Environmental Impact Study - 516681 7th Line, Town of The Blue Mountains, Grey County, Ontario

June 30, 2023

Prepared for:
Dunn Capital Corporation

Cambium Reference: 14562-001

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1.0 Introduction

Cambium Inc. (Cambium) was retained by Dunn Capital Corporation (the Client) to conduct an Environmental Impact Study at 516681 7th Line, in the Town of Blue Mountains, Grey County, Ontario (Figure 1). The proposed development includes a residential subdivision requiring a draft plan application. Based on the proposed development, the entire property will be considered the Site for this report.

An Environmental Impact Study (EIS; the Study) is required to address potential impacts to natural heritage features identified during the preliminary development review process, as required by the Provincial Policy Statement, 2020 (PPS), and the Niagara Escarpment Plan, 2017 (NEP). The Site contains or is adjacent to (within 120 m of) the following mapped natural heritage and/or hydrologic features: unevaluated wetlands, unnamed watercourse, and woodlands. The Site is within Ecoregion 6E-4 of Ontario (Crins, Gray, Uhlig, & Wester, 2009) and outside of settlement area boundaries.

The Site is within the jurisdiction of the Grey Sauble Conservation Authority (GSCA) and their regulated area overlaps lands adjacent to the Site. As such, the Study will consider regulations on development as imposed by the local Conservation Authority's Regulation under the Conservation Authorities Act, 1990.

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

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

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

1.1 Terms of Reference

The proposed Terms of Reference were circulated to the Town of Blue Mountains and Grey Sauble Conservation Authority for review and comment. No response had been received at the time of reporting. Relevant correspondence and documentation are included in Appendix A.

1.2 Existing Use and Proposed Development

The Site is approximately 8.75 ha, located at the southeast intersection of Club Drive and 7th Line. There is an existing building on the northwest corner of the Site. Adjacent lands are primarily residential and recreational.

The subject lands have historically been identified as future residential development in both the Georgian Bay Club (GBC) Golf Course Agreement and the Private Residences at GBC Site Plan Agreement. Storm, Sanitary and Domestic Water Services are currently installed at the northern property line, in the location of the proposed subdivision entrance.

The proposed development involves the development of a residential subdivision with multiple single detached units, which will be accessed from the private Georgian Bay Club Road, municipally referred to as Clubhouse Drive. The proposed development will be serviced by existing watermain, storm and sanitary stubs from the private residences to the north. A Conceptual Site Plan is provided in Appendix B.

2.0 Natural Heritage Policy Context

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

- Provincial Policy Statement (PPS), 2020
- Greenbelt Plan, 2017
- Niagara Escarpment Plan (NEP), 2017
- Grey County Official Plan, 2019
- Town of Blue Mountain Official Plan, 2016
- Town of Blue Mountain Zoning By-law, 2018
- Provincial Endangered Species Act (ESA), 2007
- Federal Species at Risk Act (SARA), 2002
- Federal Fisheries Act, 2019
- Federal Migratory Birds Convention Act (MBCA), 1994

This Study includes an evaluation of conformity of the proposed development with relevant natural heritage policies. A summary of policy conformity is included in Section 6.0.

2.1 Provincial Policy Statement, 2020

The PPS provides direction on matters of provincial interest related to land use planning and development. Section 2.1 of the PPS (Ministry of Municipal Affairs and Housing, 2020) protects the form and function of eight types of significant natural heritage features, which include:

- significant wetlands
- significant coastal wetlands
- significant woodlands (limited to Ecoregions 6E and 7E)
- significant valleylands
- significant wildlife habitat (SWH)
- significant areas of natural and scientific interest (ANSI)

- fish habitat
- habitat of endangered and threatened species

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

Section 2.2 of the PPS protects the quality and quantity of water, including the form and hydrologic function of sensitive surface water features and sensitive ground water features. Focus is given to maintaining hydrologic linkages and functions at the watershed scale to minimize potential negative impacts, including cross-jurisdictional and cross-watershed impacts of development. Mitigative measures and/or alternative development approaches should be considered for development near water features.

2.2 Conservation Authority Regulation

"Conservation Authorities are community-based watershed management agencies, whose mandate is to undertake watershed-based programs to protect people and property from flooding, and other natural hazards, and to conserve natural resources for economic, social and environmental benefits" (Conservation Ontario, 2022). Conservation Authorities each have their own Ontario Regulation under the *Conservation Authorities Act, 1990*.

GSCA regulates these features under Ontario Regulation 151/06: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.

2.3 Niagara Escarpment Plan, 2017

The Niagara Escarpment is an environmentally sensitive geological landform that extends from Queenston to Tobermory in Ontario. The purpose of the Niagara Escarpment Plan (NEP) is to protect the Niagara Escarpment and the land in its vicinity by ensuring development is compatible with the natural environment. The seven primary objectives of the NEP include:

"a) protect unique ecological and historic areas;

b) maintain and enhance the quality and character of natural streams and water supplies;

c) provide adequate opportunities for outdoor recreation;

d) maintain and enhance the open landscape character of the Niagara Escarpment in so far as possible, by such means as compatible farming or forestry and by preserving the natural scenery;

e) ensure that all new development is compatible with the purpose of the act;

f) provide adequate public access to the Niagara Escarpment; and,

g) support municipalities within the Niagara Escarpment Planning Area"

(Niagara Escarpment Commission, 2017).

Land designations under the NEP include Escarpment Natural Area, Escarpment Protection Area, Escarpment Rural Area, Minor Urban Centre, Urban Area, Escarpment Recreation Area, and Mineral Resource Extraction Area.

The subject Site is located within an area designated Escarpment Recreation Area.

2.4 Official Plan and Zoning By-Law

Current land use designations and zoning applicable to the Site are described as follows:

Official Plan – Grey County	Recreational Resort Area
Official Plan – Town of The Blue Mountain	Residential Recreational Area and Recreational Commercial Area
Zoning By-law – Town of the Blue Mountain	Development and Recreation Two

2.5 Provincial Endangered Species Act, 2007

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

2.6 Fisheries Act, 1985

The Department of Fisheries and Oceans Canada (DFO) administers the federal Fisheries Act which defines fish habitat as "*spawning grounds and other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes*" (Subsection 2(1)). Works within and adjacent to lakes, watercourses, and other bodies of water containing fish have the potential to impact fish and/or fish habitat. The Fisheries Act prohibits the harmful alteration, disruption, or destruction (HADD) of fish habitat (Subsection 35(1)), which is defined as "*any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes*".

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

2.7 Species at Risk Act, 2002

The federal Species at Risk Act (SARA) was adopted in 2002 to prevent endangered or threatened species from becoming extinct or extirpated, to help in the recovery of endangered,

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

2.8 Migratory Birds Convention Act, 1994

The federal *Migratory Birds Convention Act* (MBCA) prohibits killing, capturing, injuring, taking or disturbing of the listed migratory birds. Including damaging, destroying, removing, or disturbing of nests of all migratory bird species that contain a live birds or viable eggs. In 2022, new *Migratory Birds Regulations* (MBR) were adopted that offer year-round protection for the nests of 18 migratory species, until the nest is deemed to be abandoned. Nest abandonment must be reported through the Abandoned Nest Registry, administered by Environment and Climate Change Canada (ECCC), if there is a need to damage, disturb, destroy or remove a nest of a species listed in Schedule 1 of the MBR. The time period to confirm nest abandonment varies by species, and ranges from 12-36 months.

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

3.0 Technical Approach and Data Collection Methods

3.1 Background Information Review

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

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

- Land Information Ontario (LIO) database via the online Natural Heritage Areas: Make-a-Map tool (Ministry of Natural Resources and Forestry, 2022)
- Natural Heritage Information Center (NHIC) database: species at risk (SAR) occurrence records
- Online Atlas Data:
    - Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature, 2018)
    - Ontario Breeding Birds Atlas (OBBA) (2001-2005) (Bird Studies Canada, 2005)
- Grey County Official Plan (Grey County, 2019)
- Town of The Blue Mountain Official Plan (Town of The Blue Mountains, 2016)
- Town of the Blue Mountain Zoning By-law (Town of The Blue Mountain, 2018)
- Grey Sauble Conservation regulated area mapping (Grey Sauble Conservaiton Authority, 2017)

Mapped natural heritage features present in the general area of the Site are shown on Figure 1.

Table 1 Background Review Summary

Source	Location Reference	Relevant Records
LIO Geographic Database	Site and 120 m adjacent lands	Unevaluated wetland Woodland
NHIC Database	17NK4631 17NK4630 17NK4731 17NK4730	Butternut – END Snapping Turtle – SC
Ontario Breeding Bird Atlas (OBBA)	17TNK43	Bald Eagle – SC Eastern Wood-Pewee - SC Wood Thrush – SC
Ontario Reptile and Amphibian Atlas (ORAA)	17NK43	Midland Painted Turtle – Snapping Turtle – SC
Aquatic SAR distribution maps	Site and 120 m adjacent lands	None

Note: THR = Threatened species on SARO list
END = Endangered species on SARO list
SC = Special concern species on SARO list
OBBA and ORAA grid squares occupy 100 km^2; therefore only species with potential to occur on the Site based on habitat type, size and availability have been listed as relevant records

3.2 Consultation and Agency Correspondence

Regulatory agency consultation may include Fisheries and Oceans Canada (DFO), the Ministry of Natural Resources and Forestry (MNRF), the Ministry of Environment, Conservation, and Parks (MECP), and the local Conservation Authority, as applicable. The MECP is responsible for administering the ESA and providing direction on potential compliance issues. MECP has prepared a guidance document titled *Client's Guide to Preliminary Screening for Species at Risk* (Ministry of the Environment, Conservation and Parks, 2019). This document aims to "help clients better understand their obligation to gather information and complete a preliminary screening for SAR before contacting the Ministry" and was used to guide the habitat-based SAR screening for the Study.

Relevant correspondence has been included in Appendix A.

3.3 Field Investigations

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

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

3.3.1 Ecological Land Classification and Vegetation Survey

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

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

sensitive plant species (plants with CC of > 9). A description of CC values is provided in Table 2.

Table 2 Coefficient of Conservatism (Adapted from Oldham et al. 1995)

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

3.3.2 Butternut Survey and Health Assessment

Butternut are an endangered species protected under the provincial *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. The level of protection granted to Butternut trees is determined based on the degree to which an individual tree has been affected by the fungal pathogen known as butternut canker (*Sirococcus clavigignenti-juglandacearum*). Prior to undertaking any activity that may affect the Butternut or the lands within 25 m of a tree, an assessment of tree health must be performed by a certified Butternut Health Assessor (BHA). The BHA follows the MNDMRF methodology and a detailed report on all assessed trees must be submitted to the MECP. Butternut trees are classified as follows:

- Category 1: in the advanced stages of disease as a result of butternut canker (“non-retainable”)
- Category 2: the tree does not have butternut canker or disease is not as advanced (“retainable”)
- Category 3: could be useful in determining how to prevent or resist butternut canker (“archivable”)

3.3.3 Surface Water and Drainage Feature Mapping

Presence, location, boundary, and direction of flow were confirmed for all surface water features on and adjacent to the Site through visual investigation. Where feasible, the substrate type and cover features of surface water features were also noted. Indicators of surface drainage, including eroded soils, rill and gully formations, and sediment deposition areas were noted and traced to identify upgradient sources of erosion. All watercourse and drainage feature crossings were noted and GPS marked in the field, including bridges, culverts, and bed-level crossings.

3.3.4 Wetland Boundary Delineation

In Ontario, wetlands are mapped and evaluated under the Ontario Wetland Evaluation System (OWES). Mapped evaluated wetlands have undergone extensive study and been assessed based on their form and function under four categories: Biological, Social, Hydrological, and Special Features (Ministry of Natural Resources, 2014). Evaluated wetlands that score high enough are deemed Provincially Significant Wetlands (PSW). Evaluated wetlands that did not score high enough to be a PSW are called Locally Significant Wetlands (LSW). The province also maps unevaluated wetlands. These mapped wetlands are approximate; as such, they require field verification in order to confirm their presence and determine their boundaries.

The subject wetland was delineated following provincially approved methods outlined in the Ontario Wetland Evaluation System: Southern Manual, 3rd Ed. (Ministry of Natural Resources, 2014). Fieldwork was carried out by provincially certified Cambium staff.

The Site was visited during the early spring in order to document the extent of surface flooding at that time of year. This information is used to assist with the determination of wetland boundaries during the growing season.

The presence/absence of wetlands on the Site was confirmed through field investigations during the growing season (late May through October). Wetland boundaries were determined using the 50% wetland vegetation rule. Where vegetation-based delineation was inconclusive, soil assessment with a hand auger was used to confirm wetland boundaries. Wetland

boundaries on the Site were marked with a hand-held GPS unit and staked/flagged in the field. Where wetland communities extend off the Site, classification was done through observation from property boundaries and publicly accessible lands. Wetland delineations are carried out by provincially certified staff.

3.3.5 Breeding Bird Surveys

Two breeding bird surveys were carried out during the peak breeding season between May 24 and July 10, a minimum of 7 days apart. Point counts were complete using components of the Ontario Breeding Bird Atlas (OBBA) Guide for Participants (Ontario Breeding Bird Atlas, 2001) and the Forest Bird Monitoring Program (Cadman, Dewar, & Welsh, 1998) based on habitat characteristics. Point count stations were established in various habitat types and were combined with incidental observations to determine the presence, variety, and abundance of species. As outlined in the OBBA protocol, point counts are to be done between dawn and five hours after dawn, when wind speed is low (<19 km/h) and in the absence of rain or thick fog. All species observations (visual and auditory) were recorded during a five minute period. Each species observed was classified and assigned a code based on the highest level of breeding evidence, as defined by the protocol: Confirmed, Probable, Possible or Observed.

The Natural Heritage Information Center (NHIC) database and Species at Risk in Ontario (SARO) list were reviewed to determine the current provincial status for each bird species.

3.3.6 Amphibian Breeding Surveys

The presence of frog and toad breeding habitat was determined using auditory surveys following the Marsh Monitoring Program Participant's Handbook for Surveying Amphibians (Bird Studies Canada, 2008). According to the protocol, three amphibian surveys should be conducted between April and July, at least 15 days apart, in order to span the breeding seasons of all species that may be present in an area. Air temperature is the primary factor in determining survey dates, as different species call when air and water temperatures reach certain levels; therefore, nighttime air temperature should be greater than 5°C for the first survey, greater than 10°C for the second survey and greater than 17°C for the third survey.

Other weather conditions are also taken into consideration. Conditions are considered appropriate when wind speed is low (<19 km/h; Beaufort Wind Scale of 3 or lower) and there is light or no precipitation occurring (high humidity is ideal but heavier rain can impact ability to hear and differentiate calls). Sample points are established during the first survey, and re-visited during following surveys. At each sample point, calls from all species are aurally surveyed for 3 minutes and noted to the greatest extent possible, on a 100 m semi-circular area in front of the sampling station using call intensity codes established by the protocol:

- Code 0: No calls heard
- Code 1: Calls can be counted individually (calls do not overlap)
- Code 2: Calls overlap, but numbers of individuals can be estimated
- Code 3: Calls overlap and are continuous (full chorus); therefore, a count estimate is unreliable

Recommended monitoring windows for the Site (located between the 43rd and 47th parallels) are April 15-30, May 15-30, and June 15-30.

The recommended monitoring windows reflect historical data for when environmental conditions were typically suitable for amphibian breeding. Environmental conditions (i.e., temperature, wind, and rain) are a more important indicator for when the surveys should be conducted, with temperatures being the most important factor.

Amphibian surveys in 2022 were conducted in close proximity to the recommended windows, during evening when the required temperature and other environmental conditions were suitable for amphibian breeding.

3.3.7 Bat Maternity Roost Habitat Surveys

Bats present in Ontario typically require a snag or cavity tree for maternity roosting habitat. A snag or cavity tree is defined as a standing live or dead tree ≥25 cm diameter at breast height (DBH), with cracks, crevices, hollows, cavities and/or loose or naturally exfoliating bark

appropriate for bat roosting. High quality or significant wildlife habitat (SWH) is defined as woodlands with greater than 10 roost trees per hectare.

To determine if suitable habitat for bats existed on/or adjacent to the Site, Cambium staff conducted a bat maternity roost survey using a modified version of the methods detailed in the *Bat and Bat Habitats: Guidelines for Wind Power Projects* (Ontario Ministry of Natural Resources, 2011). The standard protocol requires that for sites with ≤10 ha of treed forest or swamp ELC community types, a minimum of 10 randomly selected plots are to be surveyed, with an additional plot added per hectare, to a maximum of 35 plots for the project area. At each plot, the number of snag/cavity trees ≥25 cm DBH within a 12.6 m radius (0.05 ha) is to be recorded. A calculation is then made to determine the snag density and if the number of cavity trees found meets the criteria for maternity surveys. Cambium used a modified version of this approach. Rather than the 10 plot method, Cambium surveyed the entire property for suitable maternity roost trees (i.e. cavity trees greater than 25 cm DBH).

3.3.8 Habitat-Based Wildlife Surveys

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

4.0 Characterization of Natural Features and Functions

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

A summary of the field investigations completed on the Site is presented in Table 3. Representative Site photos are included within the Photo Log in Appendix C. Survey stations/areas are shown on Figure 2.

Table 3 Summary of Field Investigations

Date	Time On Site	Weather	Observer	Activities
2022-04-27	8:30-11:15	0-1ºC, snowing Wind: 2 Noise: 0	D. Langlois	Preliminary Wetland Delineation Bat Maternity Roost Survey
2022-05-01	20:45-21:15	11-14ºC, cloudy Wind: 1 Noise:	D. Langlois	Amphibian Breeding Survey 1
2022-05-26	21:10-21:35	19-21ºC, drizzling Wind: 1 Noise: 0	D. Langlois	Amphibian Breeding Survey 2
2022-06-08	14:45-18:00	25ºC, clear Wind: 0 Noise: 0	T. Jamieson D. Langlois	Ecological Land Classification Wetland Delineation Soil Sampling
2022-06-16	21:45-22:00	27ºC, partly cloudy Wind: 1 Noise: 0	D. Langlois	Amphibian Breeding Survey 3
2022-06-19	8:20-9:10	14ºC Wind: 2 Noise: 2	M. Soden	Breeding Bird Survey 1

Date	Time On Site	Weather	Observer	Activities
2022-06-26	9:10-9:50	23ºC Wind: 2 Noise: 2	M. Soden	Breeding Bird Survey 2
2022-07-21	8:15-12:00	22-23ºC, cloudy Wind: 3-5 Noise: 0	B. Hnatiw	Ecological Land Classification Butternut Health Assessment

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

4.1 Landscape Position and Topography

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

The Site is relatively flat, generally sloping from south to north towards Club Drive; with no notable topographical features.

4.2 Surface Water and Drainage Features

A drainage feature was documented in the central portion of the Site, appearing to run northward. The subject feature was primarily observed to be in the dry, with only small pockets of standing water observed during the initial spring visit. No other signs of water or flow were observed. This feature is culverted numerous times under the existing maintained trails on the Site. Based on field observations the subject feature appears to be anthropogenic in nature as no upstream or downstream connections were observed.

A mapped watercourse is located on adjacent lands to the northwest of the Site. The feature and the associated riparian zone do not overlap the Site boundaries and are therefore excluded from any future discussions in the subject Study.

4.3 Wetland Delineation

Provincial mapping shows an unevaluated wetland feature located centrally on the Site and extending southward onto adjacent lands, as shown on Figure 1. However, a review of the GSCA's current regulated area mapping did not indicate the presence of wetlands, and the Site is not shown as being regulated by GSCA. Mapped unevaluated wetlands are approximate; as such, they require field verification to determine their presence and confirm their boundaries. Wetland delineations were carried out by following provincially approved methods outlined in the Ontario Wetland Evaluation System: Southern Manual, 3rd Ed. (Ministry of Natural Resources, 2013). Wetland boundaries were marked using a handheld GPS unit.

Field investigations confirmed the presence of two small wetland inclusions (approximately 0.23 and 0.13 ha in size) within the woodland on the property (Communities 8 and 9; Section 4.4; Table 4). Wetland boundaries were determined based on the dominance of wetland indicator species (>50% relative cover), including Black Ash, Pussy Willow, Narrow-leaved Cattail, and Spotted Jewelweed, and were confirmed using soil samples to assess the moisture regime of the communities (very moist (6) and moist (5), respectively). Further discussion on soil sampling and characterization is provided in Section 4.4.1.

According to the Ontario Wetland Evaluation System for Southern Ontario (Ministry of Natural Resources, 2014), the minimum size of a vegetation community to be recognized for mapping purposes is typically 0.5 hectares. The combined area of these inclusions is less than 0.5 ha and the community type is not considered specialized. These inclusions are positioned in a low-lying area of the Site that appears to collect sheet flow surface drainage and meltwater in the spring. As a result, the feature would not be considered significant at the regional or provincial level. In addition, the definition of a wetland under the Conservation Authorities Act, R.S.O. 1990 is as follows:

Wetlands defined as lands that are:

(a) seasonally or permanently covered by shallow water or has a water table close to or at its surface,

(b) directly contributes to the hydrologic function of a watershed through connection with a surface watercourse,

(c) has hydric soils, the formation of which has been caused by the presence of abundant water, and,

(d) has vegetation dominated by hydrophytic plants or water tolerant plants,

The wetland inclusions identified on the Site do not directly contribute to the hydrologic function of the watershed through a connection with a surface watercourse as they are hydrologically disconnected from other aquatic features in the vicinity of the Site. Given the above, we have determined that provisions in O.Reg. 151/06 associated with wetlands should not apply.

4.4 Vegetation Communities

The vegetation communities on the Site are summarized in Table 4 and are mapped on Figure 2. A list of identified species and representative photos for each community are provided in Appendix D.

Table 4 Vegetation Communities

No.	ELC Code	Community Description	Community Type	S -Rank
1	FOC2-2	Dry – Fresh White Cedar Coniferous Forest	Terrestrial	S5
2	CUP1	Deciduous Plantation	Terrestrial	SNA
3	CUP3	Coniferous Plantation	Terrestrial	SNA
4	CUW1	Mineral Cultural Woodland	Terrestrial	SNA
5	FOD8-1	Moist - Fresh Aspen – Poplar Deciduous Forest	Terrestrial	S5

No.	ELC Code	Community Description	Community Type	S -Rank
6	FOM4-2	Dry – Fresh White Cedar – Aspen Mixed Forest	Terrestrial	S5
7	CUT1	Mineral Cultural Thicket	Terrestrial	SNA
8	SWD4-3	Aspen – White Birch – Poplar Mineral Deciduous Swamp	Wetland	S5
9	SWD4-5	Poplar Mineral Deciduous Swamp	Wetland	S5

Field investigations determined that the majority of the Site is forested (Community 1). Vegetation north of the Site and in the southeastern corner are reflective of human influence including plantations (Communities 2 and 3), and communities with abundant non-native species (Communities 4 and 7). Two wetland communities were observed on-site and adjacent lands, as previously discussed in Section 4.3. No rare vegetation communities were observed on-site.

A search for Butternut (*Juglans cinerea*; provincially endangered) was completed as part of the vegetation survey; three Butternut trees were identified on/adjacent to the Site and further details are provided in Section 4.8.

4.4.1 Soil Characterization

Soil characterization was completed for wetland and transitional vegetation communities, where conclusive classification to vegetation type could not be completed based solely on vegetation. Soils were sampled using a hand auger, and moisture regimes were determined based on industry standard guidance. A summary of the soil characterization efforts on the Site is provided in Table 5, and soil core locations are illustrated on Figure 2.

Table 5 Soil Characterization Summary

No.	ELC Code	Soil Description	Effective Texture	Moisture Regime
1	FOC2-2	Silty Clay overlaying course boulders; no mottles or gley encountered	5	Dry (0)

No.	ELC Code	Soil Description	Effective Texture	Moisture Regime
2	FOD8-1	Silty Loam overlaying Sandy Loam; mottles encountered at 40 cm; no gley encountered	3	Moderately Moist (4)
3	FOM4-2	Silty Clay overlaying coarse boulders; no mottles or gley encountered	5	Dry (0)
4	CUT1	Silty Clay overlaying coarse boulders; no mottles or gley encountered	5	Dry (0)
5	SWD4-3	Silty Clay overlaying Sandy Clay overlaying Clay; mottles encountered at 21 cm; gley encountered at 61 cm	5	Very Moist (6)
6	SWD4-5	Silty Clay overlaying Clay; mottles encountered at 40 cm; water table at 40 cm; no gley encountered	6	Moist (5)

4.5 Significant Woodlands

In the past 200 years over 70 percent of woodland cover has been lost in Ecoregions 6E and 7E (Ministry of Natural Resources, 2010). The protection of woodland cover in southern Ontario is an important concern (Ministry of Natural Resources, 2010). Planning authorities are responsible for protecting significant woodlands within Ecoregions 6E and 7E in accordance with policies 2.1.4(b) and 2.1.6 of the PPS.

The Grey County Official Plan (2019) defines significant woodland as: a woodland greater than or equal to 40 ha size outside of settlement areas, or greater than or equal to four (4) hectares within settlement area boundaries. If a woodland fails to meet the size criteria outside a settlement area, a woodland can also be significant if it meets any two of the following three criteria: located within 30 m of another significant woodland, overlaps the boundaries of a provincially significant wetland, core area, or significant area of natural and scientific interest, and/or contains interior habitat of greater than or equal to eight (8) ha.

Section B5.5.2 of the Town of the Blue Mountains Official Plan incorporates the County's significant woodland definition and mapping. Based on a review of Appendix 1 of the Town of Blue Mountain Official Plan, the forested lands on the Site are designated as a significant woodland.

4.6 Wildlife Survey Results

Incidental wildlife observations were recorded during all field surveys. These included American Robin, Blue Jay, Canada Goose, Wood Thrush, Eastern Gartersnake, Gray Treefrog, Red Squirrel, and White-tailed Deer tracks and scat.

The Wood Thrush is a species at risk and will be discussed further in Section 4.8.

In addition, to incidental wildlife observations, visual surveys of the roadway (7th Line) were conducted during all visits to document any signs of wildlife passage/use. No signs of wildlife were documented during these visual scans.

4.6.1 Birds

OBBA breeding bird surveys were completed as a part of the current study. A full list of bird species observed on or adjacent to the Site, as well as their breeding evidence, federal and provincial status and s-ranks are provided in Appendix E. A total of seven species had probable or confirmed breeding evidence (shaded cells in Appendix E).

As noted above, Wood Thrush was recorded incidentally during one of the field investigations, however, this species was not recorded during the breeding bird surveys and no probable or confirmed breeding evidence was observed.

4.6.2 Amphibians

Amphibian breeding surveys were completed and a total of three species were identified on or adjacent to the Site, as shown in Table 6 (bold species were located on the Site). Of these, one had call level codes of 3: Spring Peeper. None of the species observed are federal or provincial SAR. The call codes listed in Table 6 are the maximum call levels documented for each species during the three survey events.

Table 6 Summary of Amphibian Survey Results

Sample Point	Survey Direction	Species	Maximum Call Intensity	# of Individuals	Inside or Outside 100 m Sample Plot
1	S	Spring Peeper	3	-	Outside
		Spring Peeper	2	6	Inside
		Gray Treefrog	2	4	Inside
		American Toad			Outside
2	N	Spring Peeper	3	-	Outside
3	W	-	-	-	-

Notes: "-" indicates no calls heard

4.6.3 Mammals

For the bat maternity roost survey, the potentially suitable forest habitat was surveyed by conducting walking transects. Individual trees that met the criteria were marked with a hand-held GPS unit. Two trees potentially suitable for bat maternity roosting were identified through our site-wide survey. The number of potential bat maternity roost trees observed at the Site was then divided by the total area of the Site. The density of candidate bat maternity roost trees was 0.43/ha.

Based on these results, the Site does not provide high quality maternity roosting habitat for bat species and does not qualify as Significant Wildlife Habitat on this basis. No features that could be used as hibernacula were observed on the Site.

4.7 Significant Wildlife Habitat

Guidance documents produced by the MNRF for the identification and evaluation of SWH were used to identify and confirm occurrences of SWH on the Site (MNR, 2000). The Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (Ministry of Natural Resources and Forestry, 2015) apply to the subject property. Information gathered during the background review and field investigations were compared to SWH criteria to evaluate the property for

SWH. A comprehensive SWH Screening table is provided in Appendix F. Details on species of conservation concern and their protected habitats are provided in Section Appendix G.

4.8 Species of Conservation Concern

A list of species of conservation concern, including SAR, with potential to occur in the general vicinity of the Site has been compiled based on known species' ranges, habitat requirements, and review of background information sources (as listed in Section 3.1). In addition, the list has been augmented with direct field observations from the Study, as detailed in the previous sections. Cambium has employed a habitat-based screening, supplemented with targeted field surveys where necessary, to identify suitable habitat for species of conservation concern located on or adjacent to the Site. A detailed habitat suitability analysis is provided in Section 5.0 and a discussion of the results is provided below.

No Critical Habitat for aquatic species at risk listed under SARA was identified on or adjacent to the Site, based on our review of DFO Aquatic SAR mapping.

4.8.1 Endangered and Threatened Species

4.8.1.1 Bats

Based on its biophysical characteristics, the Site may provide limited roosting and foraging habitat for the following bat species: Tri-coloured Bat, Eastern Small-footed Myotis, and Little Brown Myotis. The results of the bat maternity roost surveys indicate that while there are suitable cavity trees for bat roosting present, these trees do not occur at a density that meets the threshold for habitat protection. No SAR bats or evidence of bats was observed on the Site. Avoidance and mitigation measures relating to the general protection of bats are provided in Section 5.3.

4.8.1.2 Butternut

Butternut trees across North America have been infected by a fungus known as butternut canker, which is usually fatal. Butternut is an endangered species and protected under Ontario's Endangered Species Act.

A search for Butternut (*Juglans cinerea*; provincially endangered) was completed as part of the vegetation survey. Three butternut trees were identified on adjacent lands to the south of the Site (see Figure 2). Avoidance and mitigation measures relating to the protection of Butternuts are provided in Section 5.2.

4.8.2 Special Concern Species

4.8.2.1 Birds

Wood Thrush was documented incidentally during one of the field investigations, however the species was not recorded with probable or confirmed breeding evidence during the breeding bird surveys. Avoidance and mitigation measures relating to the general protection of birds are provided in Section 5.3.

4.8.3 Locally Important Species

Black Ash was recently listed as Endangered due to the widespread impact of Emerald Ash Borer, an invasive beetle, on Black Ash trees throughout Ontario. A Minister's Order for the temporary suspension of protection upon the listing of Black Ash under the ESA came into effect on January 26, 2022 (*Ontario Regulation 23/22*). The regulation includes an order to temporarily pause the application of the prohibitions in Sections 9 and 10 of the ESA against harming the species or its habitat for a period of two years from the time that Black Ash is added to the SARO List regulation. The temporary pause applies across Ontario. As such, no further consideration of this species is required at this time.

5.0 Impact Assessment and Mitigation Measures

The proposed development involves the development of a residential subdivision, which will be accessed from the private Georgian Bay Club road, municipally referred to as Clubhouse Drive. A Conceptual Site Plan is provided in Appendix B and shown on Figure 3 .

The following protected features were identified on and adjacent to the Site:

- Significant Woodlands
- Habitat of Endangered and Threatened Species

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

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

5.1 Significant Woodlands

Based on a review of Appendix 1 of the Town of Blue Mountain Official Plan, the forested lands on the Site are designated as a significant woodland. The proposed development would require removal of the woodlands on the Site.

Due to existing anthropogenic stressors (i.e., historical, and ongoing recreational use), the subject woodland exhibited signs of regular disturbance. An extensive trail system was noted throughout the feature. Vegetative diversity within the woodland is relatively low, with a large component (Community 1) being dominated by Eastern White Cedar. In addition, no uncommon characteristics were observed within the forest communities on the Site.

Given the position of the subject woodland within the larger tract of natural cover in the vicinity of the Site, it does not act as a significant wildlife corridor or linkage area. Wildlife movement patterns will be largely maintained via the extensive forested lands to the west of the Site, on

the opposite side of 7th Line. Wildlife movement to the east, and north is mainly precluded by existing residential, and recreational development.

Considering the items noted above, Cambium is of the opinion that removing the portion of the significant woodland located on the Site will not negatively impact the overall ecological function of the feature. The remaining adjacent woodlands to the west will continue to qualify as significant woodlands in the proposed post-development condition.

5.2 Habitat of Endangered and Threatened Species

Butternut is protected under the provincial ESA from being killed, harmed, or removed. The level of protection granted to Butternut trees is determined based on the degree to which an individual tree has been affected by the fungal pathogen known as butternut canker (*Sirococcus clavigignenti-juglandacearum*). Prior to undertaking any activity that may affect the Butternut or the lands within 25 m of a tree, an assessment of tree health must be performed by a Butternut Health Expert (BHE) (i.e., a qualified professional who has the expertise, education, training, and experience necessary to assess the health of butternut trees and to carry out the responsibilities imposed on the expert by Ontario Regulation 830/21). All three Butternut trees were located on adjacent lands. The 25 m setback associated with two of the trees does not overlap the Site boundary therefore no impacts are anticipated. The third tree (furthest east), was assessed by a BHE to better understand the appropriate root harm protection zone required, as per O.Reg 830/21. Based on the assessment, the tree is afforded a 23 m root harm prevention zone as shown on Figure 3. No negative impacts or harm is anticipated to the adjacent Butternuts assuming the setbacks are not encroached upon and allowed to naturally self-sustain.

5.3 Best Management Practices

To minimize potential impact to the natural environment on and surrounding the Site, Cambium recommends that the best management practices outlined in Table 7 be implemented at the Site.

Table 7 Best Management Practice Recommendations

Potential Impact	Recommended Best Practice
Erosion and Sedimentation	Prior to any construction activities taking place, it is essential that perimeter sediment fencing be installed around construction areas. Fencing should be properly keyed into the ground and securely fastened to vertical supports spaced ≤ 2 m apart. This key control measure will help prevent sediment from entering surface water features (i.e., the watercourse) in the surrounding landscape. All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated. Any observed overland drainage channels originating from Site, that may or may not have arisen as a result of erosion, should be directed to a check dam structure, prior to discharging to off-site areas. Construction activities that require earthworks (e.g., grading, excavation, etc.) should be scheduled to avoid dates of heavy rainfall events and times of high runoff volumes.
Increase in Runoff - Impervious Surfaces	Runoff from the Site is expected to increase with the introduction of impermeable surfaces (i.e., building roofs, roadways, and walkways) and compacted surfaces with reduced infiltration capacity. Measures to increase infiltration of run-off from these surfaces should be encouraged and, where possible, included in the Site Plan for the development. Eavestrough downspouts should be directed to vegetated areas (such as lawn, or gardens) and not onto hardened surfaces, to encourage infiltration.
Changes to Water Quality and Quantity	The Stormwater Management Plan prepared for the Site should specifically address potential stormwater-related impacts to water quality and quantity of the surrounding features, through quality control measures and a feature-based water balance study.
Wildlife: Bats & Birds (Disturbance and Harm)	Nesting birds and their nests, eggs, and young are protected under the *Migratory Birds Convention Act, 1994*. Demolition of any structure and clearing of vegetation should occur outside of the active bird and bat season, which extends from April 1 to September 30. Vegetation removal should be limited to the greatest extent possible across the Site.

Potential Impact	Recommended Best Practice
	If any structure removal/alteration or vegetation clearing is to occur between April 1 and September 30, the structure and vegetation should be investigated by a qualified biologist to confirm if any bat roosting activity or active nests are present, prior to removal. Structure demolition and vegetation clearing can proceed provided there are no active nests or roosting bats. If active nests are confirmed, the nests should be left undisturbed until young have fledged or the nest is determined to be inactive. If any bats are encountered, activities should cease until consultation with MECP has occurred. Note that some birds nest on the ground and in low-lying vegetation and shrubs; therefore, all habitat types should be inspected prior to ground disturbance if removals are to occur during the breeding season.
Species at Risk (SAR; Threatened and Endangered)	SAR observations, including most species of snakes and turtles, should be reported to the Natural Heritage Information Centre (NHIC). If any individuals are encountered, they should be photographed and allowed time to move out of harm's way. SAR should not be handled by unauthorized individuals.
Spread of Invasive Species	Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands, woodlands, and watercourses. Best management practices to reduce the spread of invasive species include: Revegetate with species native to the local area. Request fill and compost from reputable sources that are conscious of the potential for the spread of invasive species via these media. Get to know the most common invasive species in the area. Brush off or clean any shoes, boots and equipment that have encountered invasive species before returning to the property. Immediately eradicate invasive species if they are observed on the property. Do not compost invasive species; put them in plastic bags and dispose of them in the garbage. Do not dispose of lawn or garden clippings in the forest or wetlands to avoid species introductions.

Potential Impact	Recommended Best Practice
	An excellent resource for identifying and controlling invasive species can be found through the Ontario Invasive Plant Council: Home - Ontario Invasive Plant Council (ontarioinvasiveplants.ca) (OIPC, 2022)
Anthropogenic Impacts – Noise	Noise is not expected to increase significantly because of the proposed development as it is consistent with the land use on the surrounding properties. Temporary acute noise may occur during construction activities and should follow appropriate local noise by-laws. All equipment should be equipped with appropriate mufflers to mitigate noise levels during construction.
Anthropogenic Impacts – Lighting	Artificial lighting can have an impact on nocturnal movement of wildlife within natural areas. To minimize impacts to wildlife, it is recommended that outdoor lights be operated on timers, rather than by motion detection. Outdoor lighting associated with the development should be directed at the ground, rather than into the adjacent natural areas. Bulb wattage should be as low as practical while meeting the safety intent of the lighting. Lighting in common areas should be capped to direct light to the intended area of the ground to limit light pollution.
Anthropogenic Impacts – Domestic Animals	Access of domestic animals to natural areas can have a negative impact on local wildlife due to predation, harassment, and spread of illness and disease. Signage should be posted at trailheads and park areas to keep pets on a leash at all times, and to appropriately dispose of pet waste.

6.0 Policy Conformity

6.1 Provincial Policies

Based on the key natural heritage and/or hydrologic features identified on or adjacent to the Site and the findings of the field investigations detailed herein, the proposed development of the Site is in conformity with the PPS. Conformity with applicable natural heritage policy is summarized in Table 8.

Town of Blue Mountain Official Plan identifies significant woodlands on and adjacent to the Site. Section B5.2.1 states that development or site alteration in or adjacent to a significant woodland feature shall not be permitted unless it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions, through the completion of an EIS. This Study addresses the EIS requirements of the Official Plan for all confirmed features on or adjacent to the Site.

Section 1.8 of the NEP outlines policies relating to the land designation of Escarpment Recreation Area. Based on the policies, residential dwellings and lot creation are permitted. As outlined in Section 2.1 of the NEP, the development criteria provided regarding natural heritage features are not applied, as the subject Site is outside of the Niagara Escarpment Development Control Area and does not require a NEP development permit.

Table 8 PPS Policy Conformity Summary

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Significant Wetland in Ecoregions 5E, 6E and 7E or in the Canadian Shield north of Ecoregions 5E, 6E and 7E	No	No	N/A
	Explanation: N/A		
Significant Coastal Wetland	No	No	N/A
	Explanation: N/A		

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Coastal Wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 2.1.4(b)	No	No	N/A
	Explanation: N/A		
Significant Woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)	Yes	Yes	Yes
	Explanation: The woodlands on the Site do not serve as a wildlife corridor or linkage area and were documented with existing anthropogenic stressors, and low vegetative diversity. Cambium is of the opinion that removing the portion of the significant woodland located on the Site will not negatively impact the overall ecological function of the feature.		
Significant Valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)	No	No	N/A
	Explanation: N/A		
Significant Wildlife Habitat (including habitat of special concern species)	No	No	N/A
	Explanation: N/A		
Habitat of Threatened and Endangered Species	No	Yes	Yes
	Explanation: No negative impacts or harm is anticipated to the adjacent Butternuts assuming the recommended setbacks are implemented and allowed to naturally self-sustain.		
Areas of Natural and Scientific Significance	No	No	N/A
	Explanation: N/A		
Fish Habitat	No	Potentially	Yes
	Explanation: The watercourse on adjacent lands to the northwest of the Site may provide fish habitat. No negative impacts to this feature or it's riparian area are anticipated as the feature is located entirely on adjacent lands.		

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
	Any potential indirect impacts will be effectively mitigated through the implementation of best management practices outlined in Section 5.3.		
Seepage Areas/Springs	No	No	N/A
	Explanation: N/A		

7.0 Summary of Mitigation, Compensation, and Best Practices

The following recommendations are provided for the proposed development:

1. All required approvals and permits should be obtained prior to the commencement of any Site alteration / construction activities.
2. Butternut setbacks have been identified and mapped on Figure 3. The setbacks are considered sufficient to protect trees provided the area be allowed to naturally self-sustain (i.e., a buffer area where no vegetation removals or grading is allowed).
3. Demolition of any structure and clearing of vegetation should occur outside of the active bird and bat season, which extends from April 1 to September 30. Vegetation removal should be limited to the greatest extent possible across the Site.
4. If any structure removal/alteration or vegetation clearing is to occur between April 1 and September 30, the structure and vegetation should be investigated by a qualified biologist to confirm if any bat roosting activity or active nests are present, prior to removal. Structure demolition and vegetation clearing can proceed provided there are no active nests or roosting bats. If active nests are confirmed, the nests should be left undisturbed until young have fledged or the nest is determined to be inactive. If any bats are encountered, activities should cease until consultation with MECP has occurred. Note that some birds nest on the ground and in low-lying vegetation and shrubs; therefore, all habitat types should be inspected prior to ground disturbance if removals are to occur during the breeding season.
5. The Stormwater Management Plan prepared for the Site should specifically address potential stormwater-related impacts to water quality and quantity of the surrounding features, erosion potential, and a feature-based water balance study (if required).
6. An Erosion and Sediment Control (ESC) Plan that includes perimeter light duty sediment fencing should be implemented around construction areas prior to the commencement of any Site alteration.
    - Fencing should be properly keyed into the ground and securely fastened to vertical supports spaced ≤ 2 m apart.

- All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated.
- All ESC fencing should be removed following construction, once exposed soils have been revegetated or appropriate stabilized.

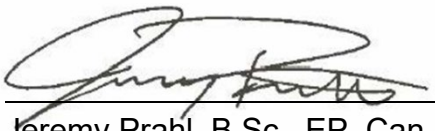
7. Machinery and construction materials should be stored within the designated construction area, throughout the construction period.
8. Construction activities that require earthworks (e.g., grading, excavation, etc.) should be scheduled to avoid dates of heavy rainfall events and times of high runoff volumes.
9. Best management practices to reduce the spread of invasive species should be implemented at the Site.
10. Though not identified in the field inventories, any subsequently identified SAR discovered on the Site must be left undisturbed as required by the *Endangered Species Act, 2007*. If any SAR individuals are encountered, they should be photographed and allowed time to move out of harms way. All SAR observations should be reported to the MNRF Natural Heritage Information Centre.

8.0 Closing

In closing, potential negative impacts associated with the proposed development and site alteration can be appropriately minimized, provided that the recommendations outlined in Section 7.0 are followed. The information presented herein demonstrates that the proposed development can be carried out in a way that will not adversely impact natural heritage and hydrologic features and function identified on or adjacent to the subject Site. Furthermore, the proposed development complies with applicable provincial policy.

Respectfully submitted,

Cambium Inc.



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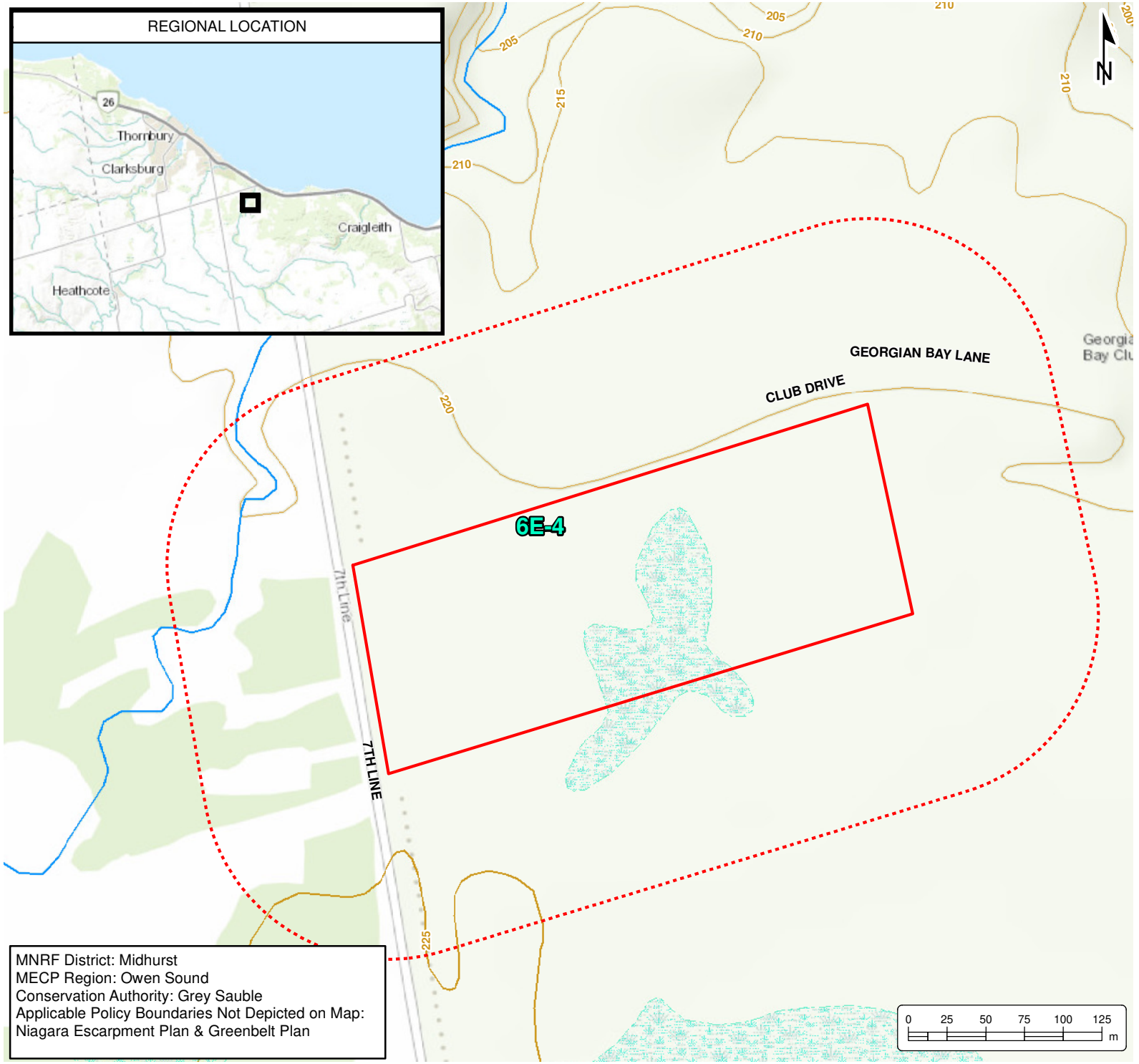
Glossary of Terms

ANSI: Area of Natural and Scientific Interest
ARA: Aquatic Resources Area
ARA: Aggregate Resources Act
AS: Agricultural System
ATK: Aboriginal Traditional Knowledge
BMA: Bear Management Area
BMP: Best Management Practice
CA: Conservation Authority
CEAA: Canadian Environmental Assessment Act/Agency
CFA: Canadian Forestry Association
CFIP: Community Fisheries Involvement Program
CFS: Canadian Forestry Service
CHU: Critical Habitat Unit
CH: Cultural Heritage
CLI: Canada Land Inventory
CLU: Crown Land Use
COSSARO: Committee on the Status of Species at Risk in Ontario
CR: Conservation Reserve
CWIP: Community Wildlife Involvement Program
CWS: Canadian Wildlife Service
DFO: Fisheries and Oceans Canada
EA: Environmental Assessment
EAA: Environmental Assessment Act
EAB: Emerald Ash Borer
EBR: Environmental Bill of Rights
EIA: Environmental Impact Assessment
EIS: Environmental Impact Study/Statement
ELC: Ecological Land Classification System
ELUP: Ecological Land Use Plan
END: Endangered species
EPA: Environmental Protection Act
ER: Environmental Registry
ESA: Endangered Species Act (2007)
ESA: Environmentally Sensitive Area
ESC: Erosion and Sediment Control
GIS: Geographic Information System
GLSL: Great Lakes – St. Lawrence
GPGGH: Growth Plan for the Greater Golden Horseshoe
GPS: Global Positioning System
HSA: Habitat Suitability Analysis
HIS: Habitat Suitability Index
KHA: Key Hydrologic Areas
KHF: Key Hydrologic Features
KNHF: Key Natural Heritage Features
LCFSP: Licence to Collect Fish for Scientific Purposes
LIO: Land Information Ontario
LRIA: Lake and Rivers Improvement Act
LUP: Land Use Permit or Plan
MA: Management Area
MAFA: Moose Aquatic Feeding Area
MCEA: Municipal Class Environmental Assessment
MECP: Ontario Ministry of Environment, Conservation and Parks
MNDMRF: Ontario Ministry of Natural Resources and Forestry
NER: Natural Environment Report
NHIC: Natural Heritage Information Centre
NHIS: Natural Heritage Information System
NHS: Natural Heritage System
OBM: Ontario Base Map
OFIS: Ontario Fisheries Information System
OLI: Ontario Land Inventory
OMAFRA: Ontario Ministry of Agriculture, Food and Rural Affairs
OWES: Ontario Wetland Evaluation System
PPS: Provincial Policy Statement (2014)
PSW: Provincially Significant Wetland
RLUP: Regional Land Use Plan
RMP: Regional Management Plan
R.P.F.: Registered Professional Forester
SAR: Species at Risk
SARO: Species at Risk in Ontario
SC: Special Concern species

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

Appended Figures



MNRF District: Midhurst
MECP Region: Owen Sound
Conservation Authority: Grey Sauble
Applicable Policy Boundaries Not Depicted on Map:
Niagara Escarpment Plan & Greenbelt Plan

ENVIRONMENTAL IMPACT STUDY

DUNN CAPITAL CORPORATION
The Enclave at GBC
Blue Mountains, Ontario

LEGEND

- Watercourse, Permanent
- Contour 5m Interval (Major)
- Contour 5m Interval (Minor)
- Unevaluated Wetlands
- Ecodistrict
- Site
- 120 m Adjacent Lands

Notes:
- Base mapping features are © Queen's Printer of Ontario, 2019 (this does not constitute an endorsement by the Ministry of Natural Resources and Forestry or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

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

LANDSCAPE SETTING AND POLICY AREAS

Project No.: 14562-001		Date: November 2022	Rev.:
Scale: 1:3,500		Projection: NAD 1983 UTM Zone 17N	
Created by: DJL	Checked by: JPP	Figure: 1	

O:\GIS\MXDs\14500-14999\14562-001 Dunn Capital Corporation - EIS - The Enclave at GBC, Blue Mountains\2022-10-06 FIG1 - Landscape Setting and Policy Areas.mxd

VEGETATION COMMUNITIES

1: FOC2-2; Dry – Fresh White Cedar Coniferous Forest
2: CUP1; Deciduousl Plantation
3: CUP3; Coniferous Plantation
4: CUW1; Mineral Cultural Woodland
5: FOD8-1; Moist - Fresh Aspen – Poplar Deciduous Forest
6: FOM4-2; Dry – Fresh White Cedar – Aspen Mixed Forest
7: CUT1; Mineral Cultural Plantation
8: SWD4-3; Aspen – White Birch – Poplar Mineral Deciduous Swamp
9: SWD; Deciduous Swamp

ENVIRONMENTAL IMPACT STUDY

DUNN CAPITAL CORPORATION
The Enclave at GBC
Blue Mountains, Ontario

LEGEND

- Amphibian Breeding Survey Station (AMP)
- Breeding Bird Survey Station (BBS)
- Butternut
- Soil Point (SP)
- Wetland Boundary
- Culvert
- Drainage Feature
- Watercourse, Permanent
- Anthropogenic Disturbance Area
- Vegetation Communities
- Wetland Inclusions (0.23 ha & 0.13 ha)
- Site
- 120 m Adjacent Lands

Notes:
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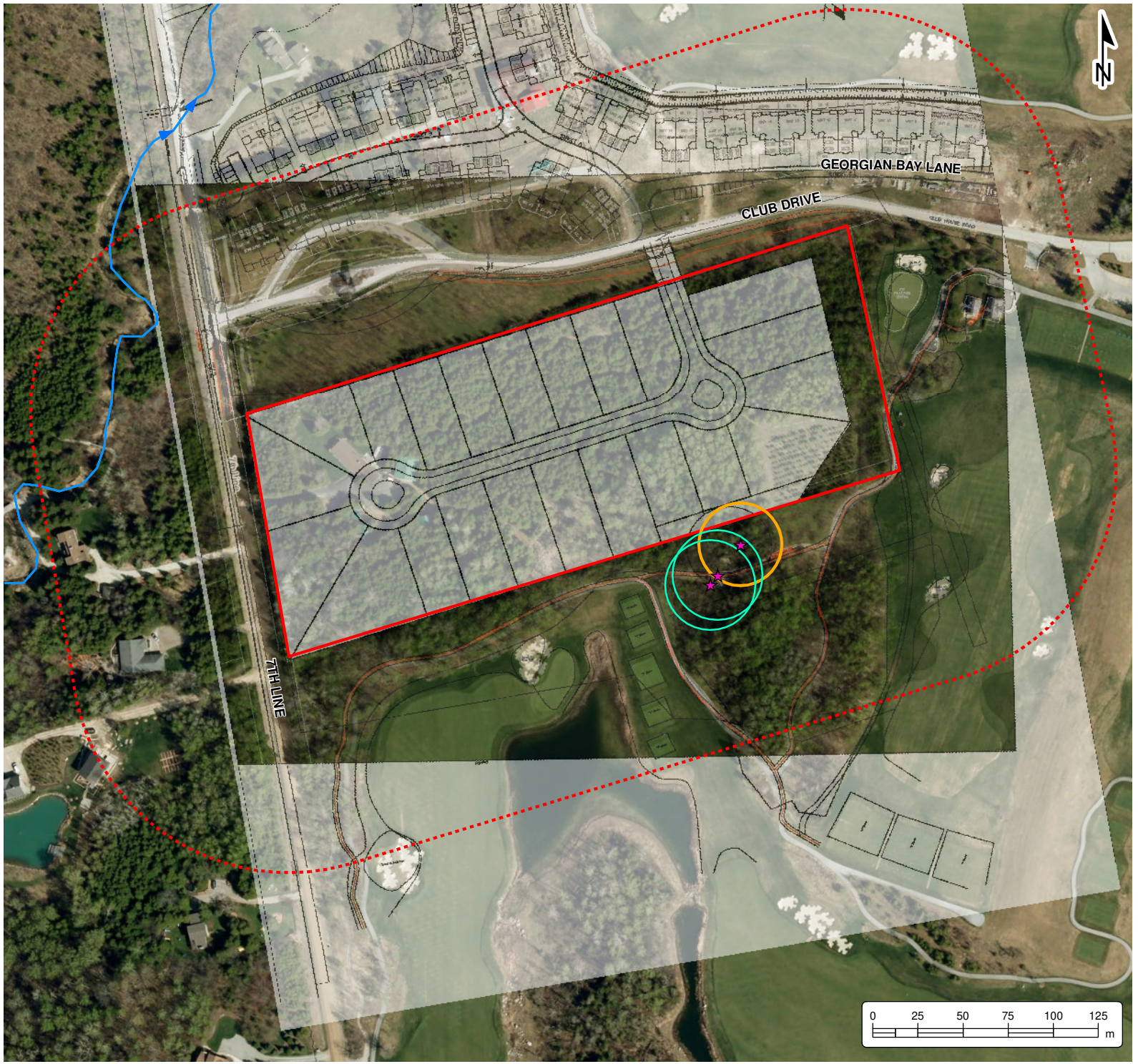
NATURAL HERITAGE FEATURES AND ECOLOGICAL SURVEY STATIONS

Project No.: 14562-001		Date: November 2022	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: DJL	Checked by: JPP	Figure: 2	

O:\GIS\MXDs\14500-14999\14562-001 Dunn Capital Corporation - EIS - The Enclave at GBC, Blue Mountains\2022-10-06 FIG2 - Natural Heritage Features and Ecological Survey Stations.mxd



ENVIRONMENTAL IMPACT STUDY

DUNN CAPITAL CORPORATION
The Enclave at GBC
Blue Mountains, Ontario

LEGEND

- Butternut
- Watercourse, Permanent
- 25 m Setback
- Root Harm Prevention Zone (18 m + 5 m Buffer = 23 m)
- Site
- 120 m Adjacent Lands

Notes:
- Base mapping features are © Queen's Printer of Ontario, 2019 (this does not constitute an endorsement by the Ministry of Natural Resources and Forestry or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

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194 Sophia Street
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NATURAL HERITAGE CONSTRAINTS

Project No.: 14562-001		Date: November 2022	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: DJL	Checked by: JPP	Figure: 3	

O:\GIS\MXDs\14500-14999\14562-001 Dunn Capital Corporation - EIS - The Enclave at GBC, Blue Mountains\2022-10-28 FIG3 - Natural Heritage Constraints.mxd

Appendix A
Correspondence

Danielle Leal

From: Danielle Leal
Sent: November 1, 2022 3:05 PM
To: Nicole McArthur; Justine Lunt
Cc: Planning & Permits; asmith@thebluemountains.ca; Cambium Admin
Subject: RE: Draft EIS Terms of Reference - 516681 7th Line, Town of The Blue Mountains (13519-001)

Good afternoon,

I am just following up on the request for a review of the Terms of Reference for the EIS outlined below.

We have completed fieldwork and are in the process of preparing our report.

Thank you,
Danielle

From: Jeremy Prahl <Jeremy.Prahl@cambium-inc.com>
Sent: July 15, 2022 11:35 AM
To: Nicole McArthur <n.mcarthur@greysauble.on.ca>; Justine Lunt <j.lunt@greysauble.on.ca>
Cc: Planning & Permits <PlanningPermits@greysauble.on.ca>; asmith@thebluemountains.ca; Cambium Admin <file@cambium-inc.com>; Danielle Langlois <Danielle.Langlois@cambium-inc.com>
Subject: RE: Draft EIS Terms of Reference - 516681 7th Line, Town of The Blue Mountains (13519-001)

Hi Nicole,

Thank you for the update. I look forward to discussing this file with Justine.

Same to you – enjoy the weekend!
Jeremy

CAMBIUM

Jeremy Prahl, B.Sc., EP, CAN-CISEC
Group Manager - Natural Sciences
Cambium - Barrie
249.359.0689
866.217.7900
cambium-inc.com

Environmental | Building Sciences | Geotechnical | Construction Quality Verification

---

From: Nicole McArthur <n.mcarthur@greysauble.on.ca>
Sent: July 15, 2022 10:55 AM

To: Jeremy Prahl <Jeremy.Prahl@cambium-inc.com>; Justine Lunt <j.lunt@greysauble.on.ca>
Cc: Planning & Permits <PlanningPermits@greysauble.on.ca>; asmith@thebluemountains.ca; Cambium Admin <file@cambium-inc.com>; Danielle Langlois <Danielle.Langlois@cambium-inc.com>
Subject: RE: Draft EIS Terms of Reference - 516681 7th Line, Town of The Blue Mountains (13519-001)

Good morning Jeremy,

Thank you for reaching out. At this time, I am going to pass along your request to our Environmental Planner – Justine to review.

Hope you have a great weekend!

Kind regards,

Nicole McArthur
Planning Technician

519.376.3076
237897 Inglis Falls Road
Owen Sound, ON N4K 5N6
www.greysauble.on.ca

Grey Sauble CONSERVATION

From: Jeremy Prahl <Jeremy.Prahl@cambium-inc.com>
Sent: July 14, 2022 10:36 AM
To: Nicole McArthur <n.mcarthur@greysauble.on.ca>
Cc: Planning & Permits <PlanningPermits@greysauble.on.ca>; asmith@thebluemountains.ca; Cambium Admin <file@cambium-inc.com>; Danielle Langlois <Danielle.Langlois@cambium-inc.com>
Subject: Draft EIS Terms of Reference - 516681 7th Line, Town of The Blue Mountains (13519-001)

Good morning Nicole,

Cambium has been retained by Dunn Capital Corp. to complete an Environmental Impact Study (EIS) for the property located at 516681 7th Line, in Town of The Blue Mountains, Grey County, Ontario (the Site), in support of a draft plan of subdivision application. Fieldwork was initiated in April 2022 and various field investigations and targeted studies have been undertaken to document natural heritage and hydrologic features and functions on the Site.

During our background review, it noted that unevaluated wetlands are shown on the Site on provincial (LIO) mapping; however, according to Grey Sauble Conservation Authority's current regulated area mapping, no wetland features are identified, and the Site is not shown as being regulated.

Cambium has carried out field investigations to assess existing conditions as they relate to current vegetation communities and wetland features. Two small wetland inclusions were documented within the woodland on the property (approximately 0.23 and 0.13 ha in size). According to the Ontario Wetland Evaluation System for Southern Ontario (Ministry of Natural Resources, 2014), the minimum size of a vegetation community to be recognized for mapping purposes is typically 0.5 hectares. The combined area of these inclusions is less than 0.5 ha and the community type is not considered specialized. These inclusions are positioned in a low-lying area of the Site that appears to collect sheet flow surface drainage and meltwater in the spring. As a result, the feature would not be considered significant at the regional or provincial level. In addition, the definition of a wetland under the Conservation Authorities Act, R.S.O. 1990 is as follows:

> *Wetlands defined as lands that are:*
> *(a) seasonally or permanently covered by shallow water or has a water table close to or at its surface,*
> *(b) directly contributes to the hydrologic function of a watershed through connection with a surface watercourse,*
> *(c) has hydric soils, the formation of which has been caused by the presence of abundant water, and,*
> *(d) has vegetation dominated by hydrophytic plants or water tolerant plants,*

The wetland inclusions identified on the Site do not directly contribute to the hydrologic function of the watershed through a connection with a surface watercourse as they are hydrologically disconnected from other aquatic features in the vicinity of the Site. Given the above, we have determined that provisions in O.Reg. 151/06 associated with wetlands should not apply.

If you could kindly review and comment on the suitability of the following proposed Terms of Reference for the EIS, that would be greatly appreciated.

- Consult with the Town and GSC staff, as required, to determine their interest/concerns regarding the proposed works and scope of work requirements.
- Compile and review applicable background information and environmental mapping pertaining to the Site.
- Conduct one bat maternity roost survey during lead-off period per MNRF protocol. *Completed in April 2022 – a limited number of wildlife trees were documented; The Site does not provide high quality maternity roosting habitat.*
- Conduct two (2) breeding bird surveys on the Site, using Components of the Ontario Breeding Bird Atlas Guide for Participants (OBBA, 2001) and the Forest Bird Monitoring Program (Canadian Wildlife Service, 2005) as appropriate, based on site conditions. *Completed in June 2022.*
- Conduct an aquatic habitat assessment, to identify and characterize features of significance (e.g., wetlands, seeps, springs, etc.) on the Site. *Completed in April 2022.*
- Conduct three (3) amphibian breeding surveys, following the Marsh Monitoring Program Participant's Handbook for Surveying Amphibians (Bird Studies Canada, 2008), to document frog and toad breeding activity on and adjacent to the Site. *Completed in April-June 2022, limited amphibian breeding activity documented. The Site does not qualify as Significant Wildlife Habitat for amphibian breeding.*
- Conduct two vascular plants surveys on the Site in late spring, and mid-summer to provide a two-season inventory. *One survey completed June 2022. A second survey is planned for August 2022.*
- Classify existing vegetation communities on the Site, according to the Ecological Land Classification System for Southern Ontario (Lee et. al., 1998), and evaluate them for sensitivity, rarity, and botanical quality.
- Undertake a Species at Risk (SAR) screening to assess for potential SAR habitat and evaluate compliance with the provincial Endangered Species Act, 2007.
- Record observations of wildlife occurrences and assess wildlife habitat function, including significant wildlife habitat on the Site. Any evidence of breeding, forage, shelter, or nesting sites, and/or travel corridors will be noted.
- Identify, assess, and include detailed descriptions of the natural features and functions identified on the Site and adjacent lands.

- Map key natural heritage and hydrologic features, vegetation communities, and other environmental features (watercourses, wetlands, areas of groundwater discharge, wildlife habitat, etc.) and proposed development on current, high quality aerial imagery. Any environmental feature/area mapping generated through the EIS work will be made available in GIS shapefile format.
- Provide an assessment of the potential impacts of the proposed development on natural features and their related ecological and hydrologic functions.
- Demonstrate conformity with the applicable policies and plans within the Beaver River watershed, including Provincial Policy Statement, 2020; Conservation Authorities Act and O.Reg. 151/06; County of Grey Official Plan; and the Town of The Blue Mountains Official Plan.
- Develop an appropriate avoidance, mitigation, and/or restoration strategy, to address the potential impacts identified.
- Complete one (1) final report with supporting figures for circulation for approval to the Town and GSC.

If you would like to discuss any of the details above, feel free to contact me directly.

Thank you,

Jeremy Prahl, B.Sc., EP, CAN-CISEC
Group Manager - Natural Sciences
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Appendix B
Conceptual Site Plans


STREET A
STREET B
STREET C
CLUB HOUSE ROAD
RELOCATED CART PATH
1.0m WIDE CHANNELS C/W NATURAL BOULDERS AND TERRAFIX GEOTEXTILE
216.03
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
UNIT 13
UNIT 14
UNIT 15
UNIT 16
UNIT 17
UNIT 18
UNIT 19
UNIT 20
UNIT 21
UNIT 22
UNIT 23
UNIT 24
UNIT 25
UNIT 26
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UNIT 41
UNIT 42
UNIT 43
UNIT 44
UNIT 45
UNIT 46
UNIT 47
UNIT 48
UNIT 49
UNIT 50
UNIT 51
UNIT 52
UNIT 53
UNIT 54
UNIT 55
UNIT 56
2800 sq.ft
2400 sq.ft
1900 sq.ft
FF=217.08
FF=216.38
FF=216.15
FF=216.02
FF=215.22
FF=215.12
EX. PRACTICE GREEN
Extent of Sand Trap
Bush
Fairway
"T" Blocks
Tiblin

Appendix C
Photographic Log

Photo 1 Existing structures on-the Site, April 2022.

Photo 2 Existing trails on the Site, April 2022.

Photo 3 View of drainage channel and culvert under existing trail on the Site, April 2022

Photo 4 View of drainage channel and culvert under existing trail on the Site, April 2022.

Photo 5 View of drainage channel, April 2022.

Photo 6 View of existing maintained trails, April 2022.

Photo 7 View of 7th Line at property boundary, April 2022.

Photo 8 View of disturbed area, April 2022.

Appendix D
Vegetation Species List

VEGETATION COMMUNITY CLASSIFICATION: FOC2-2 COMMUNITY #: 1 LOCATION: Georgian Bay Club COORDINATES: 44.5361284, -80.3799573

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 / July 21, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
American Mountain-ash	*Sorbus americana*	Rosaceae	0	8			S5
Annual Fleabane	*Erigeron annuus*	Asteraceae	3	0			S5
Basswood	*Tilia americana*	Tiliaceae	3	4			S5
Black Raspberry	*Rubus occidentalis*	Rosaceae	5	2			S5
Black-eyed Susan	*Rudbeckia hirta var. pulcherrima*	Asteraceae	3	0			S5
Bracken Fern	*Pteridium aquilinum*	Dennstaedtiaceae	3	2			S5
Broad-leaved Helleborine	*Epipactis helleborine*	Orchidaceae	3				SNA
Brown Knapweed	*Centaurea jacea*	Asteraceae	5				SNA
Canada Enchanter's Nightshade	*Circaea canadensis ssp. canadensis*	Onagraceae	3	2			S5
Canada Goldenrod	*Solidago canadensis var. canadensis*	Asteraceae	3	1			S5
Canada Violet	*Viola canadensis var. canadensis*	Violaceae	3	6			S5
Chokecherry	*Prunus virginiana var. virginiana*	Rosaceae	3	2			S5
Coltsfoot	*Tussilago farfara*	Asteraceae	3				SNA
Common Burdock	*Arctium minus*	Asteraceae	3				SNA
Common Dandelion	*Taraxacum officinale*	Asteraceae	3				SNA
Common Milkweed	*Asclepias syriaca*	Apocynaceae	5	0			S5
Common Nipplewort	*Lapsana communis*	Asteraceae	3				SNA
Common Self-heal	*Prunella vulgaris ssp. vulgaris*	Lamiaceae	0				SNA
Common Speedwell	*Veronica officinalis*	Scrophulariaceae	5				SNA
Common St. John's-wort	*Hypericum perforatum ssp. perforatum*	Clusiaceae	5				SNA
Common Yarrow	*Achillea millefolium*	Asteraceae	3				SNA
Curled Dock	*Rumex crispus*	Polygonaceae	0				SNA
Eastern Prickly Gooseberry	*Ribes cynosbati*	Grossulariaceae	3	4			S5
Eastern White Cedar	*Thuja occidentalis*	Cupressaceae	-3	4			S5
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA

VEGETATION COMMUNITY CLASSIFICATION: FOC2-2 COMMUNITY #: 1 LOCATION: Georgian Bay Club COORDINATES: 44.5361284, -80.3799573

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 / July 21, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Everlasting Pea	*Lathyrus latifolius*	Fabaceae	5				SNA
Garden Bird's-foot Trefoil	*Lotus corniculatus*	Fabaceae	3				SNA
Hairy Solomon's Seal	*Polygonatum pubescens*	Liliaceae	5	5			S5
Herb-Robert	*Geranium robertianum*	Geraniaceae	3	2			S5
Hooked Agrimony	*Agrimonia gryposepala*	Rosaceae	3	2			S5
Lesser Periwinkle	*Vinca minor*	Apocynaceae	5				SNA
Meadow Hawkweed	*Pilosella caespitosa*	Asteraceae	5				SNA
Philadelphia Fleabane	*Erigeron philadelphicus var. philadelphicus*	Asteraceae	-3	1			S5
Poison Ivy	*Toxicodendron radicans*	Anacardiaceae	0	2			S5
Red Ash	*Fraxinus pennsylvanica*	Oleaceae	-3	3			S4
Red Baneberry	*Actaea rubra ssp. rubra*	Ranunculaceae	3	6			S5
Red Elderberry	*Sambucus racemosa ssp. pubens var. pubens*	Caprifoliaceae	3	5			S5
Red Raspberry	*Rubus idaeus*	Rosaceae	3	2			S5
Riverbank Grape	*Vitis riparia*	Vitaceae	0	0			S5
Round-leaved Dogwood	*Cornus rugosa*	Cornaceae	5	6			S5
Soapberry	*Shepherdia canadensis*	Elaeagnaceae	5	7			S5
Star-flowered False Solomon's Seal	*Maianthemum stellatum*	Liliaceae	0	6			S5
Sugar Maple	*Acer saccharum*	Aceraceae	3	4			S5
Tall Anemone	*Anemone virginiana*	Ranunculaceae	3	4			S5
Tall Goldenrod	*Solidago altissima*	Asteraceae	3	1			S5
Tamarack	*Larix laricina*	Pinaceae	-3	7			S5
White Ash	*Fraxinus americana*	Oleaceae	3	4			S4
White Elm	*Ulmus americana*	Ulmaceae	-3	3			S5
White Spruce	*Picea glauca*	Pinaceae	3	6			S5

VEGETATION COMMUNITY CLASSIFICATION: FOC2-2

COMMUNITY #: 1

LOCATION: Georgian Bay Club

COORDINATES: 44.5361284, -80.3799573

PROJECT NUMBER: 14562-001

DATE: June 08, 2022 / July 21, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
White Sweet-clover	*Melilotus albus*	Fabaceae	3				SNA
Wild Chicory	*Cichorium intybus*	Asteraceae	5				SNA

NOTES: Coniferous Forest. Canopy cover >60%, dominated by Eastern White Cedar.

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: CUP1 COMMUNITY #: 2 LOCATION: Georgian Bay Club COORDINATES: 44.5333317, -80.4118739

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Sugar Maple	*Acer saccharum*	Aceraceae	3	4			S5
White Ash	*Fraxinus americana*	Oleaceae	3	4			S4

NOTES:

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: CUP3

COMMUNITY #: 3

LOCATION: Georgian Bay Club

COORDINATES: 44.5328581, -80.4103001

PROJECT NUMBER: 14562-001

DATE: June 08, 2022 / July 21, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Annual Fleabane	*Erigeron annuus*	Asteraceae	3	0			S5
Black Raspberry	*Rubus occidentalis*	Rosaceae	5	2			S5
Brown Knapweed	*Centaurea jacea*	Asteraceae	5				SNA
Canada Goldenrod	*Solidago canadensis var. canadensis*	Asteraceae	3	1			S5
Common Dandelion	*Taraxacum officinale*	Asteraceae	3				SNA
Eastern White Cedar	*Thuja occidentalis*	Cupressaceae	-3	4			S5
Eastern White Pine	*Pinus strobus*	Pinaceae	3	4			S5
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA
Oxeye Daisy	*Leucanthemum vulgare*	Asteraceae	5				SNA
Riverbank Grape	*Vitis riparia*	Vitaceae	0	0			S5
Star-flowered False Solomon's Seal	*Maianthemum stellatum*	Liliaceae	0	6			S5
White Spruce	*Picea glauca*	Pinaceae	3	6			S5

NOTES: Canopy cover is >60%, dominated by White Spruce. Understorey cover is 0-10%, dominated by Buckthorn. Groundcover is 0-10%.

VEGETATION COMMUNITY CLASSIFICATION: CUP3

COMMUNITY #: 3

LOCATION: Georgian Bay Club

COORDINATES: 44.5328581, -80.4103001

PROJECT NUMBER: 14562-001

DATE: June 08, 2022 / July 21, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: CUW1 COMMUNITY #: 4 LOCATION: Georgian Bay Club COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-002 DATE: June 08, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Black-eyed Susan	*Rudbeckia hirta var. pulcherrima*	Asteraceae	3	0			S5
Chokecherry	*Prunus virginiana var. virginiana*	Rosaceae	3	2			S5
Common Apple	*Malus pumila*	Rosaceae	5				SNA
Common Buttercup	*Ranunculus acris*	Ranunculaceae	0				SNA
Eastern Red Cedar	*Juniperus virginiana*	Cupressaceae	3	4			S5
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA
Garden Bird's-foot Trefoil	*Lotus corniculatus*	Fabaceae	3				SNA
Multiflora Rose	*Rosa multiflora*	Rosaceae	3				SNA
Tatarian Honeysuckle	*Lonicera tatarica*	Caprifoliaceae	3				SNA
Trembling Aspen	*Populus tremuloides*	Salicaceae	0	2			S5
White Ash	*Fraxinus americana*	Oleaceae	3	4			S4
White Sweet-clover	*Melilotus albus*	Fabaceae	3				SNA
Wild Carrot	*Daucus carota*	Apiaceae	5				SNA
Wild Strawberry	*Fragaria virginiana ssp. virginiana*	Rosaceae	3	2			S5

NOTES:

VEGETATION COMMUNITY CLASSIFICATION: Cultural Woodland

COMMUNITY #: 4

LOCATION: Georgian Bay Club

COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-002

DATE: June 08, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: FOD8-1 COMMUNITY #: 5 LOCATION: Georgian Bay Club COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 / July 21, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
American Mountain-ash	*Sorbus americana*	Rosaceae	0	8			S5
Annual Fleabane	*Erigeron annuus*	Asteraceae	3	0			S5
Basswood	*Tilia americana*	Tiliaceae	3	4			S5
Bracken Fern	*Pteridium aquilinum*	Dennstaedtiaceae	3	2			S5
Brown Knapweed	*Centaurea jacea*	Asteraceae	5				SNA
Canada Goldenrod	*Solidago canadensis var. canadensis*	Asteraceae	3	1			S5
Coltsfoot	*Tussilago farfara*	Asteraceae	3				SNA
Common Dandelion	*Taraxacum officinale*	Asteraceae	3				SNA
Common Self-heal	*Prunella vulgaris ssp. vulgaris*	Lamiaceae	0				SNA
Common St. John's-wort	*Hypericum perforatum ssp. perforatum*	Clusiaceae	5				SNA
Common Viper's Bugloss	*Echium vulgare*	Boraginaceae	5				SNA
Eastern Prickly Gooseberry	*Ribes cynosbati*	Grossulariaceae	3	4			S5
Eastern White Cedar	*Thuja occidentalis*	Cupressaceae	-3	4			S5
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA
Garden Bird's-foot Trefoil	*Lotus corniculatus*	Fabaceae	3				SNA
Herb-Robert	*Geranium robertianum*	Geraniaceae	3	2			S5
Highbush Cranberry	*Viburnum opulus ssp. trilobum var. americanum*	Caprifoliaceae	-3	5			S5
Hooked Agrimony	*Agrimonia gryposepala*	Rosaceae	3	2			S5
Lesser Periwinkle	*Vinca minor*	Apocynaceae	5				SNA
Orange Daylily	*Hemerocallis fulva*	Liliaceae	5				SNA
Orchard Grass	*Dactylis glomerata*	Poaceae	3				SNA
Oxeye Daisy	*Leucanthemum vulgare*	Asteraceae	5				SNA
Paper Birch	*Betula papyrifera*	Betulaceae	3	2			S5
Philadelphia Fleabane	*Erigeron philadelphicus var. philadelphicus*	Asteraceae	-3	1			S5
Poison Ivy	*Toxicodendron radicans*	Anacardiaceae	0	2			S5
Red Ash	*Fraxinus pennsylvanica*	Oleaceae	-3	3			S4

VEGETATION COMMUNITY CLASSIFICATION: FOD8-1 COMMUNITY #: 5 LOCATION: Georgian Bay Club COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 / July 21, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Riverbank Grape	*Vitis riparia*	Vitaceae	0	0			S5
Spreading Dogbane	*Apocynum androsaemifolium*	Apocynaceae	5	3			S5
Sugar Maple	*Acer saccharum*	Aceraceae	3	4			S5
Trembling Aspen	*Populus tremuloides*	Salicaceae	0	2			S5
Tufted Vetch	*Vicia cracca*	Fabaceae	5				SNA
White Ash	*Fraxinus americana*	Oleaceae	3	4			S4
White Elm	*Ulmus americana*	Ulmaceae	-3	3			S5
White Spruce	*Picea glauca*	Pinaceae	3	6			S5
Wild Carrot	*Daucus carota*	Apiaceae	5				SNA
Wild Strawberry	*Fragaria virginiana ssp. virginiana*	Rosaceae	3	2			S5

NOTES: Deciduous Forest. Canopy cover is >60%, dominated by . Understorey cover is 10-25%, dominated by . Groundcover is 25-60%.

VEGETATION COMMUNITY CLASSIFICATION: FOD8-1

COMMUNITY #: 5

LOCATION: Georgian Bay Club

COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-001

DATE: June 08, 2022 / July 21, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: FOM4-2 COMMUNITY #: 6 LOCATION: Georgian Bay Club COORDINATES: 44.5358257, -80.403961

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 / July 21, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
American Mountain-ash	*Sorbus americana*	Rosaceae	0	8			S5
Broad-leaved Helleborine	*Epipactis helleborine*	Orchidaceae	3				SNA
Brown Knapweed	*Centaurea jacea*	Asteraceae	5				SNA
Canada Enchanter's Nightshade	*Circaea canadensis ssp. canadensis*	Onagraceae	3	2			S5
Canada Goldenrod	*Solidago canadensis var. canadensis*	Asteraceae	3	1			S5
Coltsfoot	*Tussilago farfara*	Asteraceae	3				SNA
Common Dandelion	*Taraxacum officinale*	Asteraceae	3				SNA
Common Self-heal	*Prunella vulgaris ssp. vulgaris*	Lamiaceae	0				SNA
Common St. John's-wort	*Hypericum perforatum ssp. perforatum*	Clusiaceae	5				SNA
Eastern Prickly Gooseberry	*Ribes cynosbati*	Grossulariaceae	3	4			S5
Eastern White Cedar	*Thuja occidentalis*	Cupressaceae	-3	4			S5
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA
Herb-Robert	*Geranium robertianum*	Geraniaceae	3	2			S5
Hooked Agrimony	*Agrimonia gryposepala*	Rosaceae	3	2			S5
Oxeye Daisy	*Leucanthemum vulgare*	Asteraceae	5				SNA
Paper Birch	*Betula papyrifera*	Betulaceae	3	2			S5
Poison Ivy	*Toxicodendron radicans*	Anacardiaceae	0	2			S5
Red Baneberry	*Actaea rubra ssp. rubra*	Ranunculaceae	3	6			S5
Red Raspberry	*Rubus idaeus*	Rosaceae	3	2			S5
Riverbank Grape	*Vitis riparia*	Vitaceae	0	0			S5
Star-flowered False Solomon's Seal	*Maianthemum stellatum*	Liliaceae	0	6			S5
Sugar Maple	*Acer saccharum*	Aceraceae	3	4			S5
Trembling Aspen	*Populus tremuloides*	Salicaceae	0	2			S5
White Ash	*Fraxinus americana*	Oleaceae	3	4			S4
Wild Carrot	*Daucus carota*	Apiaceae	5				SNA

VEGETATION COMMUNITY CLASSIFICATION: FOM4-2 | COMMUNITY #: 6 | LOCATION: Georgian Bay Club | COORDINATES: 44.5358257, -80.403961

PROJECT NUMBER: 14562-001 | DATE: June 08, 2022 / July 21, 2022 | PROJECT MANAGER: Jeremy Prahl | FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Wild Strawberry	*Fragaria virginiana ssp. virginiana*	Rosaceae	3	2			S5

NOTES: Mixed forest. Canopy cover >60%, dominated by. Understorey cover is 10-25%, dominated by. Groundcover is 10-25%.

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: CUT1 COMMUNITY #: 7 LOCATION: Georgian Bay Club COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Eastern Prickly Gooseberry	*Ribes cynosbati*	Grossulariaceae	3	4			S5
Eastern White Cedar	*Thuja occidentalis*	Cupressaceae	-3	4			S5
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA
Herb-Robert	*Geranium robertianum*	Geraniaceae	3	2			S5
Trembling Aspen	*Populus tremuloides*	Salicaceae	0	2			S5
White Elm	*Ulmus americana*	Ulmaceae	-3	3			S5

NOTES: Cultural Thicket.

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: SWD4-3 COMMUNITY #: 8 LOCATION: Georgian Bay Club COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 / July 21, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Annual Fleabane	*Erigeron annuus*	Asteraceae	3	0			S5
Black Ash	*Fraxinus nigra*	Oleaceae	-3	7			S3
Black Medick	*Medicago lupulina*	Fabaceae	3				SNA
Black Willow	*Salix nigra*	Salicaceae	-5	6			S4
Brown Knapweed	*Centaurea jacea*	Asteraceae	5				SNA
Canada Goldenrod	*Solidago canadensis var. canadensis*	Asteraceae	3	1			S5
Coltsfoot	*Tussilago farfara*	Asteraceae	3				SNA
Common Boneset	*Eupatorium perfoliatum*	Asteraceae	-3	2			S5
Common Marsh Bedstraw	*Galium palustre*	Rubiaceae	-5	5			S5
Common Self-heal	*Prunella vulgaris ssp. vulgaris*	Lamiaceae	0				SNA
Common St. John's-wort	*Hypericum perforatum ssp. perforatum*	Clusiaceae	5				SNA
Common Woolly Bulrush	*Scirpus cyperinus*	Cyperaceae	-5	4			S5
Cursed Buttercup	*Ranunculus sceleratus*	Ranunculaceae	-5	2			S5
Devil's Beggarticks	*Bidens frondosa*	Asteraceae	-3	3			S5
Dwarf Raspberry	*Rubus pubescens*	Rosaceae	-3	4			S5
Eastern Prickly Gooseberry	*Ribes cynosbati*	Grossulariaceae	3	4			S5
Eastern White Cedar	*Thuja occidentalis*	Cupressaceae	-3	4			S5
Elecampane	*Inula helenium*	Asteraceae	3				SNA
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA
Everlasting Pea	*Lathyrus latifolius*	Fabaceae	5				SNA
Field Horsetail	*Equisetum arvense*	Equisetaceae	0	0			S5
Marsh Horsetail	*Equisetum palustre*	Equisetaceae	-3	10			S5
Narrow-leaved Cattail	*Typha angustifolia*	Typhaceae	-5				SNA
Northern Water-horehound	*Lycopus uniflorus*	Lamiaceae	-5	5			S5
Ostrich Fern	*Matteuccia struthiopteris*	Dryopteridaceae	0	5			S5
Oxeye Daisy	*Leucanthemum vulgare*	Asteraceae	5				SNA

VEGETATION COMMUNITY CLASSIFICATION: SWD4-3 COMMUNITY #: 8 LOCATION: Georgian Bay Club COORDINATES: 44.5397971, -80.4095261

PROJECT NUMBER: 14562-001 DATE: June 08, 2022 / July 21, 2022 PROJECT MANAGER: Jeremy Prahl FIELD STAFF: Tyler Jamieson / Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Purple-stemmed Aster	*Symphyotrichum puniceum var. puniceum*	Asteraceae	-5	6			S5
Pussy Willow	*Salix discolor*	Salicaceae	-3	3			S5
Red Clover	*Trifolium pratense*	Fabaceae	3				SNA
Red-osier Dogwood	*Cornus sericea*	Cornaceae	-3	2			S5
Reed Canarygrass	*Phalaris arundinacea var. arundinacea*	Poaceae	-3	0			S5
Riverbank Grape	*Vitis riparia*	Vitaceae	0	0			S5
Silky Dogwood	*Cornus obliqua*	Cornaceae	-3	2			S5
Small Enchanter's Nightshade	*Circaea alpina ssp. alpina*	Onagraceae	-3	6			S5
Southern Water-plantain	*Alisma subcordatum*	Alismataceae	-5	1			S4?
Spotted Jewelweed	*Impatiens capensis*	Balsaminaceae	-3	4			S5
Square-stemmed Monkeyflower	*Mimulus ringens*	Scrophulariaceae	-5	6			S5
Tamarack	*Larix laricina*	Pinaceae	-3	7			S5
Trembling Aspen	*Populus tremuloides*	Salicaceae	0	2			S5
Tufted Vetch	*Vicia cracca*	Fabaceae	5				SNA
Virginia Creeper	*Parthenocissus quinquefolia*	Vitaceae	3	6			S4?
White Clover	*Trifolium repens*	Fabaceae	3				SNA
White Sweet-clover	*Melilotus albus*	Fabaceae	3				SNA

NOTES: Deciduous swamp. Canopy cover is 25%, dominated by Trembling Aspen. Understorey cover is 0-10%, dominated by Willow. Groundcover is >60%, dominated by Narrow-leaved Cattail.

VEGETATION COMMUNITY CLASSIFICATION:	SWD4-3	COMMUNITY #:	8	LOCATION:	Georgian Bay Club	COORDINATES:	44.5397971, -80.4095261
PROJECT NUMBER:	14562-001	DATE:	June 08, 2022 July 21, 2022	PROJECT MANAGER:	Jeremy Prahl	FIELD STAFF:	Tyler Jamieson Brenden Hnatiw

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: SWD4-5

COMMUNITY #: 9

LOCATION: Georgian Bay Club

COORDINATES: 44.5381892, -80.4043088

PROJECT NUMBER: 14562-001

DATE: June 08, 2022 / July 21, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Annual Fleabane	*Erigeron annuus*	Asteraceae	3	0			S5
Basswood	*Tilia americana*	Tiliaceae	3	4			S5
Canada Enchanter's Nightshade	*Circaea canadensis ssp. canadensis*	Onagraceae	3	2			S5
Common Elderberry	*Sambucus canadensis*	Caprifoliaceae	-3	5			S5
Eastern Hop-hornbeam	*Ostrya virginiana*	Betulaceae	3	4			S5
Eastern Prickly Gooseberry	*Ribes cynosbati*	Grossulariaceae	3	4			S5
Eastern White Cedar	*Thuja occidentalis*	Cupressaceae	-3	4			S5
European Buckthorn	*Rhamnus cathartica*	Rhamnaceae	0				SNA
Field Horsetail	*Equisetum arvense*	Equisetaceae	0	0			S5
Herb-Robert	*Geranium robertianum*	Geraniaceae	3	2			S5
Paper Birch	*Betula papyrifera*	Betulaceae	3	2			S5
Poison Ivy	*Toxicodendron radicans*	Anacardiaceae	0	2			S5
Red Ash	*Fraxinus pennsylvanica*	Oleaceae	-3	3			S4
Riverbank Grape	*Vitis riparia*	Vitaceae	0	0			S5
Spotted Jewelweed	*Impatiens capensis*	Balsaminaceae	-3	4			S5
Sugar Maple	*Acer saccharum*	Aceraceae	3	4			S5
Trembling Aspen	*Populus tremuloides*	Salicaceae	0	2			S5
Virginia Creeper	*Parthenocissus quinquefolia*	Vitaceae	3	6			S4?
White Elm	*Ulmus americana*	Ulmaceae	-3	3			S5

NOTES: Canopy cover >60%, dominated by Poplar > Birch. Understorey cover is 25-60%, dominated by Green Ash. Groundcover is 25-60%.

VEGETATION COMMUNITY CLASSIFICATION: SWD4-5

COMMUNITY #: 9

LOCATION: Georgian Bay Club

COORDINATES: 44.5381892, -80.4043088

PROJECT NUMBER: 14562-001

DATE: June 08, 2022 / July 21, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Tyler Jamieson, Brenden Hnatiw

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

Appendix E
Bird Species List

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 1

PROJECT NUMBER: 14562-001

DATES: June 19, 2022 / June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

June 19, 2022

Common Name	Scientific Name	Family	SARA	SARO	S-Rank	Breeding Evidence
American Redstart	*Setophaga ruticilla*	Parulidae			S5B	S
American Robin	*Turdus migratorius*	Turdidae			S5B	H
Northern Cardinal	*Cardinalis cardinalis*	Cardinalidae			S5	S
Red-eyed Vireo	*Vireo olivaceus*	Vireonidae			S5B	S

June 26, 2022

Common Name	Scientific Name	Family	SARA	SARO	S-Rank	Breeding Evidence
American Crow	*Corvus brachyrhynchos*	Corvidae			S5B	H
American Robin	*Turdus migratorius*	Turdidae			S5B	S
Blue Jay	*Cyanocitta cristata*	Corvidae			S5	A
Red-eyed Vireo	*Vireo olivaceus*	Vireonidae			S5B	T
Red-winged Blackbird	*Agelaius phoeniceus*	Icteridae			S4	S

X = Species observed in its breeding season (no breeding evidence)
H = Species observed in its breeding season in suitable nesting habitat
S= Singing male present, or breeding calls heard, in its breeding season in suitable nesting habitat
P= Pair observed in their breeding season in suitable nesting habitat
T= Permanent territory presumed through registration of territorial song on at least 2 days, a week apart, at the same place
D= Courtship or display between a male and a female or 2 males, including courtship feeding or copulation
V= Visiting probable nest site
X = Species observed in its breeding season (no breeding evidence)
CF= Adult carrying food for young
NE= Nest containing eggs

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
DD= Distraction display or injury feigning
NU= Used nest or egg shell found (occupied or laid within the period of study)
FY= Recently fledged young or downy young, including young incapable to sustain flight
AE= Adults leaving or entering nest site in circumstances indicating occupied nest
FS= Adult carrying faecal sac
NY= Nest with young seen or heard

Shaded cells indicate probable or confirmed breeding by the species within the vegetation community.

NOTES: Canopy cover 90%. Recent Mourning Dove kill site nearby.

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 1

PROJECT NUMBER: 14562-001

DATES: June 19, 2022
June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

VEGETATION COMMUNITY PHOTOS:

Taken June 19, 2022

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 1

PROJECT NUMBER: 14562-001

DATES: June 19, 2022 – June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

Taken June 26, 2022

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 2

PROJECT NUMBER: 14562-001

DATES: June 19, 2022 / June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

June 19, 2022

Common Name	Scientific Name	Family	SARA	SARO	S-Rank	Breeding Evidence
Black-and-white Warbler	*Mniotilta varia*	Parulidae			S5B	S
House Wren	*Troglodytes aedon*	Troglodytidae			S5B	S
Song Sparrow	*Melospiza melodia*	Passerellidae			S5B	S

June 26, 2022

Common Name	Scientific Name	Family	SARA	SARO	S-Rank	Breeding Evidence
American Robin	*Turdus migratorius*	Turdidae			S5B	A
Cedar Waxwing	*Bombycilla cedrorum*	Bombycillidae			S5B	H
Song Sparrow	*Melospiza melodia*	Passerellidae			S5B	T

X = Species observed in its breeding season (no breeding evidence)
H = Species observed in its breeding season in suitable nesting habitat
S= Singing male present, or breeding calls heard, in its breeding season in suitable nesting habitat
P= Pair observed in their breeding season in suitable nesting habitat
T= Permanent territory presumed through registration of territorial song on at least 2 days, a week apart, at the same place
D= Courtship or display between a male and a female or 2 males, including courtship feeding or copulation
V= Visiting probable nest site
X = Species observed in its breeding season (no breeding evidence)
CF= Adult carrying food for young
NE= Nest containing eggs

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
DD= Distraction display or injury feigning
NU= Used nest or egg shell found (occupied or laid within the period of study)
FY= Recently fledged young or downy young, including young incapable to sustain flight
AE= Adults leaving or entering nest site in circumstances indicating occupied nest
FS= Adult carrying faecal sac
NY= Nest with young seen or heard

Shaded cells indicate probable or confirmed breeding by the species within the vegetation community.

NOTES: Canopy cover is 70%.

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 2

PROJECT NUMBER: 14562-001

DATES: June 19, 2022
June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

VEGETATION COMMUNITY PHOTOS:

Taken June 19, 2022

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 2

PROJECT NUMBER: 14562-001

DATES: June 19, 2022 – June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

Taken June 26, 2022

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 3

PROJECT NUMBER: 14562-001

DATES: June 19, 2022 / June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

June 19, 2022

Common Name	Scientific Name	Family	SARA	SARO	S-Rank	Breeding Evidence
American Robin	*Turdus migratorius*	Turdidae			S5B	A
Black-capped Chickadee	*Poecile atricapillus*	Paridae			S5	A
Green Heron	*Butorides virescens*	Ardeidae			S4B	A
Northern Flicker	*Colaptes auratus*	Picidae			S4B	H
Red-eyed Vireo	*Vireo olivaceus*	Vireonidae			S5B	A
Red-winged Blackbird	*Agelaius phoeniceus*	Icteridae			S4	S

June 26, 2022

Common Name	Scientific Name	Family	SARA	SARO	S-Rank	Breeding Evidence
Blue Jay	*Cyanocitta cristata*	Corvidae			S5	H
Northern Flicker	*Colaptes auratus*	Picidae			S4B	A
Red-eyed Vireo	*Vireo olivaceus*	Vireonidae			S5B	S

X = Species observed in its breeding season (no breeding evidence)
H = Species observed in its breeding season in suitable nesting habitat
S= Singing male present, or breeding calls heard, in its breeding season in suitable nesting habitat
P= Pair observed in their breeding season in suitable nesting habitat
T= Permanent territory presumed through registration of territorial song on at least 2 days, a week apart, at the same place
D= Courtship or display between a male and a female or 2 males, including courtship feeding or copulation
V= Visiting probable nest site
X = Species observed in its breeding season (no breeding evidence)
CF= Adult carrying food for young
NE= Nest containing eggs

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
DD= Distraction display or injury feigning
NU= Used nest or egg shell found (occupied or laid within the period of study)
FY= Recently fledged young or downy young, including young incapable to sustain flight
AE= Adults leaving or entering nest site in circumstances indicating occupied nest
FS= Adult carrying faecal sac
NY= Nest with young seen or heard

Shaded cells indicate probable or confirmed breeding by the species within the vegetation community.

NOTES: Canopy cover is 70%.

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 3

PROJECT NUMBER: 14562-001

DATES: June 19, 2022 – June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

VEGETATION COMMUNITY PHOTOS:

Taken June 19, 2022

VEGETATION COMMUNITY CLASSIFICATION: Woodland

LOCATION: Georgian Bay Club

POINT COUNT #: 3

PROJECT NUMBER: 14562-001

DATES: June 19, 2022 – June 26, 2022

PROJECT MANAGER: Jeremy Prahl

FIELD STAFF: Mackenzie Soden

FIELD SHEET – Bird Species List

Taken June 26, 2022

Appendix F

Significant Wildlife Habitat Assessment

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes
Seasonal Concentration Areas of Animals					
Waterfowl Stopover and Staging Areas (Terrestrial)	Ducks	Cultural Ecosites: CUM1, CUT1	Fields that flood during spring (mid-March to May).	N	N/A
Waterfowl Stopover and Staging Area (Aquatic)	Ducks, Geese	Marshes, Swamps, Shallow Water Ecosites: MAS1,MAS2, MAS3, SAS1 SAM1, SAF1, SWD1 to SWD7,	Ponds, marshes, lakes, bays, coastal inlets, and watercourses. Sewage treatment ponds and storm water ponds **not** SWH Reservoir managed as a large wetland or pond/lake qualifies.	N	N/A
Shorebird Migratory Stopover Area	Shorebirds	Beaches, Dunes, Meadow Marshes: BBO1, BBO2, BBS1, BBS2 BBT1, BBT2, SDO1, SDS2, SDT1, MAM1 to MAM5	Shorelines of lakes, rivers and wetlands. Sewage treatment ponds and storm water ponds **not** SWH.	N	N/A
Raptor Wintering Area	Eagles, Hawks, Owls	Hawks/Owls - Combination of Forest and Cultural Ecosites: FOD, FOM, FOC, CUM, CUT, CUS, CUW Bald Eagle: Forest or swamp close to open water (hunting ground): FOD, FOM, FOC, SWD, SWM, SWC	Raptor wintering sites: >20ha, with a combination of forest and upland. Idle/Fallow/Meadow (>15ha) with adjacent woodlands. Eagle sites: open water, large trees and snags for roosting.	N	N/A
Bat Hibernacula	Big Brown Bat, Tri-coloured Bat	Caves, Crevices: CCR1, CCR2, CCA1, CCA2	Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Buildings and active mine sites **not** SWH.	N	N/A
Bat Maternity Colonies	Big Brown Bat, Silver-haired Bat	Deciduous or mixed forests and swamps: FOD, FOM, SWD, SWM	Mature deciduous and mixed forest stands with >10/ha; large trees >25 cm DBH with cavities.	N	N/A
Turtle Wintering Area	Turtles	SW, MA, OA, SA, FEO, BOO	Free water beneath ice. Soft mud substrate. Permanent water bodies, large wetlands, bogs, fens with adequate DO.	N	N/A
Reptile Hibernaculum	Snakes	Habitat may be found in any ecosite other than very wet ones. Five-lined Skink: FOD and FOM, FOC1, FOC3	Below frost line in burrows, rock crevices, rock piles or slopes, stone fences, abandoned stone foundations. Conifer or shrub swamps/swales, poor fens, depressions in bedrock with accumulations of sphagnum moss or sedge hummock ground cover. Skink: mixed forest with rock outcrop openings; granite bedrock with fissures.	N	Field investigations confirmed that there are no areas with extensive rock piles or slopes, old stone fences,etc. that would provide hibernaculum sites for reptiles.
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Cliff Swallow, Northern Rough-winged Swallow	Eroding banks, sandy hills/piles, burrow pits, steep slopes, cliff faces, bridge abutments, silos, barns. CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1	Exposed soil banks, **not** a licensed/permitted aggregate area. Does **not** include man-made structures (bridges or buildings), or recently (2 yrs) disturbed soil areas (berms, embankments, soil/aggregate stockpiles).	N	N/A
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Great Blue Heron, Black-crowned Night Heron, Great Egret, Green Heron	SWM2, SWM3, SWM5, SWM6, SWD1 to SWD7, FET1	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and emergents may be used. Nests in trees are 11 to 15 m from ground, near top of the tree.	N	N/A
Colonially-nesting Bird Breeding Habitat (Ground)	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	Rocky island or peninsula in lake or river. Close to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird). MAM1 – 6; MAS1 – 3; CUM, CUT, CUS	Gulls and terns nesting on islands or peninsulas with open water or marshy areas. Brewers Blackbird colonies are found on the ground in low bushes close to streams and irrigation ditches within farmlands.	N	N/A
Migratory Butterfly Stopover Area	Painted Lady, Red Admiral, **Special Concern:** Monarch	Combination of open and forested ecosites (need one from each). Field: CUM, CUT, CUS Forest: FOC, FOD, FOM, CUP	Minimum of 10 ha, located within 5 km of Lake Ontario. Combination of field and forest, undisturbed sites, with flowering species (preferred nectar plants).	N	N/A
Landbird Migratory Stopover Areas	All migratory songbirds. All migrant raptor species.	FOC, FOM, FOD, SWC, SWM, SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. If multiple woodlands are located along the shoreline, those Woodlands <2km from Lake Ontario are more significant. Include a variety of habitats; forest, grassland and wetlands.	N	N/A
Deer Yarding Areas	White-tailed Deer	FOM, FOC, SWM, SWC, CUP2, CUP3, FOD3, CUT	Stratum I: core deer yard - coniferous forest; 60% canopy cover with pine, hemlock, cedar, spruce. Stratum II: mixed or deciduous forest with plenty of browse available, may include agricultural areas.	N	N/A

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes
Deer Wintering Congregation Areas	White-tailed Deer	FOC, FOM, FOD, SWC, SWM, SWD	When movement is not constrained by snow depth (20cm) Woodlots > 100 ha and used annually.	N	N/A
Rare Vegetation Communities					
Cliffs and Talus Slopes		TAO, TAS, CLO, CLS, TAT, CLT	Cliff: near vertical bedrock >3m in height; Talus Slope: coarse rock rubble at the base of a cliff	N	N/A
Sand Barren		SBO1, SBS1, SBT1	Sand Barrens >0.5 ha. Vegetation can vary from patchy and barren to continuous meadow, thicket--like, or tree covered (less than 60%). Less than 50% vegetation cover are exotic species.	N	N/A
Alvar	*Indicator species: Carex crawei, Panicum philadelphicum, Eleocharis compressa, Scutellaria parvula, Trichostema brachiatum,* Loggerhead Shrike	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Alvar >0.5 ha. Level, mostly unfractured calcareous bedrock with mosaic or rock pavements and bedrock overlain with thin veneer of soil. Vegetation cover varies from patchy to barren with <60% tree cover.	N	N/A
Old Growth Forest		FOD, FOC, FOM, SWD, SWC, SWM	Woodland areas 30 ha or greater or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.	N	N/A
Savannah		TPS1, TPS2, TPW1, TPW2, CUS2	No minimum size; A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60% with less than 50% cover of exotic species. Remnant sites (railway right-of-ways) are **not** SWH.	N	N/A
Tallgrass Prairie		TPO1, TPO2	No minimum size; An open Tallgrass Prairie habitat has < 25% tree cover. Less than 50% cover of exotic species. Remnant sites (railway right-of-ways) are not SWH.	N	N/A
Other Rare Vegetation Communities		Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps. Review Appendix M	N	N/A
Specialized Habitat for Wildlife					
Waterfowl Nesting Area	Ducks	Upland habitats adjacent to: MAS1 to MAS3, SAS1, SAM1, SAF1, MAM1 to MAM6, SWT1, SWT2, SWD1 to SWD4	Extends 120 m from a wetland or wetland complex. Upland areas should be at least 120 m wide. Wood Ducks and Hooded Mergansers use cavity trees (>40cm dbh) in woodlands.	N	N/A
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey, Bald Eagle	FOD, FOM, FOC, SWD, SWM, SWC directly adjacent to riparian areas	Nesting areas are associated with waterbodies along forested shorelines, islands, or on structures over water.	N	N/A
Woodland Raptor Nesting Habitat	Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Red-shouldered Hawk, Barred Owl, Broad-winged Hawk	All forested ELC ecosites. Forests, swamps, and conifer plantations: FOD, FOM, FOC, SWD, SWM, SWC, CUP3	Natural or conifer plantation woodland/forest stands >30 ha with > 10 ha interior habitat. Stick nests.	N	N/A
Turtle Nesting Areas	Midland Painted Turtle, Snapping Turtle, Northern Map Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within: MAS1 to MAS3, SAS1, SAM1, SAF1, BOO1	Nest sites close to water, within open sunny areas with soil suitable for digging. Sand and gravel beaches. Nesting areas on sides of roads are not SWH.	N	N/A
Seeps and Springs	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp.	Seeps/Springs are areas where ground water comes to the surface.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream/river system.	N	N/A
Amphibian Breeding Habitat (Woodland)	Woodland Frogs and Salamanders	FOC, FOM, FOD, SWC, SWM, SWD	Wetland, pond or woodland pool of >500 m^2 within or adjacent (within 120m) to wooded areas (no min. size). Woodlands with permanent ponds or those containing water until mid-July are preferred.	N	Amphibian breeding surveys determined that while some amphibian breeding activity is present, the activity recorded did not meet criteria to be classified as SWH.
Amphibian Breeding Habitat (Wetlands)	Toads, Frogs, and Salamanders	SW, MA, FE, BO, OA and SA. Typically isolated (>120m) from woodland ecosites, however larger wetlands may be adjacent to woodlands.	Wetlands >500m^2 isolated from woodland ecosites with high species diversity. Permanent water bodies with abundant vegetation for bullfrogs.	N	Amphibian breeding surveys determined that while some amphibian breeding activity is present, the activity recorded did not meet criteria to be classified as SWH.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/N)	Additional Notes
Woodland Area-Sensitive Bird Breeding Habitat	Birds: Yellow-bellied Sapsucker Red-breasted Nuthatch, Veery, Blue-headed Vireo, Northern Parula, Black-throated Green Warbler, Blackburnian Warbler, Black-throated Blue Warbler, Ovenbird, Scarlet Tanager, Winter Wren, Special Concern: Cerulean Warbler Canada Warbler	FOC, FOM, FOD, SWC, SWM, SWD	Large mature (>60 years) forest stands or woodlots > 30 ha. Interior forest habitat of >200 m from forest edge.	N	N/A
Habitat of Species of Conservation Concern					
Marsh Bird Breeding Habitat	American Bittern, Virginia Rail, Sora, Common Moorhen, American Coot, Pied-billed Grebe, Marsh Wren, Sedge Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan	MAM1 to MAM6, SAS1, SAM1, SAF1, FEO1, BOO1 For Green Heron: SW, MA and CUM1 sites.	Wetlands with shallow water and emergent aquatic vegetation.	N	N/A
Open Country Bird Breeding Habitat	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier, Savannah Sparrow, Short-eared Owl	CUM1, CUM2	Grassland/meadow >30 ha. Not being actively used for farming. Habitat established for 5 years or more.	N	N/A
Shrub/Early Successional Bird Breeding Habitat	Brown Thrasher, Clay-coloured Sparrow, Field Sparrow, Black-billed Cuckoo, Eastern Towhee, Willow Flycatcher, Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large field areas succeeding to shrub and thicket habitats > 10 ha. Areas not actively used for farming in the last 5 years.	N	N/A
Terrestrial Crayfish	Chimney or Digger Crayfish; (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish; (*Cambarus Diogenes*)	MAM1 to MAM6, MAS1 to MAS3, SWD, SWT, SWM, CUM1 sites with inclusions of the aforementioned.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish	N	N/A
Special Concern and Rare Wildlife Species	Any species of concern or rare wildlife species (S1-S3, SH) plant and animal.	Any ELC code.	Presence of species of concern or rare wildlife species identified within 1 or 10 km grid (NHIC).	Y	See Species of Conservation Concern Screening for a list of special cocern species that may be present on the Site.

Appendix G

Species Of Conservation Concern Screening

APPENDIX: Species of Conservation Concern - Grey County

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Birds								
Bald Eagle	*Haliaeetus leucocephalus*	No Status	SC	S2N,S4B	The Bald Eagle is a bird of prey with a white head, neck and tail, a massive bright yellow beak, powerful legs, and a wingspan of over 2 m. It nests in a variety of habitats and forest types, almost always near a major lake or river where they do most of their hunting. These nests are usually on islands in freshwater lakes or in large trees such as the pine and poplar. During the winter, they may also be found near open bodies of water that do not freeze (1).	Yes: on-site and adjacent lands	Confirmed absent through targeted surveys	No further consideration required
Bank Swallow	*Riparia riparia*	THR	THR	S4B	The Bank Swallow is a small songbird of around 12 cm long with a distinctive dark breast band, that flies with quick and erratic wingbeats (1). It nests in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. This can include banks of rivers and lakes, bluffs, active sand and gravel pits, road cuts and stockpiles of soils. However, they prefer sand-silt substrates for excavating their nest burrows. They often use large wetlands as communal nocturnal roosts post-breeding or during wintering periods (2).	No	Confirmed absent through targeted surveys	No further consideration required
Barn Swallow	*Hirundo rustica*	THR	THR	S4B	The Barn Swallow is a mid-sized songbird with steel-blue backs and wings, glossy in males, and a line of white spots across its upper tail. It lives in a variety of open habitats for foraging, such as grassy fields, pastures, certain agricultural crops, shorelines, cottage areas, wetlands, or subarctic tundra (2). They prefer to nest within human made structures such as barns, bridges, and culverts. Barn Swallow nests are cup-shaped and made of mud, typically attached to horizontal beams or vertical walls underneath an overhang (1).	No	Confirmed absent through targeted surveys	No further consideration required
Black Tern	*Chlidonias niger*	No Status	SC	S3B	The Black Tern is a small waterbird with a forked tail, straight pointed bill, slender shape, and black head during breeding season. It builds floating nests in loose colonies in shallow marshes, with a preference for cattails. They breed primarily in the marshes along the edges of the Great Lakes, but may also use wetlands further north if suitable (1).	No	Confirmed absent through targeted surveys	No further consideration required
Bobolink	*Dolichonyx oryzivorus*	THR	THR	S4B	The Bobolink is a mid-sized songbird of tan colour with black stripes, except for males during summer breeding season who are black with a white back and yellow collar. It prefers tall, grassy meadows, hayfields and some croplands, and feeds (largely on insects) on the ground in dense grasses (1). It tends to nest in forage crops: hayfields and pastures dominated by species including clover, bluegrass, and broadleaf plants (2).	No	Known to occur in the general area	No further consideration required
Canada Warbler	*Cardellina canadensis*	THR	SC	S4B	The Canada Warbler is a small songbird with bright yellow underparts and bluish-grey back and tail (1). It can be found in a variety of forest types, but is most abundant in moist, mixed forests with a well-developed, dense shrub layer. Nests are usually located on or near the ground on mossy logs, and along stream banks (3).	Yes: on-site and adjacent lands	Confirmed absent through targeted surveys	No further consideration required
Chimney Swift	*Chaetura pelagica*	THR	THR	S4B,S4N	The Chimney Swift is a small bird, between 12 and 14 cm, with a brown, cigar-shaped body, slender wings, and an erratic flight pattern. Prior to settlement, the Chimney Swift would mainly nest in cave walls and hollow trees. Now, it is found mostly near urban and suburban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. They also tend to stay in habitat close to the water (1).	No	Confirmed absent through targeted surveys	No further consideration required
Common Nighthawk	*Chordeiles minor*	THR	SC	S4B	The Common Nighthawk is a medium-sized bird with long, pointed wings, a long tail with a notch, and large eyes. Its plumage of dark brown with black and white specks blends with its roost site. It is typically found in open areas such as gravel beaches, rock outcrops and burned woodlands, that have little to no ground vegetation. This species can also be found in highly disturbed locations such as clear cuts, mine tailing areas, cultivated fields, urban parks, gravel roads, and orchards (1).	No	Known to occur in the general area	No further consideration required
Eastern Meadowlark	*Sturnella magna*	THR	THR	S4B	The Eastern Meadowlark is a medium-sized migratory songbird with a bright yellow throat and belly, a black V shape on its chest, and a pointed bill. It prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields, human-use areas such as airports and roadsides, or other open areas. The Eastern Meadowlark can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses (1).	No	Known to occur in the general area	No further consideration required
Eastern Whip-poor-will	*Antrostomus vociferus*	THR	THR	S4B	The Eastern Whip-poor-will is a medium-sized bird with mottled brown and grey feathers to blend in with its surroundings, a large flattened head, and small bill. They are usually found in areas with a mix of open and forested areas such as patchy forests with clearings, forests that are regenerating after major disturbances, savannahs, open woodlands or openings in more mature forests. Breeding habitat is dependent on forest structure rather than composition, although common tree associations are pine and oak, and it nests directly on the forest floor (2). The species prefers to nest in semi-open or patchy forests with clearings as it forages in open areas and uses forested areas for roosting (1).	No	Known to occur in the general area	No further consideration required
Eastern Wood-Pewee	*Contopus virens*	SC	SC	S4B	The Eastern Wood-pewee is a species of 'flycatcher', a bird that eats flying insects. It grows to approximately 15 cm, has greyish-olive upper parts and pale bars on its wings. This species lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation (1). It typically creates nests on tree branches 2-12 m in height (2).	Yes: on-site and adjacent lands	Confirmed absent through targeted surveys	No further consideration required
Golden Winged Warbler	*Vermivora chrysoptera*	THR	SC	S4B	The Golden-winged Warbler is a small songbird with distinctive yellow wing patches and patches behind their eyes. It inhabits early successional habitat of old fields and favour areas where trees are spread out or forest edges to use for perching, singing, and searching for food. They seem to prefer regeneration zones with young shrub growth, surrounded by mature forest, locations that have recently been disturbed, such as field edges, hydro or utility right-of-ways, or logged areas for their breeding sites; often frequenting clusters of herbaceous plants and low bushes (1).	No	Confirmed absent through targeted surveys	No further consideration required
Grasshopper Sparrow	*Ammodramus savannarum*	SC	SC	S4B	The Grasshopper Sparrow is a small songbird with a streaked back, a white stripe down the center of its crown, a flattish head, and a conical beak. It inhabits open grasslands and prairies with well-drained soil, preferring areas that are sparsely vegetated. It will also nest in hayfields and pastures, as well as alvars and occasionally grain crops such as barley (1).	No	Confirmed absent through targeted surveys	No further consideration required
Henslow's Sparrow	*Ammodramus henslowii*	END	END	SHB	Henslow's Sparrow is a small, secretive bird with chestnut brown wings, a patterned olive-green head, and a black and brown streaked back. It is found in large fields with tall grass, a dense litter layer, and standing dead vegetation. They use undisturbed areas with dense living grasses, avoiding areas that have been grazed or burned. As a ground nester, continuous areas of dense, tall grasslands that have not been invaded by shrubs are required to support its population (1).	No	Confirmed absent through targeted surveys	No further consideration required

Least Bittern	*Ixobrychus exilis*	THR	THR	S4B	The Least Bittern is a small member of the heron family, reaching around 30 cm in length. It has brown and beige plumage with chestnut patches on its wings (1). The species nests in marshes (> 5 - 10 ha) and swamps dominated by emergent vegetation, preferably cattails, interspersed with patches of woody vegetation and open water. They require dense vegetation and open water with stable levels within 10 m for nesting, and access to clear, open water for foraging (4).	No	Confirmed absent through targeted surveys	No further consideration required
Loggerhead Shrike	*Lanius ludovicianus*	END	END	S2B	The Loggerhead Shrike is a small bird with a black, hooked bill, grey crown, and white throat and chest. This species has specific habitat requirements that are dependent on active livestock grazing, or grassland areas that have naturally short grass cover (i.e. alvar communities). They also require spiny, multi-branched shrubs, or barbed fencing, to catch prey. They prefer grassland habitats that have sporadic occurrences of low trees and shrubs; particularly hawthorn species, which are used as part of their feeding behaviour (1).	No	Confirmed absent through targeted surveys	No further consideration required
Louisiana Waterthrush	*Parkesia motacilla*	THR	THR	S3B	The Louisiana Waterthrush is a large wood warbler with brown upper parts, cream-coloured breasts and flanks with dark streaks, and a long bill. It is typically found along fast moving streams and creeks, in deeply forested ravines. It nests along stream banks, in the roots of fallen trees, and under logs and other large woody debris. Although less frequently, the Louisiana Waterthrush has been known to inhabit heavily wooded, deciduous swamps and open water areas, In Ontario, its breeding ground is mostly found in woodlands along Lake Erie and along the Niagara Escarpment (1).	No	Confirmed absent through targeted surveys	No further consideration required
Olive-sided Flycatcher	*Contopus cooperi*	THR	SC	S4B	The Olive-sided Flycatcher is a medium-sized songbird with olive colouring, often seen perching on top of tall trees waiting to catch their prey. It prefers open areas along natural mature forest edges, forest edges near natural openings such as rivers or swamps, human-made openings, or burned forest openings with numbers of dead trees. Breeding habitat usually consists of coniferous or mixed forests adjacent to rivers or wetlands, in Ontario often nesting in White and Black Spruce, Jack Pine, and Balsam Fir (1).	No	Confirmed absent through targeted surveys	No further consideration required
Peregrine Falcon	*Falco peregrinus*	SC	SC	S3B	The Peregrine Falcon is a bird of prey with a slate blue back, cream-coloured chest with dark markings, and pointed wings spanning around 1 m. It also has bright yellow feet and legs. This species can be found nesting on tall, steep cliff ledges close to large bodies of water. They prefer open habitats such as wetlands, tundra, savannah, sea coasts and mountain meadows for hunting , but may also be found above open forests. This species has also adapted well to living and nesting in urban areas, and has been documented using the ledges of tall buildings and other tall man-made structures for perches and nesting (1).	No	Confirmed absent through targeted surveys	No further consideration required
Red-headed Woodpecker	*Melanerpes erythrocephalus*	END	END	S4B	The Red-headed Woodpecker is a mid-sized bird, at around 20 cm long, with a vivid red head, neck and breast as well a strong bill. The species can be found in open woodland and woodland edges, often near man-made landscapes such as parks, golf courses and cemeteries. These areas must contain a large number of dead trees for perching and nesting (1).	No	Confirmed absent through targeted surveys	No further consideration required
Short-eared owl	*Asio flammeus*	SC	SC	S2N,S4B	The Short-eared Owl has a large round head with small tufts of feathers, long wings, a short tail, and cryptic colouring of brown streaks. This species is found in scattered pockets across the province where suitable open habitat, including grasslands, tundra, peat bogs and marsh, can be found in sufficient quantities. Adults build nests on the ground in grassy areas and occasionally agricultural fields (1). The main factor influencing their choice in habitat is believed to be an abundance of their food source, primarily rodents and other small mammals (2).	No	Confirmed absent through targeted surveys	No further consideration required
Wood Thrush	*Hylocichla mustelina*	THR	SC	S4B	The Wood Thrush is a medium-sized songbird of around 20 cm with rusty brown coloured upper parts and white underparts with large dark spots. It breeds in deciduous and mixed forests with moderate understories, shade and abundant leaf litter where it forages for food, including larval and adult insects as well as plant material. They prefer moist stands of trees with well-developed undergrowth and tall trees for perches (1).	Yes: adjacent lands only	Incidental observation on-site	Potential significant wildlife habitat on adjacent lands
Yellow Rail	*Coturnicops noveboracensis*	SC	SC	S4B	The Yellow Rail is a small, quail-like marsh bird with a short yellow or black bill, short tail, with yellowish and black streaks on its back and white wing patches. This species is mainly found in the Hudson Bay Lowlands region, and is only found in localized marshes in southern Ontario. It is a secretive bird that lives deep within the reeds, sedges, and marshes of shallow wetlands which nest on the ground in areas that have an overlying mat of dry vegetation that can be used for nest building (1).	No	Confirmed absent through targeted surveys	No further consideration required
Fish								
American Eel	*Anguilla rostrata*	No Status	END	S1?	The American Eel is a long, slender bodied fish, with one long fin extending down the back and around the tail, and two small pectoral fins. It has thick lips, and a protruding lower jaw that extends out above the upper jaw. At the juvenile stage, they swim up the St. Lawrence River to reach Lake Ontario and connected tributaries where they will remain for 8 to 23 years before migrating back to their spawning grounds. In Ontario, the American eel prefers mud, sand or gravel substrates during the juvenile stage when they reside primarily in the benthic zone of waterbodies. More mature eels are able to thrive in most environments provided there is available cover during daylight hours, and the habitat is accessible (2).	No	Known to occur in the general area	No further consideration required
Deepwater Sculpin	*Myoxocephalus thompsonii*	SC	-	S1	The Deepwater Sculpin grows tup to 8 cm in length, and has eyes on top of its head, a large mouth, three dark bands on its pectoral fins, and lacks true scales. This species inhabits the bottoms of cold, highly oxygenated lakes (2).	No	Known to occur in the general area	No further consideration required
Lake Sturgeon	*Acipenser fulvescens*	No Status	END	S2	The Lake Sturgeon, a large freshwater fish, has an extended snout with four whisker-like organs hanging near the mouth and is dark to light brown or grey on its back and sides with a lighter belly. In Ontario, this fish is found in the rivers of the Hudson Bay Basin, the Great Lakes basin, and their connecting waterways. Lake Sturgeon's live almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel and are usually found at depths of 5 to 20 m. They spawn in relatively shallow, fast-flowing water or if available deeper water habitat as well (1).	No	Known to occur in the general area	No further consideration required
Nothern Brook Lamprey	*Ichthyomyzon fossor*	SC	SC	S3	The Northern Brook Lamprey is a small, elongate fish growing up to 16 cm long with a round, jawless mouth, sevel gill openings, and no pectoral or pelvic fins. This species has a larval stage, in which they require soft substrates for burrowing and typically use slow-moving portions of coolwater streams, and an adult stage, in which they are more typically associated with fast flowing ripples in coolwater strams with rock or gravel bottoms (1).	No	Known to occur in the general area	No further consideration required

Northern Sunfish (Great Lakes - Upper St. Lawrence population)	*Lepomis peltastes*	SC	SC	S3	The Northern Sunfish is a small (about 130 mm long), typical looking member of the sunfish family (Centrarchidae). It has a deep, laterally compressed and olive coloured body with bright blue and red markings. In Ontario, the Northern Sunfish lives in shallow vegetated areas of quiet, slow flowing rivers and streams, as well as warm lakes and ponds, with sandy banks or rocky bottoms. Northern Sunfish prefer to be near aquatic vegetation where they can avoid strong currents. The Great Lakes - Upper St. Lawrence Populations are found throughout southern Ontario including waters flowing into Lake Huron, Georgian Bay, Lake St. Clair, Lake Erie and Lake Ontario, as well as rivers and small lakes in eastern Ontario (1).	No	Known to occur in the general area	No further consideration required
Redside Dace	*Clinostomus elongatus*	END	END	S2	The Redside Dace is a small-bodied fish that is a member of the Minnow family. It averages about 75 milimeters in length and has a flattened body shape. Adults are colourful, with a red stripe on the front half of the body and a yellow stripe that extends almost the full length of the fish. Redside Dace prefer small streams and headwater areas with a gravel bottom. Overhanging grasses and shrubs provide ideal habitat as this species is adapted to jumping up to 10 cm out of the water to feed on insects (2).	No	Known to occur in the general area	No further consideration required
Silver Lamprey (Great Lakes - Upper St. Lawrence River population)	*Ichthyomyzon unicuspis*	SC	SC	S3	The Silver Lamprey is an eel-shaped fish growing from 9 to 39 cm long, with a sucking disc mouth and no jaws or paired fins. They can be differed from other lamprey species based on fin shapes and teeth arrangements. Their habitat requirements include clear water, the availability of fish hosts, and relatively clean beds of sand or organic debris (1).	No	Known to occur in the general area	No further consideration required
Herptiles								
Midland Painted Turtle	*Chrysemys picta marginata*	SC	-	S4	The Midland Painted Turtle has a olive to black carapace with red or dark orange markings on the marginal scutes, as well as red and yellow stripes on the head and neck. The species uses a variety of waterbodies including, ponds, marshes, lakes and slow-moving creeks with a soft bottom and an abundance of basking sites and aquatic vegetation. This species usually hibernates on the bottom of waterbodies (5).	No	Known to occur in the general area	No further consideration required
Northern Map Turtle	*Graptemys geographica*	SC	SC	S3	The Northern Map Turtle is a medium sized turtle identified by its carapace's map contour-like patterning. It lives in larger lakes and rivers, requiring high water quality to support their primary prey species: molluscs. This species can often be seen in large groups basking together on rocks and logs. In the winter, the Northern Map Turtle can be found hibernating on the bottom of slow-moving rivers (1).	No	Known to occur in the general area	No further consideration required
Snapping Turtle	*Chelydra serpentina*	SC	SC	S3	The Snapping Turtle, with its large serrated carapace, small plastron, and spiked tail, is Canada's largest freshwater turtle (5). It spends the majority of its life in water, preferring shallow water with soft mud and leaf litter, and will travel upland to gravel or sandy embankments, roadsides, along railway lines or beaches to lay their eggs (1).	No	Known to occur in the general area	No further consideration required
Spotted Turtle	*Clemmys guttata*	END	END	S2	The Spotted Turtle is named after the distinct yellow spots on its carapace. The species is semi-aquatic and prefers ponds, marshes, bogs and even ditches with slow-moving, unpolluted water and an abundant supply of aquatic vegetation. This species usually hibernates in wetlands or seasonally wet areas with structures such as overhanging banks, hummocks, tree roots, or aquatic animal burrows (1).	No	Known to occur in the general area	No further consideration required
Wood Turtle	*Glyptemys insculpta*	THR	END	S2	The Wood Turtle has orange coloured front legs, neck and chin and a sculpted carapace with raised, pyramidal scutes (5). They prefer clear rivers and streams that have moderate current, and sandy or gravelly substrates. This species spends more time on land than other turtle species including in meadows, swamps and fields. Wooded areas are an essential habitat component, and the species uses aquatic habitats for hibernation and mating. Nesting occurs in areas with sandy soil and abundant light (1).	No	Known to occur in the general area	No further consideration required
Eastern Milksnake	*Lampropeltis triangulum*	SC	NAR	S4	The Eastern Milksnake's colouration is grey or tan with reddish alternating blotches otlines in black along its back and sides (5). It has recently been delisted from being a species at risk in Ontario (1). This species tends to use open habitats such as rocky outcrops, fields and forest edges. The preferred prey of milksnakes are mice, small rodents, and ground nesting birds which are amply found in and surrounding agricultural outbuildings. The milksnake is secretive and is not likely to be encountered during the day or at night while hunting (5).	No	Known to occur in the general area	No further consideration required
Eastern Ribbonsnake	*Thamnophis sauritus*	SC	SC	S4	The Eastern Ribbonsnake is slender with three bright yellow stripes running down its back and sides and a white crescent in front of each eye. This snake is usually found close to water as they are strong swimmers, often fleeing predators by diving into shallow water. It prefers wetland habitats where its prey species, frogs and small fish, are abundant. Over winter, they congregate in underground burrows or rock crevices to hibernate (1).	No	Known to occur in the general area	No further consideration required
Massasauga Rattlesnake (Great Lakes - St. Lawrence population)	*Sistrurus catenatus*	THR	THR	S3	The Massasauga, Ontario's venomous snake, can be identified by its rattle, vertical pupils, and triangular head. It inhabits a range of different habitats throughout Ontario, including tall grass prairies, marshes, bogs, shorelines, forests, and alvars. Within these habitats they require open areas to warm themselves in the sun (1).	No	Known to occur in the general area	No further consideration required
Jefferson Salamander	*Ambystoma jeffersonianum*	END	END	S2	The Jefferson Salamander is black or grey-brown with bluish spots. Adults live in moist, loose soil, under logs, or in leaf litter, often in ponds surrounding forests. They spend most of their time underground in burrows or under rocks and logs so are most likely to be spotted in early spring as they travel to breed. Their eggs are laid in clumps attached to underwater vegetation. In Ontario, it is mainly found along the Niagara Escarpment (1).	No	Known to occur in the general area	No further consideration required
Western Chorus Frog	*Pseudacris triseriata*	THR	-	S3	The Western Chorus Frog is small with a dark stripe running through its eye and a light stripe underneath (5). It is primarily a lowland terrestrial species that requires access to terrestrial and aquatic habitats in close proximity to one another. Relying on marshes and wooded wetlands adjacent to forested habitats, this species also requires isolated, predator free pools for breeding. Temporary pools, such as vernal pools in wooded areas, are preferred. This species hibernates terrestrially in a variety of environments, including leaf litter, wood debris, and vacant animal burrows (2).	Yes: on-site and adjacent lands	Confirmed absent through targeted surveys	No further consideration required
Invertebrates								
Monarch Butterfly	*Danaus plexippus*	SC	SC	S2N,S4B	The Monarch is an orange and black butterfly with small white spots and a wingspan of around 10 cm. It relies on milkweed plants as a food source for growing caterpillars, but the adult butterflies forage in diverse habitats for nectar from wildflowers (1).	No	Known to occur in the general area	No further consideration required
West Virginia White	*Pieris virginiensis*	No Status	SC	S3	The West Virginia White is a small, dingy white butterfly. This species is found in moist deciduous woods, and requires a supply of toothwort, a small, spring-blooming plant, which provides the only source of food for its larvae. The West Virginia White is found mostly in the central and southern parts of Ontario, but its range extends north to Manitoulin and St. Joseph islands (1).	No	Known to occur in the general area	No further consideration required

Yellow-banded Bumble Bee	*Bombus terricola*	SC	SC	S3S5	The Yellow-banded Bumble Bee is a medium-sized bumble bee with a distinct yellow and black abdominal band pattern found on its queens, males, and workers. This species is a forage and habitat generalist, able to use a variety of nectaring plants and environmental conditions. It can be found in mixed woodlands, particularly for nesting and overwintering, as well as a variety of open habitat such as native grasslands, farmlands and urban areas. The Yellow-banded Bumble Bee ranges from the Mixedwood Plains of southern Ontario to the Hudson Bay Lowlands in the north (1).	No	Known to occur in the general area	No further consideration required
Rainbow Mussel	*Villosa iris*	SC	SC		The Rainbow mussel shell exterior is yellow, green, or brown with many brokedn dark green lines while its interior is iridescent coloured. It has an elongated oval shape and grows up to 8 cm long. This species prefers small or medium rivers with a moderate to strong current. The Rainbow mussel is typically found in or near riffle areas in shallow (<1 m) water with either asandy, rocky, or gravel bottom (2).	No	Known to occur in the general area	No further consideration required
Mammals								
Tri-colored Bat	*Perimyotis subflavus*	END	END	S3?	The Tri-colored Bat is small, with pale brown with orange-red forearms, muzzle, and ears. It is named for the black, yellow, and brown hairs on its back. It is considered rare in this region of Ontario which is at the northernmost limit of the natural range. These bats prefer to nest in foliage, tree cavities and woodpecker holes, but are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Tri-colored Bats prefer an open forest habitat type in proximity to water (6).	Yes: on-site and adjacent lands	Known to occur in the general area	No further consideration required
Eastern Small-footed Myotis	*Myotis leibii*	No Status	END	S2S3	The Eastern Small-footed Myotis has fur with black roots and shiny brown tips as well as very small feet. In the spring and summer, the Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects. They hibernate in winter, often in caves and abandoned mines choosing colder and drier sites than other similar bats (1).	Yes: on-site and adjacent lands	Known to occur in the general area	No further consideration required
Little Brown Myotis	*Myotis lucifugus*	END	END	S4	The Little Brown Myotis has glossy brown fur and a fleshy projection covering the entrance to its ears. This species roosts in trees and buildings, often selecting attics, abandoned buildings and barns for summer colonies where they can raise their young. Little Brown Bats hibernate from October/November to March/April, most often in caves or abandoned mines that are humid and remain above freezing (1).	Yes: on-site and adjacent lands	Known to occur in the general area	No further consideration required
Northern Myotis	*Myotis septentrionalis*	END	END	S3	The Northern Myotis has dull yellow-brown fur with pale bellies and long, rounded ears. This species is found in boreal forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October/November to March/April, most often in caves or abandoned mines (1).	No	Known to occur in the general area	No further consideration required
Trees, plants, fungi and lichens								
American Ginseng	*Panax quinquefolius*	END	END	S2	American Ginseng is a perennial plant which grows up to 60 centimetres in height. The leaves typically have five leaflets arranged in a whorl at the end of the leaf stem. The root looks like a gnarly parsnip. The flowers are an inconspicuous green-white in colour, but the berries are bright red and arranged in a cluster. In Ontario, the American Ginseng typically grows in rich, moist, and mature deciduous woods dominated by Sugar Maple, White Ash, and American Basswood. It typically grows in deep, nutrient rich soil over limestone or marble bedrock (1).	No	Confirmed absent through targeted surveys	No further consideration required
American Hart's-tongue Fern	*Asplenium scolopendrium*	SC	SC	S3	American Hart's Tongue Fern is a perennial evergreen fern with fronds growing from a short underground stem. Its blades are strap-shaped with a heart-shaped base and pointed tip. The species grows on calcareous rocks on slopes in deciduous forests, preferring deep shade. In Ontario, most occurences are in maple-beech forests (1).	No	Confirmed absent through targeted surveys	No further consideration required
Black Ash	*Fraxinus nigra*	No status	END	S4	The Black Ash is a smaller-sized tree with a narrow crown, light grey and scaly bark, and green, oval leaflets on a central stalk. It grows everywhere in Ontario except for the far north, preferring moist climates and soils such as swampy woodlands or bogs (1).	Yes: on-site and adjacent lands	Confirmed habitat on-site through targeted surveys	Consideration required under local/regional conservation objectives
Butternut	*Juglans cinerea*	END	END	S2?	The Butternut is a medium sized tree reaching 30 m in height. It has large compound leaves with 11 to 17 leaflets. The fruit is oval, fuzzy and sticky. In Ontario, the Butternut prefers moist, well-drained soil, often along streams, or occasionally well-drained gravel sites. It grows alone or in small groups in deciduous forests (1).	Yes: on-site and adjacent lands	Confirmed habitat on-site through targeted surveys	Consideration required under the ESA
Eastern Prairie Fringed-orchid	*Platanthera leucophaea*	END	END	S2	The Eastern Prairie Fringed-Orchid has distinctive fringed white flowers with a deep "nectar spur" containing nectar and a flat, fringed "lip" serving as a platform for pollinating insects. It may lie dormant for years before flowering. It can be found in areas of tallgrass prairie or fen throughout the province and in some tamarack swamps of the Bruce Peninsula and Ottawa Area (1).	No	Confirmed absent through targeted surveys	No further consideration required
Tuberous Indian-plantain	*Arnoglossum plantagineum*	SC	SC	S1	The Tuberous Indian-plantain, a member of the aster family, grows as a flat rosette of leaves which grow a tall flower stalk (up to 1.8 m) with a large, flat-topped closter of white flowers. The species grows in open areas within wet, calciumm-rich meadows or shoreline fens (1).	No	Confirmed absent through targeted surveys	No further consideration required

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