.

The shoreline was observed to be covered with organic debris and foam. Some rocks were covered with algae. Minimal aquatic vegetation was observed. Fish were not observed. A Canada goose was observed swimming close to the shore and a great blue heron was observed at the edge of the water.

6.6 Terrestrial Wildlife

6.6.1 Breeding Birds

Birds observed during the site visits included species commonly found close to urban areas such as mourning dove (*Zenaidura macroura*), American robin (*Turdus migratorius*), house wren (*Troglodytes eadon*), blue jay (*Cyanocitta cristata*), American crow (*Corvus brachyrhynchos*), chipping sparrow (*Spizella passerina*), song sparrow (*Melospiza melodia*), northern cardinal (*Cardinalis cardinalis*), gray catbird (*Dumetella carolinensis*), European starling (*Sturnus vulgaris*), red-eyed vireo (*Vireo olivaceus*), Baltimore oriole (*Icterus galbula*), great-crested flycatcher (*Myiarchus crinitus*), northern flicker (*Colaptes auratus*), belted kingfisher (*Megaceryle*

alcyon), barn swallow (*Hirundo rustica*), black-capped chickadee (*Poecile atricapillus*), American goldfinch (*Carduelis tristis*), cedar waxwing (*Bobyrcilla cedrorum*), eastern phoebe (*Sayornis phoebe*), hairy woodpecker (*Dryobates villosus*), osprey (*Pandion haliaetus*), Bobolink (*Dolichonyx iryzivorus*), and waterfowls such as Canada goose (*Branta canadensis*), and great blue heron (*Ardea herodias*). A list of wildlife species documented during the site investigations and the breeding evidence is included in Appendix D.

6.6.2 Mammals

Eastern gray squirrels (*Sciurus carolinensis*), eastern chipmunks (*Tamias striatus*) were observed in the property. The smell of a striped skunk (*Mephitis mephitis*) was detected, and the maintenance person indicated that a skunk was living under a trailer. No other mammals were observed.

The trees in the property were inspected for presence of cavities and evidence of bats using them as a roosting habitat. Few trees were found to have cavities that can be used by squirrels, woodpeckers and potentially bats. No signs of bats using the cavities were found. In February 2024 dead trees were cut which was outside the roosting season.

6.6.3 Reptiles and Amphibians

No turtles or snakes or amphibians were observed during the site visits. **No evidence of turtle nesting was found during the site investigations.**

6.6.4 Species at Risk

General reports were obtained from the NHIC database regarding records of SAR within the Study Area. Additional records of SAR were obtained from the sources of information provided by the MECP. A list of SAR records is included in the following Table.

Table 1: Potential Endangered and Threatened Species within the Study Area

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
Birds					
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened	Threatened	Low	Habitat includes hayfields, pastures, fallow or abandoned fields, meadows, and tall grass prairie remnants, savannahs and alvar grasslands (COSEWIC, 2010). A female was observed during the August site visit. However, suitable habitat is not present as the meadow vegetation covers a small area and it is regularly maintained.
Bank Swallow	<i>Riparia riparia</i>	Threatened	Threatened	Low	Bank Swallows nest in burrows in natural and man-made settings, wherever there are silt or sand deposits. Nests are often along riverbanks and in aggregates pits (COSEWIC, 2013a). Suitable habitat is not found on the property.
Barn Swallow	<i>Hirundo rustica</i>	Threatened	Special Concern	Low	The natural habitat of Barn Swallow includes caves, holes, crevices and ledges in cliff faces. Also, they build the nest around barns and other farm outbuildings, under bridges, wharves, boat-houses, and culverts (COSEWIC, 2011a). Suitable habitat is not found on

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					the property. The barn and sheds are covered; therefore, they do not provide nesting habitat for Barn Swallow.
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened	Threatened	Low	Habitat includes hayfields, pastures, fallow or abandoned fields, meadows, and tall grass prairie remnants, savannahs and alvar grasslands (COSEWIC, 2011b). Suitable habitat for Eastern Meadowlark is not found on the property.
Grasshopper Sparrow	<i>Ammodramus savannarum pratensis</i>	Special Concern	Special Concern	Low	Eastern Grasshopper Sparrow typically breeds in large human-created grasslands (≥ 5 ha), such as pastures and hayfields, and natural prairies such as alvars, characterized by well-drained, often poor dry soil dominated by relatively low, sparse perennial herbaceous vegetation (COSEWIC, 2013b). Suitable habitat is not found on the property.
Eastern Wood-pewee	<i>Contopus virens</i>	Special Concern	Special Concern	Low-Medium	The Eastern Wood-Pewee prefers mature and intermediate-age deciduous and mixed forest having an open understorey (COSEWIC, 2012a). Suitable habitat is found on the property.
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Low	Canada Warbler is found in wide variety of forest types but is common in wet, mixed deciduous-coniferous forest types having a well-developed shrub layer, often as a result of canopy gaps and suitable drainage and soil moisture conditions. This species can be found in wet red maple stands, cedar and spruce swamps, aspen stands, mixed aspen/birch/fir forests, beaver ponds, brushy slopes, riparian woodlands, and dense forested ravines (COSEWIC, 2020). Suitable habitat is not found on the property.
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Endangered	Endangered	Low	Suitable nesting areas include open deciduous forest with little understory and a high density of dead trees used for nesting and perching. They are found in a variety of natural and disturbed areas (COSEWIC, 2007). Suitable habitat is not present on the property.
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Threatened	Threatened	Low	The whip-poor-will uses forested areas for roosting and nesting. Nesting areas include most types of forest at early stages of succession or edges of forests with a dense tree cover but showing similar structure at the ground level, rock or sand barrens with scattered trees, savannahs, old burns, as well as sparse conifer plantations. Also, the species can nest in cultivated fields, orchards, urban parks, mine tailings and along gravel roads and railways (Environment Canada,

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					2015). Suitable habitat is not found on the property.
Wood Thrush	<i>Hylocichla mustelina</i>	Threatened	Special Concern	Low	Wood Thrush nests mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understorey layers. The species prefers large forest mosaics and small forest fragments (COSEWIC, 2012b). Suitable habitat is not found on the property.
Black Tern	<i>Clodinius niger</i>	No Status	Special Concern	Low	Prefer habitat for Black Tern are limestone-based, rich, freshwater marshes with an abundance of emergent vegetation along rivers, lakes or inland locations. It prefers wetland in excess of 20 ha in size with an equal portion of open water and dense emergent vegetation (Peter S.B., 2012). Suitable habitat for Black Tern is not found on the property.
Least Bittern	<i>Ixobrychus exilis</i>	Threatened	Threatened	Low	Least Bitterns are found in a variety of wetland habitats, but their preferred habitat is cattail marshes with a mix of open pools and channels. Preferred habitat consists of robust-emergent-dominated but interspersed wetlands free of purple Loosestrife and European Common Red, with limited urban land use and high proportion of wetlands in the surrounding landscape. The presence of stands of dense vegetation is essential for nesting because the nests of least Bittern sit on platforms of stiff stems (COSEWIC, 2009a). Habitat is not present in the aquatic habitat adjacent to the property.
Piping Plover	<i>Charadrius melodus circumcinctus</i>	Endangered	Endangered	Low	Nesting habitat for this species is found on wide sandy beaches with little vegetation and a mix of substrates such as pebbles, gravel, shells, and sticks of freshwater dune formations on barrier islands, peninsulas or shorelines of large lakes (COSEWIC, 2013c). Suitable habitat for this species is not found on the property.
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Not at Risk	Special Concern	Low	The bald Eagle nest in a variety of habitats and forest types near major lakes or rivers where they catch fish. They nest in large trees such as pines and poplars (Armstrong, 2014). Suitable habitat is not found on the property.

Reptiles and Amphibians

Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern	Special Concern	Low-Medium	Preferred habitat is slow-moving water with soft mud bottom and dense aquatic vegetation. Nesting takes place on sand and gravel banks along waterways, including artificial dam and railways embankments (COSEWIC, 2008a). Suitable nesting habitat for this species is
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Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					found on the property.
Blanding's Turtle	<i>Emydoidea blandingii</i>	Endangered	Threatened	Low-Medium	Preferred habitat is found in shallow water in large clear water eutrophic wetlands and shallow lakes with lots of submergent and emergent vegetation. Females nest in a variety of substrates including sands, organic soil, gravel, cobblestone, and soil-filled crevices of rock outcrops. Adults and juveniles overwinter in a variety of water bodies that maintain pools averaging about 1 m in depth; however, hatching turtles hibernate on land during their first winter (COSEWIC, 2016a). Suitable nesting habitat is found on the property.
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	Special Concern	No Status	Low-Medium	Midland painted turtles prefer habitat include slow moving, relatively shallow and well-vegetated wetlands and waterbodies with abundant basking sites and organic substrate. The species is semi-tolerant of human-altered landscapes and may occasionally be found occupying urban ponds and lands subject to anthropogenic disturbance (e.g., farm ponds, impoundments, water treatment facilities) (COSEWIC, 2018a). Suitable nesting habitat for this species is found on the property.
Northern Map Turtle	<i>Graptemys geographica</i>	Special Concern	Special Concern	Low	Preferred habitat is found in rivers and lakes where it basks on emergent rocks, banks, logs, and fallen trees throughout the active season. It prefers shallow, soft-bottomed aquatic habitats with exposed objects for basking near natural shorelines. In the winter, the turtles typically hibernate on the bottom of deep, slow-moving sections of rivers or lakes (COSEWIC, 2012c). Suitable habitat is not found on the property.
Eastern Musk Turtle	<i>Sternotherus odoratus</i>	Special Concern	Special Concern	Low	Habitats include littoral zones of waterways such as slow to no current, soft bottom rivers, lakes, bays, streams, ponds, canals, and swamps. The preferred habitat contains floating or submerged vegetation and water that is less than 2 meters deep COSEWIC, 2012d). Suitable habitat for this species is not found on the property or in the water adjacent to the property.
Eastern Milksnake	<i>Lampropeltis traingulum</i>	Special Concern	No Status	Low-Medium	Habitats include areas with suitable coverage that range from prairies to meadows, pastures, hayfields, rocky outcrops, rocky hillsides and forests (COSEWIC, 2014). This species was not observed; however, potentially suitable habitat is present within the forest and adjacent properties.

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
Western Chorus Frog	<i>Pseudacris triseriata</i>	Threatened	No Status	Low	The Western Chorus Frog requires both terrestrial and aquatic habitats in close proximity. Terrestrial habitat consists mostly of humid prairie, moist woods, meadows, marshes, bottomland swaps, and temporary ponds in open county. For reproduction and tadpole development, this species requires seasonally dry, temporary ponds that are devoid of predators such as fish. The western chorus frog overwinters underground or under surface cover, such as fallen logs (COSEWIC, 2008b). Suitable habitat is not found on the property.

Mammals

Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Endangered	Low	Hibernation roosts for the three species are found in caves, hollow trees, abandoned buildings, and abandoned mines. Most species choose maternity roosts in woodlands with appropriate tree cavities, caves, crevices, under loose bark, and cracks in cliffs. Little Brown Myotis is found in buildings and rocky habitats (COSEWIC, 2013d). Potential habitat for these bat species is not found on the property.
Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Low	
Tri-coloured Bat	<i>Perimyotis subflavus</i>	Endangered	Endangered	Low	

Insects

Monarch	<i>Danaus plexippus</i>	Endangered	Special Concern	High	Caterpillars feed on milkweed plants found in meadows and open areas. Adult butterflies are found in diverse habitats where they feed on nectar from a variety of wildflowers (COSEWIC, 2016b). Monarch butterflies were observed in the meadow vegetation and along the edges of the hedgerows.
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Plants

Swamp Rose Mallow	<i>Hibiscus moscheutos</i>	Special Concern	Special Concern	Low	The Swamp Rose-mallow grows on organic or clay soils in open, coastal marshes. Sometimes is found in open wet woods, thickets and drainage ditches Environment Canada, 2013). Suitable habitat is not found on the property or in the water adjacent to the property.
Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	Low	Preferred habitat is in neutral to calcareous soils, with a pH that ranges from 5.5 to 8. Often found in areas with rich well-drained mesic loams. Suitable habitat includes floodplains, streambanks, terraces, and ravine slopes COSEWIC, 2017). Butternuts were not observed on the property and/or in the immediate area adjacent to the property.
Golden-eyed Lichen	<i>Teloschistes chrysophthalmus</i>	Endangered	Endangered	Low	This epiphytic twig and branch specialist species required well-lit, humid environments near shorelines. It is found

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					in branches and twigs of several host tree species. It grows in coastal deciduous forest of sugar maple, eastern hop-hornbeam and red oak growing over limestone bedrock (COSEWIC, 2016c). Suitable habitat for this species is not found on the property.
Black Ash	<i>Fraxinus nigra</i>	Not Listed	Endangered	Low	Black ash is predominantly a wetland species of swamps, floodplains and fens. It has an intermediate light requirement and a tendency toward greater abundance in more alkaline sites. Most sites in which it is dominant are flood prone, where its high tolerance of seasonal flooding appears to offer a competitive advantage. Black ash also is present in upland forests, but it is less abundant than in wet areas. The Black ash is threatened by the introduced emerald ash borer (EAB), an Asian wood-boring beetle that reached southwestern Ontario in 1992 (COSEWIC, 2018b). Suitable habitat for Black Ash is not found on the property. Black Ash was not observed along the shoreline or in adjacent land.

Fish

Eastern Sand Darter (West Lake population)	<i>Ammocrypta pellucida</i>	No Status	Endangered	Low	This species prefers sand-bottomed areas in streams and rivers, and sandy shoals in lakes. It has been found in waters that are clear, tea-coloured and high turbidity but high turbidity can have negative effects in the habitat preference (COSEWIC, 2009b). Suitable habitat for Eastern Sand Darter is not found in West Lake in the nearshore area adjacent to the property. The substrate nearshore is composed of sand and gravel.
Grass Pickerel	<i>Esox americanus vermiculatus</i>	Special Concern	Special Concern	Low	Suitable habitat for this species is found in clear to tea coloured warm water, slow moving streams, isolated pools of streams, and shallow bays of lakes usually with mud bottoms. It is always associated with extensive submergent and emergent aquatic vegetation (COSEWIC, 2005). Suitable habitat is not found on the property.
Pugnose Shiner	<i>Notropis anogenus</i>	Threatened	Threatened	Low	Pugnose Shiner spawn in densely-vegetated, shallow water (2 m maximum depth), with sand/silt substrate and some gravel. Spawning occurs in water temperatures between 21 and 29 °C (June). They are found in clear, heavily-vegetated lakes and embayments (DFO, 2010). Suitable habitat for this species is

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					not found on the property or area adjacent of the lake.
Bridle Shiner	<i>Notropis bifrenatus</i>	Special Concern	Special Concern	Low	The Bridle Shiner is a warm water fish found in quite areas of streams and occasionally in lakes. It prefers substrate consisting of soft bottom of sand silt and detritus, colourless or moderately stained water and avoids turbid areas (COSEWIC, 2013e). Suitable habitat for this species is not found on the property or in the Lake adjacent to the property.

Review of Fisheries and Oceans Canada for Aquatic Species at Risk indicate the presence of four species: eastern sand darter (*Ammocrypta pellucida*) – Endangered (ESA), grass pickerel (*Esox americanus vermiculatus*) – Special Concern (ESA and SARA), pugnose shiner (*Notropis anogenus*) – Threatened (ESA and SARA), and bridle shiner (*Notropis bifrenatus*) - Special Concern (ESA and SARA). The in-water proposed development is to install a central dock where the boat launch ramp is. Also, suitable habitat for these species is not found along the beach. Aquatic vegetation is not present. Most of the shoreline is shallow several metres from shore and covered with sand and gravel. Therefore, impacts to aquatic SAR and SAR habitat is considered low as the only work planned in water is to install a dock in the same area where a dock was observed.

During the June and July site visits, Bobolink and Eastern Meadowlark were not observed in the meadow vegetation. In the August site visit a bobolink female was observed foraging. It was determined that the meadow vegetation provides habitat for grassland species. However, the owner indicated that the vegetation in this area is regularly cut. The meadow vegetation south of the property is too small; therefore, habitat for Bobolink and Eastern Meadowlark is not present.

Barn Swallows were observed flying over the meadow vegetation. Barn Swallow is listed as a Special Concern species under the Ontario’s Endangered Species Act (2007) and Threatened under Schedule 1 of the SARA. Natural habitat of Barn Swallow includes caves, holes, crevices and ledges in cliff faces but anthropogenic features are often used in farmlands, rural, suburban areas, and villages where they build the nest around many kinds of structures, especially barns and other farm outbuildings, under bridges, wharves, boat-houses, and culverts. Barn swallows were observed flying (foraging) over the meadow vegetation. The barn and sheds in the property were covered; therefore, they do not provide habitat to Barn Swallow. Structures and barns found in adjacent lands may provide habitat to the species.

Monarch Butterflies were observed in the meadow vegetation and along the edges of the hedgerow vegetation. Milkweed plants are present, but caterpillars were not observed. The Monarch Butterfly is listed as a species of Special Concern under Ontario’s Endangered Species Act (2007) and the SARA. Monarchs use three different types of habitats. Caterpillars feed on milkweed plants found in meadows and open areas. Adult butterflies are found in diverse habitats where they feed on nectar from a variety of wildflowers (COSEWIC, 2016b). Wildflowers are present around the property boundaries; therefore, there is potential for adult butterflies to be disturbed/affected during future construction work. Measures should be applied to prevent damage to adult butterflies or caterpillars.

Five turtle species were reported to be found in the area; however, habitat for these species is not found on the property or in the portion of West Lake adjacent to the property. Soils in the property are composed of sandy loam. Potential suitable nesting habitat for turtles is found on the road that allows access to the trailers. The

area beside the roads was observed covered with grass. No signs of turtle nests were found during the site investigations. The maintenance person living in the residence indicated that he had never seen a turtle in the property. The nearshore area does not offer nesting habitat as it is well vegetated covered with trees. The gravel road is not a suitable habitat for turtles as the gravel is compacted by constant traffic. Also, the area along the beach is steep with the boat launch area as the only area to access the property. As the trailers and cottages have been removed and the area graded, it is possible that turtles nest in the open areas. Inspection of open areas should be carried out prior to any construction, if construction is planned during the turtle nesting season, to ensure turtles are not harmed.

There is the potential to find eastern milksnakes. This species was not observed during the site investigations. Measures should be applied to avoid harm to this species if present.

The trees within the property potentially to be impacted were inspected. Few trees were found to have cavities that can be used by squirrels, woodpeckers and potentially bats. The trees were inspected for signs of bats using them, but no signs were observed. If additional removal of trees is necessary, it should be outside the bat maternity period. Trees to be removed should be inspected prior to removal to ensure no wildlife is using them.

Per Ontario Regulation 6/24, the prohibitions in clause 9(1)(a) of the ESA (against killing, harming, harassing, capturing or taking) apply to any living Black Ash tree with a diameter at the breast height (DBH) of 8 cm or more that are located in areas of the province identified in schedule 1 of Ontario Regulation 6/24, unless a report prepared by a qualified professional identifies the tree as “unhealthy” in accordance with the regulation. The property is in the areas listed in Schedule 1. However, suitable habitat for Black Ash is not found on the property and Black Ash was not observed along the shoreline or in adjacent land. As Black ash is not in the property trees were not observed within 30 m from the property line, a Black Ash Assessment Report is not required.

Property boat owners should learn to identify invasive aquatic species, capture them and properly dispose of them. Boats and other aquatic structures should be regularly cleaned to avoid the spread of invasive species.

7. Discussion

7.1 Significant Natural Heritage Features and Functions

On Schedule B of the Prince Edward County Official Plan (2021) Woodlands within the County that are larger than 40 hectares in size are identified. These Woodlands enhance scenic beauty, they provide shelter against wind, and wind-induced soil erosion, they have a moderating influence on climate, they improve the quality of air and water, and they contribute significantly to the amount, quality and diversity of wildlife habitat, particularly the provision of breeding and foraging habitat for many of the bird species which migrate to, or through, Prince Edward County.

The property is not within an Area of Natural and Scientific Interest (ANSI), provincially significant wetland, significant habitat for endangered or threatened species at risk, and significant wildlife habitat. The closest PSW is to the north. Sandbanks Provincial Park is located south and west of the property. There is a patch of forest in the south part of the property. It is approximately 0.7 ha. Development in this area is not proposed except for a walking trail which was already made using the wood chips obtained from the trees cut. The area is surrounded by County Road No. 12, landscaping area and private residential properties. It is impacted due to anthropogenic activities around it. It is composed of native and non-native species; however, it is important as provide habitat to wildlife, contain native species and provide hydrological functions. It is important as it is the only piece of forest in the area. Impacts to the forest are not expected. According to the information provided, dead trees in the hedgerows have been removed. The location of the villas has been modified from their original proposed location to avoid removal of trees.

The property is not located within an area identified as significant woodland or woodland greater than 40 ha in size. The forest in the property is small approximately 0.7 ha, too small to provide interior habitat and it is composed of native and non-native species.

In February 2024 vegetation in the lower layers was removed affecting the structure of the community and reducing the probability for Eastern Wood-pewee to use the forest. The forest is not considered a candidate for significant woodland and significant wildlife habitat.

Areas in West Lake provide habitat to SAR species. Fish/ SAR Fish were not observed during the site visits; however, fish can be foraging in the nearshore area adjacent to the property. The nearshore area does not provide nesting habitat to fish.

7.2 Regulated Areas

Quinte Conservation regulates activities in natural and hazardous areas subject to processes such as flooding, erosion, dynamic beaches, or unstable soil or bedrock. In addition, development within Environmental Protection Zones is regulated by Quinte Conservation in partnership with Prince Edward County. Schedule C: Constraint Areas of the County's Official Plan show presence of steep slopes greater than 25 % and greater than 3 m change in elevation. Quinte Conservation provided the hazard limit for the area and indicated that a 6 m is applied from the hazard limit. All the proposed development is located outside the 6 m setback from the hazard limit and the 15 m setback from the 100-year flood plain except for a central dock that will be installed where the boat launch ramp is located. A permit from Quinte Region Conservation Authority will be required.

7.2.1 Steep Slopes

According to the Watershed (O. Reg. 319/09) Policy Manual (May 2019), Section 3.7.9, paragraph d) For slopes, bluffs, and embankments, a minimum 30 metre setback shall be applied horizontally from the top of the bank for new development. For slopes and embankments which exist above a proposed site for development, a minimum 30 metre setback from the stable toe of the slope will be applied. A geotechnical review will be requested to support any reduction in this setback.

The property is relatively flat sloping down toward West Lake. From the entrance to close to the lake, elevations vary from 82.5 mASL to 80.0 mASL. Close to the lake, a steep slope is present with the steepest area located in the south part of the property where the slope is almost vertical. The change of elevation is from 80 mASL to 75.7 mASL (wave-up rush limit) indicating a slope greater than 20%. The only area where the slope is less than 20 % is the boat launch ramp which has a moderate slope. The steep area close to the lake is composed of sandy sediment with gravel, cobbles and boulders. Large boulders were observed on top of the slope on the south side. As the steep slope area is close to the water, it is exposed to the action of the waves and winds resulting in erosion. The slope is well vegetated which reduces the potential for erosion.

The proposed redevelopment will not be located on steep slopes greater than 25 % grade. The conservation Authority provided the data for the hazard limit, and it has established a setback of 6 m from the hazard limit. Therefore, the development is proposed outside the established setback.

7.2.2 Shoreline Setback

According to the Watershed (O. Reg. 319/09) Policy Manual (May 2019), Section 3.7.9, paragraph a) states that for the Lake Ontario shoreline (including Bay of Quinte, West and East Lake, Weller's Bay, Huyck's Bay, Pleasant Bay and North Bay) development must be setback from the aggregate of 15 from the known 1:100 year flood plain, and 6 metres from the erosion hazard and the dynamic beach hazard.

The Bay of Quinte and Lake Ontario Shoreline Management Plan (SMP) dated June 21, 2022, includes updates to Quinte Conservation's hazard mapping for flooding, erosion, and dynamic beaches. As a result of the study, the 1:100-year flood plain elevation for the property on West Lake is reflected as 76.07 m CGVD28. Quinte Conservation's setback for new development is a minimum 15 m from the 1:100-year flood plain of West Lake. In addition, Quinte Conservation requires for new development a minimum 6 m setback from the erosion hazard limit. As the property lies within the regulated area of West Lake (Ontario Regulation No. 319/09) the landowner will be required to obtain a permit prior to development (construction/filling/excavation/site grading) from Quinte Conservation. **The existing vegetation within the 15 m floodplain setback and the 6 m hazard lands setback should be maintained and minimize the vegetation to be removed for the installation of the central dock.**

8. Development-Related Impacts and Mitigation Measures

8.1 Natural Features

As some of the vegetation observed during the site investigations has been removed, future development related impacts will include the removal of additional hedgerow vegetation, removal of vegetation in the area where the central dock will be installed and increase of impervious areas due to the construction of the proposed development (permanent structures). The vegetation in the area covered with forest, hedgerow vegetation north of the property and on the shoreline will not be affected by the development.

The property was mostly occupied with cottages and trailers which were removed at the end of the summer of 2023. The impervious areas left on the property were the dwelling, accessory sheds, the trailer box and the barn. The impervious area that will continue to be onsite will be the existing dwelling. It will be an increase in impervious areas as it is proposed the construction of 20 villas, an amenity building, storage building, patio, paved roads and parking lots.

The redevelopment will be on the area currently without vegetation; therefore, significant impacts to natural features are not expected.

In compliance with Section 4.14.1 and 4.14.2 of the Comprehensive Zoning By-law, strips of plant species with a minimum width of 1.5 m and not less than 1.5 m high at planting must be planted along the property lines. Native species should be used for the strips. A landscaping plan should be prepared as part of the site plan application. The landscaping plan should include the use of native species.

8.2 Water Quality

The County's new Official Plan contains policies to ensure the natural environment and the character of West Lake is protected, including the groundwater and the surface water.

The County is a peninsula surrounded by Lake Ontario. The County has six inland lakes, five of them including West Lake currently have significant development around their shorelines. Based on the 2023 Watershed Report Card from Quinte Region Conservation Authority, surface water quality in Prince Edward County is fair. The most significant water quality concerns are associated with the input of nutrients to the lake, particularly phosphorus. Sources of increase in nutrient loading include faulty septic systems, use of fertilizers on lawns, and runoff from lawns and farm fields. In the last decades phosphorus levels in the lakes have decreased due to a decrease of livestock within the watershed and stewardship practices implemented by farmers (shoreline re-naturalization, minimized surface water runoff and restrict cattle from going into the water). Actions required to maintain low levels of phosphorus going to the lake is to ensure all new commercial and residential development and redevelopment uses sewage treatment systems that reduce or eliminate phosphorus to the greatest extent possible.

The redevelopment project will require an Environmental Compliance Approval from the Ministry of the Environment, Conservation and Parks as the daily design flow has been estimated as 30,550 L/day which exceeds the 10,000 L/day level that triggers an approval under Section 53 of the Ontario Water Resource Act. According to the Ontario Water Resource Act (June 2021), Section 53 (1), subject to Section 47.3 of the *Environmental Protection Act*, no person shall use, operate, establish, alter, extend or replace new or existing sewage works except under and in accordance with an environmental compliance approval.

(6.1) This section does apply to sewage works described in clause (6) (a) if,

- (a) the sewage works have a design capacity in excess of 10,000 litres per day;
- (b) more than one sewage works is located on a lot or parcel of land and they have, in total, a design capacity in excess of 10,000 litres per day; or
- (c) the sewage works are not located wholly within the boundaries of the lot or parcel of land on which is located the residence or other building or facility served by the works. 1997, c. 30, Sched. B, s. 24 (2); 2017, c. 2, Sched. 11, s. 4 (3).

The objective with respect to sanitary servicing is the ability to meet MECP standards regarding system design and environmental impacts. The existing Class 4 septic system servicing the existing residence will be decommissioned. The sewage flows from the cottages, office/café and club house will be collected and discharged to a common large subsurface disposal system (LSSDS) setback an adequate distance from the lake (>30 m) and likely provided with a tertiary treatment (this will be confirmed with the MECP through the pre-application approvals process).

According to the hydrogeology assessment (Greer Galloway, 2024), groundwater flow is in a northwestern direction toward West Lake. Water from the existing supply well was tested and results indicated nitrate concentration is below the drinking water standard of 10.0 mg/L but high (8.27 mg/L and 5.01 mg/L). Elevated nitrate concentration can be attributable to runoff from septic systems and agricultural practices. The estimated occupancy of the proposed development is 64 persons. Assuming a 50% annual occupancy maintained continuously each year, the annual raw total phosphorus output from the proposed development is estimated to be 22.4 kg, before treatment. No wells were identified in the projected path of the nitrate plume and the source of drinking water for the residents in the houses to the northwest of the property is from the West Lake. Tertiary treatment has been recommended to ensure that the well servicing the development is not contaminated in the event of unforeseen groundwater flow patterns.

8.3 Mitigation Measures

It is proposed the redevelopment of the trailer park to a Village Resort. The redevelopment project will consist of twenty (20) 2-bedroom bungalow villas, one (1) guest amenity building; bike café and storage; porches, patios, docks, and an amenity deck; internal road, village parking, villa parking and office/café and dwelling parking; and landscape open space (including septic, sidewalks, landscape buffers and ex. driveway). The project proposed a single entrance to the property. The existing entrance in front of the existing dwelling will be converted into a pedestrian/cyclist pathway. The current dwelling will be converted to a building with multiple uses such as reception/office for the operation of the resort, a bike café and a dwelling unit. Also, a patio is proposed on the back of the dwelling. An additional storage building is proposed south of the existing dwelling. The new development will occupy the area where the cottages and trailers were located. The existing forest area will be preserved, no development is proposed in this area except for the existing walking trail made of wood chips. As development will be outside the setbacks from the flood plain and the hazard limit, impacts to shore vegetation will be minimal and related to the upgrade of the ramp and installation of the central dock. Trees, shrubs and herbaceous vegetation have been removed in the hedgerow located in the central part of the property and the area around the hedgerow has been graded. The vegetated area (hedgerow) north of the

property will be preserved. It is expected that removal of vegetation prior to construction will be minimal. The accessory sheds, trailer box and the barn will be removed.

During the construction of the development, standard management practices should be implemented as part of any construction to avoid and/or mitigate potential impacts. These include:

- Minimize the area to be affected.
- Application of erosion and sedimentation control measures.
- **Temporary silt fencing around the work area should be installed prior to initiate construction activities or before the beginning of the active turtle nesting season on April 1st to isolate the work area and restrict movement of construction vehicles, protect adjacent trees and other vegetation to be retained, filter any surface water runoff leaving the work area, and isolate the work area from wildlife, including turtles.**
- **The existing vegetation within the 15 m floodplain setback and the 6 m hazard lands setback should be maintained and minimize the vegetation to be removed for the installation of the central dock.**
- Avoid runoff toward West Lake during construction.
- Work areas should be maintained free of standing water and garbage that may attract wildlife.
- Use of fences along the vegetated area present in neighbouring properties.
- During construction, use of a fence along the edge of the forest vegetation.
- Restrict construction activities to the area designated for construction. Minimize any disturbance to the surrounding areas.
- If additional removal of vegetation is required, where practical scheduling removal of vegetation outside bird nesting season (April 15th – August 31st), if this can not be avoided, vegetation should be inspected for presence of nests. If nests are found, removal should not be carried out as removal will result in contravention of the Endangered Species Act and the Migratory Bird Act.
- Trees with cavities should be inspected prior to removal to ensure bats are not using them.
- Best practices should be implemented during the construction to ensure wildlife species are not harmed by equipment or workers activities.
- It is recommended a restoration and enhancement plan for the shore to remove garbage deposited on the shore, remove the invasive species, restore the eroded areas (slope and existing water easement), and plant native species where needed.
- Keep secure stockpile materials, vehicles and structures against wildlife entry.
- Litter and other waste material must be appropriately contained and promptly disposed of.
- Restrict noise work to day hours and avoid unnecessary running of machinery causing the noise.
- The construction areas should be inspected prior to beginning construction to ensure adult Monarch butterflies and/or caterpillars are not harmed by the work.
- **Workers must be vigilant and check work areas for the presence of snakes, turtles and other sensitive wildlife per Site Plan Agreement, QC Permit. If wildlife is encountered, whenever possible, work should be temporarily suspended until the animal is out of harm's way. Workers should report any SAR observations immediately (including photographs and coordinates) to the local MECP Office.**
- Use of 'Clean Equipment Protocols' during construction activities to reduce the spread of exotic species of plants and allow natural revegetation of the areas within the setbacks that lack of it.
- Use of native species in landscaping areas and along the property lines, and removal of invasive species. A landscaping plan should be prepared as part of the site plan application. The landscaping plan will include the use of native species and no or little formal landscaping. It is recommended to maintain meadow vegetation in the area where the septic bed will be located.
- It is recommended to maintain the internal road and parking areas unpaved to continue allowing natural surface water infiltration.

- **Stormwater quality control measures should be provided to maintained and/or enhance natural infiltration. Measures will need to be approved by the County through the Site Plan Control application process.**
- Proper disposal of invasive species removed from the property.
- The invasive species removed should be properly disposed to avoid propagation in other areas.
- Clean/screened topsoil should be used on the landscaped areas of the property.
- Regular monitoring to avoid the establishment of invasive species.

9. Policy Conformity

The property was used as a trailer park. According to the County's Official Plan, the property is zoned Shore Land where resort commercial uses which provide accommodation and amenities for the vacationing public are permitted. The proposed redevelopment complies with the Official Plan policies as the redevelopment complies with the Official Plan shoreline policy to serve the projected seasonal and recreational growth needs of the County. The Zoning By-law land use for the property is Rural 1 where Tourist Commercial establishment are not permitted. Therefore, an amendment of the Zoning By-law will be required to allow the proposed development. As the redevelopment will not impact significant natural heritage features and their functions, and will include landscape naturalization, on-site retention and treatment of pollutants, and the proposed development will protect and conserved the natural environment as established in the Shore Land designation, it complies with the PPS policies.

The proposed project is consistent with the PPS policies as analysis of background information and field investigations indicate that there are no significant natural features, SAR or significant habitat for SAR within the property or immediate lands that could be significantly impacted. Impacts to groundwater and surface water are not expected as a new septic system will be installed improving the treatment and discharge of wastewater, and natural sheet drainage will continue to be applied and enhanced grass swales to manage the storm water.

Development in the Official Plan is defined as the creation of new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act, but does not include activities that create or maintain infrastructure under an environmental process. Based on the definition of development. Section 3.1.5 Unmapped Natural Heritage Feature Policies applied. Policy 4 which states that *Permitted development proposals must be supported with an **Environmental Impacts Study (EIS)** in consultation with the MECP. This is to ensure water quality protection. The study will take into consideration the existing water quality of the water body, surface water run-off, impact and loading of phosphorus from septic systems, type of soils, stormwater management and nature of vegetation.*

The Ministry of the Environment, Conservation and Park (MECP) Belleville Office has indicated that the Ministry can provide comments regarding production of sewage water greater than 10,000 L/day to be discharged to the ground. An application for an environmental compliance approval for the new proposed sewage system will be submitted to the MECP for approval. The new system will comply with MECP requirements to ensure the wastewater receives acceptable treatment to avoid impacts to the quality of groundwater and surface. Also, the potable water to be supplied for the redevelopment will need to comply with the minimum drinking water treatment equipment required to ensure safe drinking water. Therefore, the redevelopment will comply with the policies of the County's Official Plan.

The proposed redevelopment will be located outside the Quinte Conservation regulated areas. The redevelopment complies with the flood and erosion hazards policies of the PPS.

The proposed redevelopment will be located outside steep slopes, complying with Section 3.1.6 of the County's Official Plan.

10. Summary

The property is surrounded by residential and tourist development and agricultural land. The property is currently occupied by a dwelling, accessory sheds, a trailer box, barn, and natural and landscaping areas. It is proposed the redevelopment of the property to a Villa Resort. There are no natural significant features on the property; however, the approximately 0.7 ha patch of forest will be conserved. The hedgerow vegetation located north of the property will be preserved in its natural current conditions and the trees present in the hedgerows will be part of the development. The development will be located outside the 100-year flood plain, hazard limit and the steep slope.

In compliance with policy 3.1.5(4) of the County of Prince Edward Official Plan, an environmental compliance approval application will be submitted to the MECP as the sewage volume estimated to be produced by the new development is greater than 10,000 L/day. The MECP does not have jurisdiction for septic systems that produce wastewater 10,000 litres a day or more. The large subsurface disposal system will receive a daily design flow of approximately 30,550 L/day. The disposal system will be located more than 30 m from the lake. Impacts to the water quality of West Lake and groundwater are not expected.

The proposed project is consistent with the natural heritage and water policies established in the PPS as there are no significant natural heritage features in the subject property and adjacent lands to be affected by the proposed development, and the proposed location of the redevelopment is within the area currently impacted. No species at risk were observed in the property except for a female Bobolink observed outside the breeding season on the area where the septic system will be located which is subject to regular maintenance. **Bobolink uses large grassland areas as nesting habitat. The meadow vegetation observed in the property during the site investigations is small and the property owner informed that the area is regularly maintained. Therefore, habitat for Bobolink is not present.** Food for Monarch Butterflies and nesting habitat for grassland bird species are found in the property where herbaceous vegetation is present. Impacts to SAR are not expected as long as recommended measures to avoid harm to butterflies and birds are applied. Mitigation measures have been recommended to avoid impacts to vegetation and wildlife.

I trust that this report is complete within the County of Prince Edward terms of reference and sufficient for your present requirements. Please contact me at your convenience if you have any questions about this report or our recommendations.

**THE GREER GALLOWAY GROUP INC.
CONSULTING ENGINEERS**



Yazmin Ramirez Avila, M.Sc.
Biologist

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Figures

Appendix A

Correspondence

DEVELOPMENT, INTERFERENCE WITH WETLANDS & ALTERATIONS TO SHORELINES & WATERCOURSES, ONT. REGULATION 319/09

PERMIT # REG0394-2023
ISSUED TO: West Lake Lake Ltd. c/o Sean Mckinney
CIVIC ADDRESS: 1874 County Road 12
GEOGRAPHIC DESCRIPTION: Lot 4, Concession 1SESWL, Prince Edward County
WATER FEATURE: West Lake

Works to be undertaken:

Removal of debris, vegetation, tree stumps and derelict structures on the property to prepare the site for future development. The majority of the work will be limited to the top of the slope along the shoreline and the removal of individual trees along the shoreline. Existing stairs providing access from the top of the bank to the shoreline, wooden debris, and abandoned docks will be removed, however excavation will not be required. The work will be conducted as per the application received at this office on December 8, 2023. A site visit was conducted on February 15, 2024 and the work has been completed.

Conditions:

- **Your contractor or anyone working on your behalf must have a copy of this permit and must follow the details and conditions contained herein.**
- **Sediment and erosion controls must be properly installed to isolate the work site and must remain in place until the site has stabilized. The sediment and erosion control fencing must be removed and disposed of properly once the work has been completed.**
- **All fill that is temporarily stored on site before and during construction must be independently surrounded by appropriate sediment and erosion controls and must be removed from the site upon completion of the project.**
- **Drainage patterns on the property must be maintained.**
- **Any disturbed areas are to be stabilized with topsoil and seeded with native vegetation.**
- **You must notify this office at the start and completion of this project.**

Notes:

- **Quinte Conservation inspects some, but not all permits. If you are interested in a re-inspection, please contact this office within one month of the project's completion.**
- **All works must be constructed as per submitted documentation and drawings provided.**

You are reminded that the granting of this permit does not remove your responsibility to obtain any necessary additional permits from other agencies or government bodies before starting your project. It is also important to note that this permit does not override any other permit or setback requirements from other agencies. In the case of a conflict between setback requirements the most restrictive will apply.

Any departure from the submitted documentation without prior written approval from Quinte Conservation or failure to comply with the conditions set out in the permit will constitute a violation of this permit and may result in legal action in accordance with Section 28 of the Conservation Authorities Act. Should your plans change regarding the specifications and location of the projects described, please contact this office so an amendment can be issued accordingly.

In accordance with the Development, Interference with Wetlands & Alterations to Shorelines & Watercourses Regulation made pursuant to Section 28(1) of the Conservation Authorities Act, R.S.O. 1990, this permit is granted provided that all works are completed in accordance with the specifications and plans set out in the application.

c.c. Peter Moyer - Director of Development Services, PEC

This permit is not transferable/renewable. Additional approvals may be required under other applicable legislation.

PERMIT NOTICE MUST BE PROMINENTLY DISPLAYED AT THE WORK SITE



Sharlene Richardson
Regulations Officer

February 16, 2024

Issuance Date

February 55, 2026

Expiry Date

Appendix B

Concept Resort Plan

Appendix C

List of Plant Species

Table 1. List of Plant Species

Common Name	Scientific Name	Family	S Rank	G Rank
Trees				
White Birch	<i>Betula papyrifera</i>	Betulaceae	SNR	G5
Eastern Red Cedar	<i>Juniperus virginiana</i>	Cupressaceae	S5	G5
Eastern White Cedar	<i>Thuja occidentalis</i>	Cupressaceae	S5	G5
Black Locust	<i>Robinia pseudoacacia</i>	Fabaceae	SNA	G5
Red Oak	<i>Quercus rubra</i>	Fagaceae	S5	G5
Black Walnut	<i>Juglans nigra</i>	Juglandaceae	S4?	G5
Littleleaf Linden	<i>Tilia cordata</i>	Malvaceae	SNA	GNR
Green Ash	<i>Fraxinus pennsylvanica</i>	Oleaceae	S5	G5
White Ash	<i>Fraxinus americana</i>	Oleaceae	S5	G5
Eastern White Pine	<i>Pinus strobus</i>	Pinaceae	S5	G5
Scots Pine	<i>Pinus sylvestris</i>	Pinaceae	SNA	GNR
Norway Spruce	<i>Picea abies</i>	Pinaceae	SNA	G5
White Spruce	<i>Picea glauca</i>	Pinaceae	S5	G5
Apple	<i>Malus sp.</i>	Rosaceae	?	?
Black Cherry	<i>Prunus serotina</i>	Rosaceae	S5	G5
Balsam Poplar	<i>Populus balsamifera</i>	Salicaceae	S5	G5
Black Willow	<i>Salix nigra</i>	Salicaceae	S4	G5
Eastern Cottonwood	<i>Populus deltoides</i>	Salicaceae	S5	G5
Trembling Aspen	<i>Populus tremuloides</i>	Salicaceae	S5	G5
Manitoba Maple	<i>Acer negundo</i>	Sapindaceae	S5	G5
Sugar Maple	<i>Acer saccharum</i>	Sapindaceae	S5	G5
Norway Maple	<i>Acer platanoides</i>	Sapindaceae	SNA	GNR
Silver Maple	<i>Acer saccharinum</i>	Sapindaceae	S5	G5
Basswood	<i>Tilia americana</i>	Tiliaceae	S5	G5
American Elm	<i>Ulmus americana</i>	Ulmaceae	S5	G5

Common Name	Scientific Name	Family	S Rank	G Rank
Shrubs				
White Mulberry	<i>Morus alba</i>	Moraceae	SNA	GNR
Common Lilac	<i>Syringa vulgaris</i>	Oleaceae	SNA	GNR
Common Buckthorn	<i>Rhamnus cathartica</i>	Rhamnaceae	SNA	GNR
Multiflora Rose	<i>Rosa multiflora</i>	Rosaceae	SNA	GNR
Chokecherry	<i>Prunus virginiana</i>	Rosaceae	S5	G5
European Mountain Ash	<i>Sorbus aucuparia</i>	Rosaceae	SNA	G5
Herbaceous				
Poison Ivy	<i>Toxicodendron radicans</i>	Anacardiaceae	S5	G5
Queen Anne's Lace (Wild Carrot)	<i>Daucus carota</i>	Apiaceae	SNA	GNR
Common Milkweed	<i>Asclepias syriaca</i>	Apocynaceae	S5	G5
Lesser Periwinkle	<i>Vinca Minor</i>	Apocynaceae	SNA	GNR
Starflower Solomon's-plume	<i>Maianthemum stellatum</i>	Asparagaceae	S5	G5
Hairy Solomon's-seal	<i>Polygonatum pubescens</i>	Asparagaceae	S5	G5
Oxeye Daisy	<i>Leucanthemum vulgare</i>	Asteraceae	SNA	GNR
Canada Goldenrod	<i>Solidago canadensis</i>	Asteraceae	S5	G5
Common Burdock	<i>Arctium minus</i>	Asteraceae	SNA	GNR
Common Ragweed	<i>Ambrosia artemissifolia</i>	Asteraceae	S5	G5
Common Dandelion	<i>Taraxacum officinale</i>	Asteraceae	SNA	G5
Annual Sowthistle	<i>Sonchus oleraceus</i>	Asteraceae	SNA	GNR
Chicory	<i>Cichorium intybus</i>	Asteraceae	SNA	GNR
Goat's Beard	<i>Tragopogon dubius</i>	Asteraceae	SNA	GNR
False Sunflower	<i>Heliopsis helianthoides</i>	Asteraceae	G5	SNR
King Devil	<i>Hieracium caespitosum</i>	Asteraceae	SNA	GNR
Philadelphia Fleabane	<i>Erigeron philadelphicus</i>	Asteraceae	S5	G5
White Heath Aster	<i>Aster ericoides</i>	Asteraceae	SNA	GNR
Spotted touch-me-not	<i>Impatiens capensis</i>	Balsaminaceae	S5	G5

Common Name	Scientific Name	Family	S Rank	G Rank
Common Viper's-Bugloss	<i>Echium vulgare</i>	Boraginaceae	SNA	GNR
Dame's Rocket	<i>Hesperis matronalis</i>	Brassicaceae	SNA	G4G5
Field Pepper-grass	<i>Lepidium campestre</i>	Brassicaceae	SNA	GNR
Wormseed Mustard	<i>Erysimum cheiranthoides</i>	Brassicaceae	S5?	G5
Garlic Mustard	<i>Alliaria petiolata</i>	Brassicaceae	SNA	GNR
Creeping Bellflower	<i>Campinula rapunculoides</i>	Campanulaceae	SNA	GNR
Wild Teasel	<i>Dipsacus fullonum ssp. sylvestris</i>	Caprifoliacea	SNA	GNR
Bladder Campion	<i>Silene vulgaris</i>	Caryphyllaceae	SNA	GNR
Alfalfa	<i>Medicago sativa</i>	Fabaceae	SNA	GNR
Bird's-foot Trefoil	<i>Lotus corniculatus</i>	Fabaceae	SNA	GNR
Black Medic	<i>Medicago lupulina</i>	Fabaceae	SNA	GNR
Red Clover	<i>Trifolium pratense</i>	Fabaceae	SNA	GNR
Herb Robert	<i>Geranium robertianum</i>	Geraniaceae	S5	G5
Wild Black Currant (Gooseberry)	<i>Ribes americanum</i>	Grossulariaceae	S5	G5
Harlequin Iris	<i>Iris versicolor</i>	Iridaceae	S5	G5
Heal-all	<i>Prunella vulgaris</i>	Lamiaceae	S5	G5
creeping Charlie	<i>Glechoma hederaceae</i>	Lamiaceae	SNA	GNR
Wild Mint	<i>Mentha arvensis</i>	Lamiaceae	SNR	G5
Common Motherwort	<i>Leonurus cardiaca</i>	Lamiaceae	SNA	GNR
Broadleaf Enchanter's Nightshade	<i>Circaea lutetiana</i>	Onagraceae	S5	G5
Common Evening-primrose	<i>Oenothera biennis</i>	Onagraceae	S5	G5
Eastern Helleborine	<i>Epipactis helleborine</i>	Orchidaceae	SNA	GNR
Common Yellow Woodsorrel	<i>Oxalis stricta</i>	Oxalidaceae	SNA	G5
Peony	<i>Paeonia Sp.</i>	Paeoniaceae	SNA	GNR
Greater Celandine	<i>Chelidonium majus</i>	Papaveraceae	SNA	GNR
Common Plantain	<i>Plantago major</i>	Plantaginaceae	SNA	G5
Ribgrass	<i>Plantago lanceolata</i>	Plantaginaceae	SNA	G5

Common Name	Scientific Name	Family	S Rank	G Rank
Butter-and-eggs	<i>Linaria vulgaris</i>	Plantaginaceae	SNA	GNR
Curly Dock	<i>Rumex crispus</i>	Polygonaceae	SNA	GNR
Dock-Leaf Smartweed	<i>Polygonum lapathifolium</i>	Polygonaceae	S5	G5
Bristly Crowfoot	<i>Ranunculus pensylvanicus</i>	Ranunculaceae	S5	G5
Early Meadowrue	<i>Thalictrum dioicum</i>	Ranunculaceae	S5	G5
Tall Buttercup	<i>Ranunculus acris</i>	Ranunculaceae	SNA	G5
Common Silverweed	<i>Potentilla anserina</i>	Rosaceae	SNR	G5
Red Raspberry	<i>Rubus idaeus</i>	Rosaceae	S5	G5
Wild Strawberry	<i>Fragaria virginiana</i>	Rosaceae	S5	G5
Cleavers	<i>Galium aparine</i>	Rubiaceae	S5	G5
Great Mullein	<i>Verbascum thapsus</i>	Scrophulariaceae	SNA	GNR
Bitter Nightshade	<i>Solanum dulcamara</i>	Solanaceae	SNA	GNR
Vines				
Dog Strangling Vine	<i>Cynanchum rossicum</i>	Apocynaceae	SNA	GNR
Hedge Bindweed	<i>Calystegia sepium</i>	Convolvulaceae	S5	G5
Summer Grape	<i>Vitis aestivalis</i>	Vitaceae	S4	G5
Riverbank Grape	<i>Vitis riparia</i>	Vitaceae	S5	G5
Virginia Creeper	<i>Parthenocissus quinquefolia</i>	Vitaceae	S5	G5
Grasses				
Turkeyfoot	<i>Andropogon gerardii</i>	Poaceae	S4	G5
Green Foxtail	<i>Setaria viridis</i>	Poaceae		NGRTNR
Canada Bluegrass	<i>Poa compressa</i>	Poaceae	SNA	GNR
Orchard Grass	<i>Dactylis glomerata</i>	Poaceae	SNA	GNR
Smooth Bromegrass	<i>Bromus inermis</i>	Poaceae	SNA	G5

Nature Conservancy conservation concern ranking (2023). G – Global Level, S – Provincial Conservation Status.

SRANK Definition

S1 – Critically imperiled - At very high risk of extirpation in the province due to restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.

S2 – Imperiled - At high risk of extirpation in the province due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.

S3 – Vulnerable - At moderate risk of extirpation in the province due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

S4 – Apparently Secure - It denotes that a species is apparently secure, with over 100 occurrences in the province.

S5 – Secure - Indicates that a species is widespread in Ontario, it is demonstrably secure in the province.

SNA - Not Applicable - A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.

SNR - Unranked – National or subnational conservation status not yet assessed.

GRANK definition

G1 – Critically Imperiled – At very high risk of extinction or collapse due to very restricted range, very few populations or occurrences, steep declines, severe threats, or other factors.

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T - denotes that the rank applies to a subspecies variety.

Appendix D

List of Wildlife Species

Table 2. List of Wildlife

Common Name	Scientific Name	Family	S Rank	G Rank	Breeding Evidence Codes
Canada Goose	<i>Branta canadensis</i>	Anatidae	S5	G5	
Great Blue Heron	<i>Ardea herodias</i>	Ardeidae	S4	G5	
Belted Kingfisher	<i>Megaceryle alcyon</i>	Alcedinidae	S5B,S4N	G5	X
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Bombycillidae	S5	G5	
Northern Cardinal	<i>Cardinalis cardinalis</i>	Cardinalidae	S5	G5	X
Mourning Dove	<i>Zenaida macroura</i>	Columbidae	S5	G5	
American Crow	<i>Corvus brachyrhynchos</i>	Corvidae	S5B	G5	
Blue Jay	<i>Cyanocitta cristata</i>	Corvidae	S5	G5	X
American Goldfinch	<i>Carduelis tristis</i>	Fringillidae	S5	G5	X
Barn Swallow	<i>Hirundo rustica</i>	Hirundinidae	S4B	G5	X
Baltimore Oriole	<i>Icterus galbula</i>	Icteridae	S4B	G5	H
Bobolink	<i>Dolichonyx iryzivorus</i>	Icteridae	S4B	G5	
Gray Catbird	<i>Dumetella carolinensis</i>	Mimidae	S4B	G5	H
Osprey	<i>Pandion haliaetus</i>	Pandionidae	S5B	G5	
Black-capped Chickadee	<i>Poecile atricapillus</i>	Paridae	S5	G5	X
Chipping Sparrow	<i>Spizella passerina</i>	Passerellidae	S5B	G5	X
Song Sparrow	<i>Melospiza melodia</i>	Passerellidae	S5B	G5	A
Hairy Woodpecker	<i>Dryobates villosus</i>	Picidae	S5	G5	
Northern Flicker	<i>Colaptes auratus</i>	Picidae	S4B	G5	X
European Starling	<i>Sturnus vulgaris</i>	Sturnidae	SNA	G5	
House Wren	<i>Troglodytes aedon</i>	Troglodytidae	S5B	G5	A
American Robin	<i>Turdus migratorius</i>	Turdidae	S5B	G5	X
Eastern Phoebe	<i>Sayornis phoebe</i>	Tyrannidae	S5B	G5	X
Great Crested Flycatcher	<i>Myarchus crinitus</i>	Tyrannidae	S5B	G5	X
Red-eyed Vireo	<i>Vireo olivaceus</i>	Vireonidae	S5B	G5	X

Common Name	Scientific Name	Family	S Rank	G Rank
Mammals				
Striped Skunk	<i>Mephitis mephitis</i>	Mephitidae	S5	G5
Eastern Chipmunk	<i>Tamias striatus</i>	Sciuridae	S5	G5
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	Sciuridae	S5	G5

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- S5 – Secure - Indicates that a species is widespread in Ontario, it is demonstrably secure in the province.
- SNA - Not Applicable - A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.
- SNR - Unranked – National or subnational conservation status not yet assessed.

GRANK definition

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- GNR – Unranked – Global rank not yet assessed.
- GNA - Not Applicable - A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.

T - denotes that the rank applies to a subspecies variety.

Breeding Evidence Codes

(Taken from the Breeding Bird Atlas: <https://www.birdsontario.org/jsp/codes.jsp>)

OBSERVED	
X	Species observed in its breeding season (no breeding evidence)
POSSIBLE	
H	Species observed in its breeding season in suitable nesting habitat
S	Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season
PROBABLE	
M	At least 7 individuals singing or producing other sounds associated with breeding (e.g., calls or drumming), heard during the same visit to a single square and in suitable nesting habitat during the species' breeding season.
P	Pair observed in suitable nesting habitat in nesting season
T	Permanent territory presumed through registration of territorial song, or the occurrence of an adult bird, at the same place, in breeding habitat, on at least two days a week or more apart, during its breeding season. Use discretion when using this code. "T" is not to be used for colonial birds, or species that might forage or loaf a long distance from their nesting site e.g. Kingfisher, Turkey Vulture, and male waterfowl
D	Courtship or display, including interaction between a male and a female or two males, including courtship feeding or copulation
V	Visiting probable nest site
A	Agitated behaviour or anxiety calls of an adult
B	Brood Patch on adult female or cloacal protuberance on adult male
N	Nest-building or excavation of nest hole, by a wren or a woopecker
CONFIRMED	
NB	Nest-building or excavation of nest hole by a species other than a wren or a woopecker
DD	Distraction display or injury feigning

NU	Used nest or egg shells found (occupied or laid within the period of the survey)
FY	Recently fledged young (nidicolous species) or downy young (nidifugous species) incapable of sustained flight
AE	Adult leaving or entering nest sites in circumstances indicating occupied nest
FS	Adult carrying fecal sac
CF	Adult carrying food for young
NE	Nest containing eggs
NY	Nest with young seen or heard

Appendix E

Site Photolog



Photo 1. Looking east, Christ Church Lane (entrance to the property) (June 15th, 2023).



Photo 2. View of the existing water easement (June 15th, 2023).



Photo 3. A view of the back of the existing dwelling (August 22nd, 2023).



Photo 4. A view of the sheds located around the dwelling (June 15th, 2023).



Photo 5. Looking west the barn and the trailer box observed on the property (June 15th, 2023).



Photo 6. A view of the vegetation along the shore and on the slope (June 15th, 2023).



Photo 7. Hedgerow found along the property in a north to south direction (August 22nd, 2023).



Photo 8. A view of the Hedgerow vegetation south of the property (June 15th, 2023).

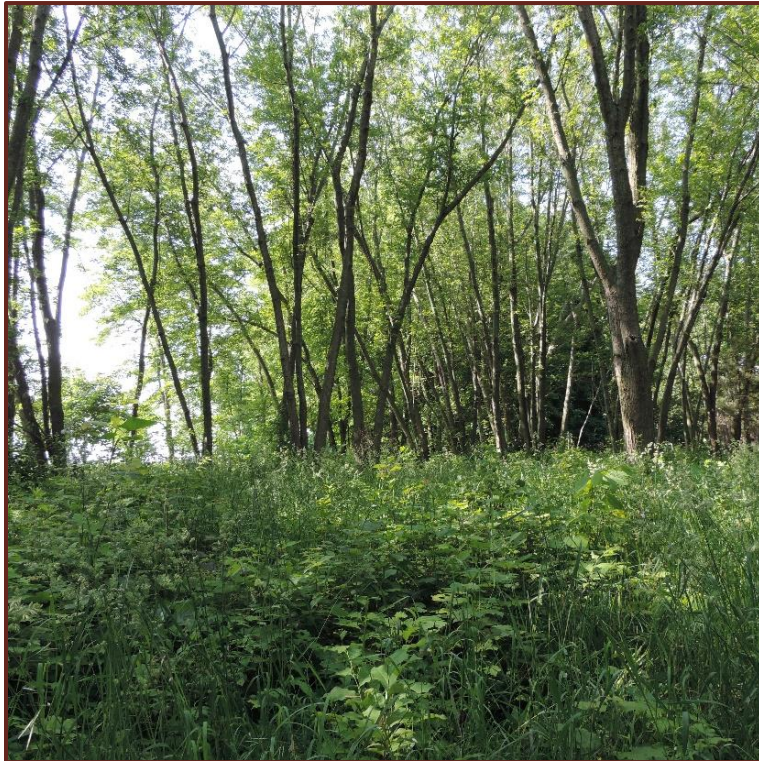


Photo 9. A view of the Silver Maple Deciduous Forest (June 15th, 2023).



Photo 10. A view of the Cultural Woodland (June 15th, 2023).



Photo 11. A view of the area where the LSSDS bed will be located (July 11th, 2023).

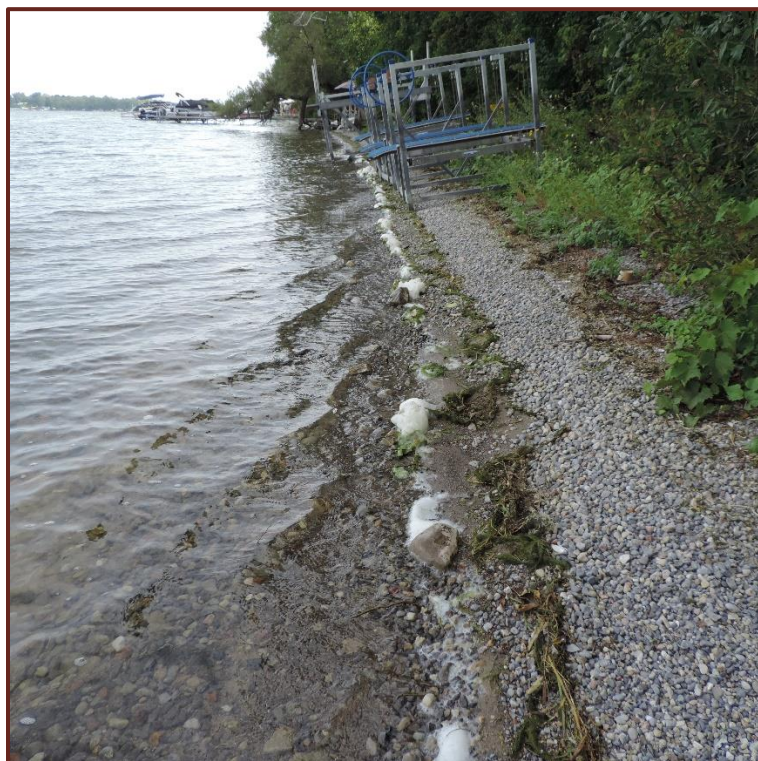


Photo 12. A view of the aquatic habitat (June 15th, 2023).



Photo 13. Removal of vegetation and grading carried out in the property (taken by others on February 16, 2024).



Photo 14. Walking trail made in the Deciduous Forest (taken by others on February 16th, 2024).