ENVIRONMENTAL IMPACT STATEMENT

A-14 Adam & Eve Road, Buckhorn ON

Project No.: CCO-23-3258

Prepared for:

Lucas Fuderer and Marcus Fuderer
Ontario Ltd. 1000037246
Fire Route 25
Adam and Eve Road
Buckhorn, ON
K0L 1J0

Prepared by:

Egis
115 Walgreen Road, R.R.3
Carp, Ontario
K0A 1L0

ENVIRONMENTAL IMPACT STATEMENT
A-14 Adam & Eve Road, Buckhorn ON

Prepared for:

Lucas Fuderer and Marcus Fuderer
Ontario Ltd. 1000037246
Fire Route 25
Adam and Eve Road
Buckhorn, ON
K0L 1J0

Prepared by:

Egis
115 Walgreen Road, R.R.3
Carp, Ontario
K0A 1L0

Version 002
April 21, 2025

Written by: Danica Rice
Junior Biologist, Natural Sciences
Egis

Reviewed by: Christian Lyon
Practice Area Lead, Natural Sciences
Egis

Reviewed by: Chris Heffernan
Senior Biologist, Natural Sciences
Egis

Table of Contents

Tables

Figures

Appendices

1.0 PROPERTY INFORMATION AND INTRODUCTION

The subject property for this *Environmental Impact Statement* (EIS) is a 1.9-hectare (ha) parcel of land located at A-14 Adam & Eve Road, in the Town of Buckhorn, Ontario, within the Municipality of Trent Lakes and is legally known as Lot 8, Concession 9 in the Geographic Township of Harvey. The subject property is located within the County of Peterborough off of Adam and Eve Road, with approximately 60 metres (m) of frontage on the east side of Adam and Eve Road (Figure 1).

The subject property is located within the Municipality of Trent Lakes (the Municipality), which has adopted the Official Planning of the Township of Galway-Cavendish and Harvey (the Township), as well as the Official Planning of the County of Peterborough (the Country). The subject property is designated as a "Rural Settlement" as well as "Natural Core Area" under the County's *Official Plan* (County of Peterborough, Map TL – 3, 2022), and as "Rural" under the Township's *Official Plan* (Township of Galway-Cavendish and Harvey, 2011). The owner of the subject property is proposing to construct two (2) new storage facilities to house boats during the winter, in addition to grading a portion of the property and laying down gravel. Details on the proposed development are provided in Section 4.0 of this report.

The subject property is located within the jurisdiction of the Ministry of Natural Resources (MNR) – Peterborough District and the Ministry of Environment, Conservation and Parks (MECP) - Peterborough District.

As the County's *Official Plan* (County of Peterborough, 2022) designates the land as "Rural Settlement", which only permits small-scale commercial or industrial uses, the property must be re-designated to "Tourist Commercial" via an Official Plan Amendment (OPA). The Municipality requires an EIS to be carried out in order to complete the application for this re-designation due to the presence of Natural Heritage Features within 120 m of the proposed works as outlined in the Townships *Official Plan* (Township of Galway-Cavendish and Harvey, 2011), as well as due to the potential for Species at Risk (SAR) occurrence. This EIS report assesses the potential impacts that the development may have on the existing woodlands and natural heritage features, including fish habitat, SAR, and their habitat.

Egis was retained by the property owners, Lucas Fuderer and Marcus Fuderer, to carry out an EIS to assess the existing natural heritage features as required under the Townships *Official Plan* (Township of Galway-Cavendish and Harvey, 2011) and the *Provincial Planning Statement*, 2024 (PPS). This EIS summarizes the findings of the background review and field investigations, outlines potential impacts as a result of the proposed development, and provides recommendations to mitigate anticipated impacts on natural heritage features. Statements within this EIS specific to the legal boundary of 24 Fire Route 25 (A-14 Adam & Eve Road) will be referred to as the "subject property," while reference to the "study area" includes the subject property and adjacent lands within 120 m of that area.

Figure 1: Site Location Key Map

2.0 METHODOLOGY

A desktop background review was conducted concerning the study area in order to satisfy requirements outlined under Section 5.1.10.3 of the Townships *Official Plan* (Township of Galway-Cavendish and Harvey, 2011), which indicates that "*Where determined by the Municipality, in consultation with the local Conservation Authority, the Ministry of Natural Resources or the County of Peterborough, the Municipality shall require the developer to prepare an Environmental Impact Study (EIS) as part of any proposal for development or site alteration, where potential exists for a negative impact on the natural environmental features, functions and/or adjacent lands…..*".

2.1 Background Information

- The Natural Heritage Information Centre (NHIC) database accessed via the MNR Make a Map: Natural Heritage Areas; this search tool allows areas to be searched at up to 1 km^2 grid resolution and provides reports concerning rare species tracked by the NHIC. Information for each 1 km^2 square within the study area was reviewed for occurrences of rare species tracked by NHIC (MNR, 2024a);
- The MNR Geospatial Ontario (GO) Metadata Management Tool; this tool contains information (e.g., location of Provincially Significant Wetlands (PSWs), SAR element occurrences, etc.) as well as Aquatic Resource Area (ARA) licensed under the Open Government Licence for Ontario (MNR, 2024b);
- The Soil Association of Southern Ontario's Mapping was accessed to determine the soil association in which the study area is located within (Ontario Soil Survey, 1964)
- Fish – ON-Line sport fish and stocking resource (MNR, 2024c);
- Fisheries and Oceans Canada (DFO) Aquatic SAR Mapping (DFO, 2023);
- Data from the Ontario Breeding Bird Atlas Database (OBBA) was accessed from the data summaries page of the Atlas of the Breeding Birds of Ontario website. Information for each 10 km^2 grid square was reviewed for the study area (Bird Studies Canada et al., 2006);
- Ontario Reptile and Amphibian Atlas was accessed for the data summaries. Information for each 10 km^2 grid square was reviewed for the study area (Ontario Nature, 2020);
- Ontario Butterfly Atlas was accessed for data summaries. Information for each 10 km^2 grid square was reviewed for the study area (Toronto Entomologists' Association, 2020);
- The *Official Plan* for the Township of Galway-Cavendish and Harvey was reviewed for property designation information as well as any environmental constraints which may be present within or adjacent to the study area (Township of Galway-Cavendish and Harvey, 2011);
- The *Official Plan* for the County of Peterborough was reviewed for property designation information as well as any environmental constraints which may be present within or adjacent to the study area (Peterborough County, 2022); and
- Habitat in the study area was evaluated by use of aerial photography accessed through Google Earth aerials and Street View mapping (Maxar Technologies, 2024).

2.2 Field Investigations

In order to acquire information on habitat present within and adjacent to the study area, a field investigation was carried out on May 6, 2024, by an Egis field biologist, the specifics of which can be found in Table 1. The field investigation was conducted to provide a baseline inventory and assessment of the Valued Ecosystem Components (VECs) within the study area. The field investigation included the identification of the following features listed below, where applicable, within the study area. Based on the May 6, 2024, field investigation, two (2) additional targeted SAR bird and bat surveys were completed in July (Table 1).

- Existing vegetation communities;
- Areas of critical or significant habitat (i.e., Significant Valleylands, Significant Woodlands, Significant Wildlife Habitat, Provincially Significant Wetlands [PSWs], etc.);
- Soil types;
- Areas of groundwater recharge and discharge, drainage patterns, watercourses, wetland habitat, other areas of surface water;
- Watercourse morphology, habitat features, water quality parameters, specialized fish habitat, and migration barriers;
- Species at Risk (SAR) and their habitat; and
- Resident or migratory birds and other wildlife species.

Table 1: Summary of Field Investigation Activities

Date	Personnel Involved	Weather Conditions	Purpose of Visit
May 6, 2024	P. Gilhooly	15 ^{o}C, Sunny, No breeze	Daytime field investigation
July 8, 2024	P. Gilhooly & E. Porche	21 ^{o}C, Overcast, Humid	Targeted SAR bird and SAR bat surveys (evening)
July 15, 2024	P. Gilhooly & E. Porche	25 ^{o}C, Partly cloudy, Humid, Thunderstorms (early afternoon)	Targeted SAR bird and SAR bat surveys (evening)

The vegetation communities observed within the study area were characterized using the Ecological Land Classification (ELC) protocol for Southern Ontario (Lee et al., 1998), and existing vegetation communities were delineated on an aerial photograph. During the field investigations, wildlife species were observed through sight, sound, and physical evidence.

Photographs were taken during the field investigation depicting vegetation communities and VECs observed within and adjacent to the study areas. This photographic record can be found in Appendix B of this report (Photos 1 to 13).

3.0 DESCRIPTION OF THE SITE AND NATURAL ENVIRONMENT

3.1 Existing Land Use

During the first field investigation, the study area was found to be composed of a mixed deciduous forest dominated by oak species, including a historically cleared area in the southeastern quadrant of the property (Figure 2). Other land uses include a commercial lot directly to the south and residential properties scattered throughout the eastern half of the study area.

Schedule TL-3–of the Counties *Official Plan* (Peterborough County, 2022), designates the subject property as being within a "Rural Settlement" area as well as a small inclusion of "Natural Core Area" adjacent to Adam and Eve Road. According to this schedule, land designated as 'Commercial' exists within the study area on the adjacent property to the south, as well as additional "Natural Core Area(s)" within residential properties to the east of the subject property. During the background review the study area was found to contain three (3) small (approximately 0.6 ha, 1.0 ha, and 0.8 ha in size) unevaluated wetlands according to available GO data (MNR, 2024b), though the wetland mapped within the subject property was found to be dry upland habitat with no wetland species present during the May 6, 2024, field investigation (Photo 11). The other two (2) unconfirmed wetlands within the study area are well outside of the development area and located within residential properties. Therefore, their presence was not confirmed. Wetlands such as these can contain sensitive features regarding groundwater resources; therefore, groundwater resources are discussed below in Section 3.4.

No sensitive groundwater recharge areas or "Wellhead Protection Areas" under *Appendix E – Source Water Protection, Vulnerable Areas* within the Counties *Official Plan* (Peterborough County, 2022) were identified within the study area, as well as through the Township's *Official Plan* (Township of Galway-Cavendish and Harvey, 2011) *Schedule B1 – Natural Features Harvey*, though the study area is approximately 100 m west of Buckhorn Lake. Two (2) unknown wellheads were observed within the area of planned development during the field investigation (Photo 12[a/b]).

3.2 Natural Heritage System Components

- GO data from the MNR (2024b) identified the following natural features within 2 km of the study area:
  - Three (3) unevaluated wetlands (swamp) are present within the study area, as well as several more within 2 km, and
  - Mississauga River Mouth Wetland (PSW) exists approximately 1.6 km north of the property.

The County's *Official Plan* (County of Peterborough, 2022) defines wetlands as "*…lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens.*". It also defines key natural heritage features as "*…habitat of endangered species and threatened species; fish habitat; wetlands; life science areas of natural and scientific interest (ANSIs), significant valleylands, significant woodlands; significant wildlife habitat (including habitat of special concern species); sand barrens, savannahs, and tallgrass prairies; and alvars*". No wildlife activity areas are known to be present within the study area (MNR, 2024b), and based on the

results of the field investigation, no wetlands exist within the subject property.

The PPS defines a Significant Woodland as "*…an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history…*".

Section 4.1 (5) of the PPS states that "Development and site alteration shall not be permitted in significant woodlands in Ecoregions 6E…[or] Significant Wildlife Habitat… ". The Natural Heritage Reference Manual (Ontario, 2005) goes on to elaborate "unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions."

The County's *Official Plan* (County of Peterborough, 2022) defines a Significant Woodland as "*…one which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history. These are to be identified using criteria established by the Province* [….] *In Ecoregion 6E, where woodlands cover 30 to 60% of land, a significant woodland is one that is…":*

- *50 hectares in size or greater;*

3.3 Landforms, Soils and Geology

According to the Ontario Geological Survey (2010), the soils identified in the northern half of the study area are from the Rockland Formation, which consists of intrusive and metamorphic rocks (Precambrian) exposed or covered with thin drift veneer up to 1 m thick. The southern half of the study area is from the St. Peters formation, which consists of gravel, gravelly Sand, minor silt and till. The rock geology is composed of granodiorite, tonalite, monzogranite, granite, derived gneisses and migmatites (Ontario Geological Survey, 2010). The general study area exists within the Wendigo Association, which is characterized by hilly, undulating topography and excessive stoniness and is dominated by course textures soils such as loamy sand (Ontario Soil Survey, 1964). During the May 6, 2024, field investigation, the top layer of the soil profile within the study area appeared to be prevailingly sandy loam (Photo 5).

3.4 Surface Water, Fish Habitat, and Groundwater

The subject property is located within the Burleigh Falls Dam - Lower Buckhorn Lake watershed (MNR, 2023). Based on GO mapping, three (3) unevaluated wetlands are present within the study area, though one (1) of these has been confirmed through field investigation to be non-existent (Figure 2), meaning the available mapping (MNR, 2024b) may be out of date. The other two (2) are located well outside of the subject property within residential lots and were, therefore, not examined during the field investigation. No PSWs were identified within or adjacent to the study area, the closest occurrence being the Mississauga River Mouth Wetland (PSW), which exists approximately 1.6 km north of the subject property in association with Buckhorn Lake.

The County's *Official Plan – Land Use Schedule Map TL-3* identifies the western portion of the property where development is planned as a 'Natural Core Area', which is "*…intended to recognize wetlands and streams, together with lands that form a vegetation protection zone around these key hydrologic features*." (County of Peterborough, 2022). *Section 4.3.1.2* of the *Official Plan* states "*Development, including the creation of new lots, is not permitted within the Natural Core Area designation…[though] it is recognized that the Natural Core Area designation may not be accurately reflected on Land Use Schedules due to the mapping accuracy of the underlying feature, particularly non-evaluated wetlands*".

Buckhorn Lake, which is present approximately 100 m east of the study area (220 m east of the proposed development area), has a warm thermal regime and is known to contain the following fish species: Banded Killifish (*Fundulus diaphanus*),Black Crappie (*Pomoxis nigromaculatus*), Blackchin Shiner (*Notropis heterodon*), Bloater (*Coregonus hoyi*), Bluegill (*Lepomis macrochirus*), Bluntnose Minnow (*Pimephales notatus*), Brown Bullhead (*Ameiurus nebulosus*), Common Carp (*Cyprinus carpio*), Emerald Shiner (*Notropis atherinoides*), Golden Shiner (*Notations crysoleucas*), Iowa Darter (*Etheostoma exile*), Largemouth Bass (*Micropterus salmoides*), Logperch (*Percidae sp.*), Mottled Sculpin (*Cottus bairdii*), Muskellunge (*Esox masquinongy*), Pumpkinseed (*Lepomis gibbosus*), Rock Bass (*Ambloplites rupestris*), Smallmouth Bass (*Micropterus dolomieu*), Spottail Shiner (*Notropis hudsonius*), Walleye (*Sander vitreus*) , White Sucker (*Catostomus commersonii*) ,Yellow Bullhead (*Ameiurus natalis*), and Yellow Perch (*Perca flavescens*) (MNR, 2024b and 2024c).

During the May 6, 2024, field investigation, the wetland mapped within the area of the proposed development (Figure 2) was observed to be absent, and the ditch line along the east side of Adam and Eve Road was concluded not to be suitable fish habitat. As no watercourses have been identified within the study area, and Lake Buckhorn exists well outside of it, no fish inventory took place as part of the scope of this project. In addition, the study area was inspected for suitable amphibian breeding habitat, such as depressions in the woodlot, which may accumulate water seasonally, as well as wetland habitat, which may be present according to GO mapping (MNR, 2024b). Such habitat was not observed throughout the study area.

MECP Well records identified four (4) wells within the study area which range from depths of 9 m to 62 m, and have a static water level ranging from 1 m to 12 m. All the wells within the study area were domestic water supplies. A total of 63 wells are located within 500 m of the study area. Although no wells were identified within the subject property according to LIO Mapping (MNR, 2024b), two (2) unknown wellheads were observed within the area of planned development during the field investigation (Photo 12[a/b]; Figure 3). No sensitive groundwater recharge areas or 'Wellhead Protection Areas' were identified within the study area using the sources listed in Section 2.1. No Evidence of groundwater upwelling was observed at the time of the field investigation.

3.5 Vegetation Cover

A spring vegetation survey was completed during the May 6, 2024, field investigation. Habitat observed during the field investigation included one (1) vegetation community. No SAR or vegetation species of conservation concern were identified during the field investigation. The following sections outline the existing vegetation community identified within the study areas (Figure 2). Photographs of the vegetation community can be found in Appendix B. A complete listing of vegetation species observed within the study areas during the field investigation is found in

Table 2.

The following section outlines the existing vegetation community identified within the study area. For a detailed map of vegetation communities within the subject property, refer to Figure 2.

3.5.1 Vegetation Community 1: Dry-Fresh Mixed Oak Deciduous Forest Type (FOM1-4)

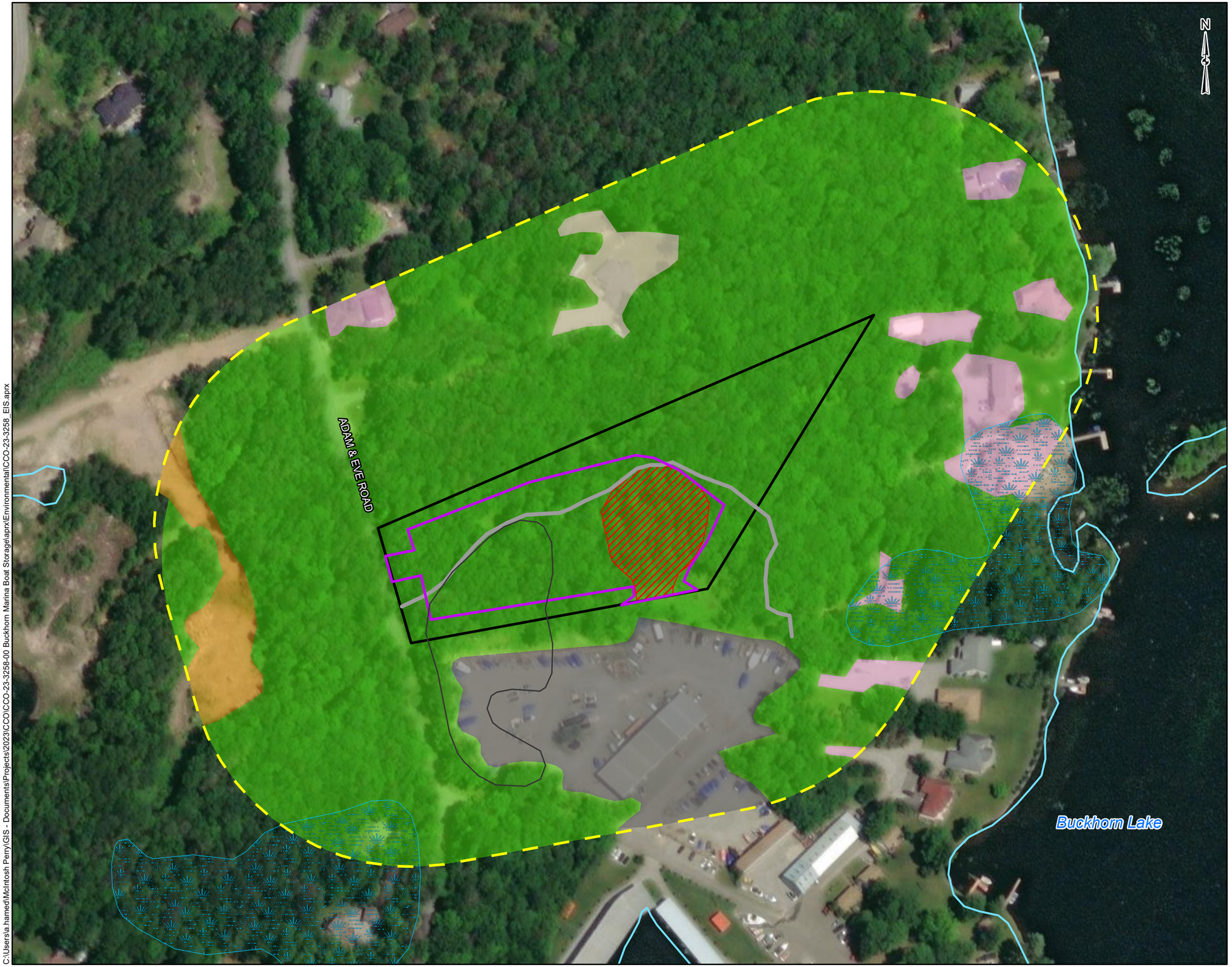
Vegetation Community 1 was classified through ELC as a Dry-Fresh Mixed Oak Deciduous Forest Type (FOM1-4) (Photos 1 - 6). This community is present throughout the entirety of the subject property and most of the study area, with the exception of the residential lots, a commercial lot to the south, and a cleared area within the westend of the property. It is dominated by red oak (*Quercus rubra*) and white oak (*Quercus alba*), with occasional white pines (*Pinus strobus*). During the May 6, 2024, field investigation, it was observed that a small portion of the forest within the planned development area was historically cleared (i.e., a cleared footpath approximately 3-4 m wide).

Table 2: Vegetation Species Observed Within the Study Areas			
Common Name	Scientific Name	Common Name	Scientific Name
Woody Species			
American hazelnut	*Corylus americana*	large-toothed Aspen	*Populus grandidentata*
bird cherry	*Prunus padus*	paper birch	*Betula papyrifera*
black cherry	*Prunus serotina*	red maple	*Acer rubrum*
common juniper	*Juniperus communis*	red oak	*Quercus rubra*
common serviceberry	*Amelanchier arborea*	white oak	*Quercus alba*
honeysuckle sp.	*Lonicera sp.*	white pine	*Pinus strobus*
ironwood	*Ostrya virginiana*		
Herbaceous Species			
barren strawberry	*Waldsteinia fragarioides*	joint-toothed moss	*Bryopsida sp.*
blueberry sp.	*Vaccinium sp.*	large leaved aster	*Eurybia macrophylla*
bull thistle[2]	*Cirsium vulgare*	large-leaved trillium	*Trillium grandiflorum*
Canadian mayflower	*Maianthemum canadense*	Pennsylvania sedge	*Carex pensylvanica*
coltsfoot[2]	*Tussilago farfara*	red raspberry	*Rubus idaeus*
common bracken fern	*Pteridium aquilinum*	round-lobed hepatica	*Anemone americana*
common dandelion	*Taraxacum officinale*	Solomon's seal	*Polygonatum sp.*
eastern teaberry	*Gaultheria procumbens*	sulphur cinquefoil	*Potentilla recta*
evening primrose	*Oenothera biennis*	white rattlesnake root	*Prenanthes alba*
fringed polygala	*Polygala paucifolia*	white trillium	*Trillium grandiflorum*

Table 2: Vegetation Species Observed Within the Study Areas			
Common Name	Scientific Name	Common Name	Scientific Name
grass sp.	*Poaceae sp.*	wild strawberry	*Fragaria vesca*
great mullein	*Verbascum thapsus*		

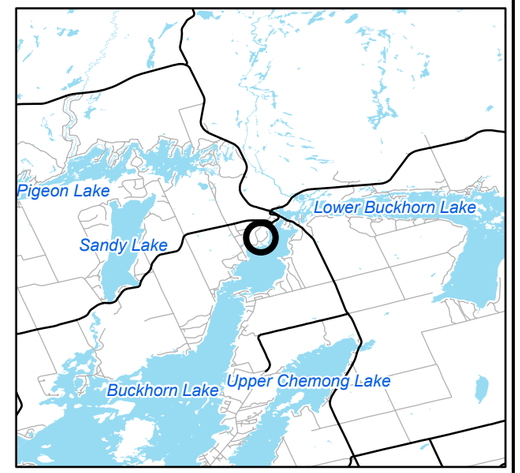
[1] These species are known to be invasive or exotic and are currently tracked in Ontario in accordance with *Invasive Species Act* (1995).

[2] These species are considered as noxious weeds in Ontario in accordance with the *Ministry of Agriculture, Food and Rural Affairs* (OMAFRA, 2021) under the *Weed Control Act, R.S.O. c. W.5* (1990).



LEGEND

- Project Limits
- Study Area
- Historically Cleared Area
- Property Boundary
- Cleared Path
- FODM1-4 Dry-Fresh Mixed Oak Deciduous Forest Type
- Commercial
- Residential
- Cleared Area - Non-ELC Community
- Non-existent wetland - Field Verified
- Waterbody
- Unevaluated Wetland



REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2024.

60 30 0 60 Metres

Scale 1:2,000

CLIENT: LUCAS FUDERER AND MARCUS FUDERER

PROJECT: BUCKHORN YACHT EIS

TITLE: VEGETATION COMMUNITIES

egis
115 Walgreen Road, RR3, Carp, ON K0A1L0
Tel: 613-836-2184 Fax: 613-836-3742

PROJECT NO:CCO-23-3258		FIGURE:
Date	Jun., 07, 2024	2
GIS	AH	
Checked By	DR	

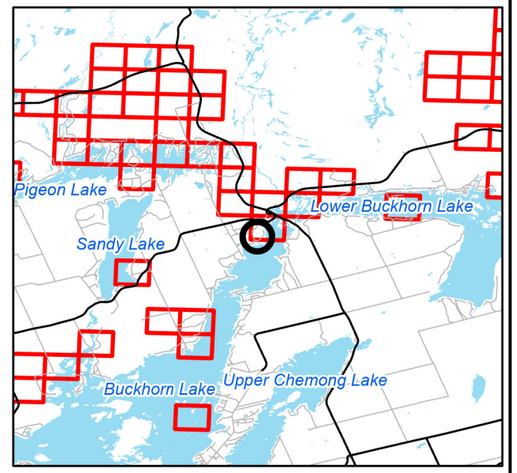
C:\Users\a.hamed\McIntosh Perry\GIS - Documents\Projects\2023\CCO\CCO-23-3258-00 Buckhorn Marina Boat Storage\aprx\Environmental\CCO-23-3258_EIS.aprx

LEGEND

- Unknown Wellhead
- Study Area
- Project Limits
- Historically Cleared Area
- Property Boundary
- Waterbody
- Unevaluated Wetland
- Non-existent wetland - Field Verified
- Suitable Bat Habitat (0.71 ha)

SAR Habitat/ Observations

- Barn Swallow (May 6, 2024)
- Eastern Wood-Pewee (July 8, 2024)
- Little Brown Myotis & Hoary Bat (July 8, 2024)
- Northern Myotis (July 8, 2024)
- Snag Tree
- Tri-colored Bat (July 8, 2024)
- Suitable SAR Woodland Bird Habitat
- Category 2 Blanding's Turtle Habitat
- Category 3 Blanding's Turtle Habitat
- Blanding's Turtle Record in NHIC Database (1km²)



REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2025.

60 30 0 60 Metres

Scale 1:2,000

CLIENT: LUCAS FUDERER AND MARCUS FUDERER

PROJECT: BUCKHORN YACHT EIS

TITLE: CONSTRAINTS AND OPPORTUNITIES

egis
115 Walgreen Road, RR3, Carp, ON K0A1L0
Tel: 613-836-2184 Fax: 613-836-3742

PROJECT NO: CCO-23-3258		FIGURE:
Date	Apr., 15, 2025	3
GIS	AH	
Checked By	DR	

C:\Users\a.hamed.MCINTOSHPERRY1\EGIS Group\GIS - Documents\Projects\2023\CCO\CCO-23-3258-00 Buckhorn Marina Boat Storage\aprx\Environmental\CCO-23-3258_EIS.aprx

3.5.2 Significant Woodlands

Both the Township and the County have not mapped "Significant Woodland", and as such do not identify the forest within the study area as a "Significant Woodland", the definition of which has been deferred to the PPS in both cases.

The Natural Heritage Reference Manual (Ontario, 2005) states that in Ecoregion 6E:

- *"A woodland which occupies 30 – 60% of land cover may be considered 'Significant' under the PPS if it is 50 ha in size or larger. "*, and
- *"Woodland areas are considered to be generally continuous even if intersected by narrow gaps 20 m or less in width between crown edges."*

The woodland within the subject property is unlikely to be designated as 'Significant', as it is non-continuous in the wider landscape (making the continuous portion less than 50 ha), and surrounded by residential and commercial development, including roads which create crown gaps of greater than 20 m.

During the field investigation, the woodland within the study area was evaluated for features such as SAR trees (i.e., Butternut and Black Ash) and bat snag trees (significant wildlife habitat). Seven (7) suitable bat snags were observed within the study area and will be discussed further in Section 3.7 and Section 3.8.

3.5.3 Invasive and Noxious Plant Species

Two (2) exotic (i.e., non-native) plant species with habits that generally give them an advantage to be invasive and/or noxious species were found sporadically throughout the study area (Table 2). These species are considered to be commonly established in eastern Ontario and are present within relatively small proportions within the study area in relation to overall speciation and compose an aggregate of ELC communities. One (1) genus of plant, *Lonicera* (commonly known as Honey Suckle sp.), includes many species which are considered 'Invasive' under the *Weed Control Act* (1990). However, as this plant was not leafed at the time of the field investigation, its species was unable to be determined. Further recommendations regarding this will be discussed in Section 5.6.2.

No plant species listed as 'Restricted' or 'Prohibited' under the *Invasive Species Act* (2015), were observed within the study area during the May 6, 2024, field investigation.

The following species, which are considered 'Noxious Weeds' as defined above were observed within the study area:

- bull thistle (*Cirsium vulgare)*; and
- coltsfoot (*Tussilago farfara)*.

3.6 Wildlife

Characteristic wildlife of the Lake Simcoe-Rideau Ecoregion (6E) includes American Bullfrog (*Lithobates catesbeianus*), Eastern Gartersnake (*Thamnophis sirtalis*), groundhog (*Marmota monax*), Northern Leopard Frog (*Lithobates pipiens*), Northern Watersnake (*Nerodia sipedon*), raccoon (*Procyon lotor*), Red-spotted Newt (*Notophthalmus viridescens*), Common Snapping Turtle (*Chelydra serpentina*), Spring Peeper (*Pseudacris crucifer*), striped skunk (*Mephitis mephitis*),

and white-tailed deer (*Odocoileus virginianus*). Representative bird species include the Great Blue Heron (*Ardea herodias*), Hairy Woodpecker (*Leuconotopicus villosus*), Rose-breasted Grosbeak (*Pheucticus ludovicianus*), Scarlet Tanager (*Piranga olivacea*), Wilson's Snipe (*Gallinago delicata*), Wood Duck (*Aix sponsa*), and Wood Thrush (*Hylocichla mustelina*) (Crins et al., 2009).

During the field investigation, the study area was searched for signs of Pileated Woodpecker nesting. No Pileated nests were observed during the 2024 field investigations. This species usually nests in larger trees (> 40 cm diameter at breast height [DBH]) and can be distinguished from other species nesting cavities as it is unusual to find a tree with more than one (1) cavity, which will typically be circular or oval in shape with smooth edges. However, not a recognized SAR, the nests of this species are protected under *Schedule 1* of the *Migratory Bird Regulations* (MBR) whether they are occupied or not for a period of three (3) years, as they are often reused (Environment and Climate Change Canada (ECCC), 2022).

Wildlife observed during the field investigations can be found in Table 3 below.

Table 3: Wildlife Species Observed in Association with the Study Area

Common Name	Scientific Name	Applicable Legislation
Insects		
eastern tent caterpillar	*Malacosoma americanum*	N/A
Birds		
American Crow	*Corvus brachyrhynchos*	N/A
American Goldfinch	*Spinus tristis*	Migratory Bird Convention Act (1994) (MBCA)
American Robin	*Turdus migratorius*	MBCA
Barn Swallow*	*Hirundo rustica*	MBCA, Species at Risk Act (SARA), Endangered Species Act (ESA)
Black-and-white Warbler	*Mniotilta varia*	MBCA
Black-capped Chickadee	*Poecile atricapillus*	MBCA
Blue Jay	*Cyanocitta cristata*	Fish and Wildlife Conservation Act (FWCA)
Common Grackle	*Quiscalus quiscula*	N/A
Eastern Wood-pewee**	*Contopus virens*	MBCA, SARA, ESA
Gray Catbird	*Dumetella carolinensis*	MBCA
Great Crested Flycatcher	*Myiarchus crinitus*	MBCA
House Wren	*Troglodytes aedon*	MBCA
Hairy Woodpecker	*Leuconotopicus villosus*	MBCA

Table 3: Wildlife Species Observed in Association with the Study Area		
Common Name	Scientific Name	Applicable Legislation
Mourning Dove	*Colaptes auratus*	MBCA
Northern Flicker	*Colaptes auratus*	MBCA
Northern Cardinal	*Cardinalis cardinalis*	MBCA
Ovenbird	*Seiurus aurocapilla*	MBCA
Red-breasted Nuthatch	*Sitta canadensis*	MBCA
Red-eyed Vireo	*Vireo olivaceus*	MBCA
Red-winged Blackbird	*Agelaius phoeniceus*	N/A
Ring-billed Gull	*Larus delawarensis*	MBCA
Song Sparrow	*Melospiza melodia*	MBCA
Winter Wren	*Troglodytes hiemalis*	MBCA
Wild Turkey	*Meleagris gallopavo*	FWCA
White-breasted Nuthatch	*Sitta carolinensis*	MBCA
Mammals		
Tri-colored Bat	*Perimyotis subflavus*	FWCA, SARA, ESA
Northern Myotis	*Myotis septentrionalis*	FWCA, SARA, ESA
Little Brown Myotis	*Myotis lucifugus*	FWCA, SARA, ESA
Big Brown Bat	*Eptesicus fuscus*	FWCA
Hoary Bat	*Lasiurus cinereus*	FWCA, ESA

*Observed flying over the commercial property to the south of the subject property.

**Observed via auditory cues within and north of the subject property.

3.7 Habitat for Species at Risk

Background information obtained from the sources listed in Section 2.1 of this report indicated that SAR and their habitat were potentially present within the study area. These species have been listed in Table 4. Given habitat observed during the field investigation and direct observation of SAR, a determination was made as to whether these species had the potential to be or were present within the study area. The status of each species under the provincial *Endangered Species Act*, 2007 (ESA) and federal *Species at Risk Act*, 2002 (SARA) are also listed in Table 4. Additional protection afforded to species under the provincial *Fish and Wildlife Conservation Act*, 1994 (FWCA) and federal *Migratory Birds Convention Act*, 1997 (MBCA) are also noted.

Table 4: Species at Risk Potentially Present within the Study Area								
Species Name	Scientific Name	Provincial Status under the ESA	Provincial Habitat Protection	Federal Status under the SARA	Federal Protection of Individual and *Residence* outside of Federal lands	Source	Other Applicable Legislation	Suitable Habitat Present Within Study Area
Lichens								
Flooded Jellyskin	*Leptogium rivulare*	Not at Risk	No	Special Concern	No	NHIC	N/A	No. Though the study area is within the historical distribution of this species within Ontario, species requires vernal forested pools and seasonally flooded swamps, which were not present within the study area.
Plants								
Black Ash	*Fraxinus nigra*	Endangered	Yes	No Status	No	NHIC, GR	N/A	No. Species is predominantly a wetland species found in swamps, floodplains and fens.
Butternut	*Juglans cinerea*	Endangered	Yes	Endangered	Yes	NHIC, GR	N/A	Yes. Though this shade-intolerant species can be found growing in a variety of habitats, Butternuts grow best within deciduous forests (FOD) with moist, rich, and well-drained soils, often along streams.
Insects								
Monarch	*Danaus plexippus*	Special Concern	No	Endangered	No	OBA, GR	FWCA	No. No milkweed host plants were observed in the study areas, though migrant Monarchs may transit the area.
West Virginia White	*Pieris virginiensis*	Special Concern	No	No Status	No	NHIC, OBA	FWCA	No. Although the study area is within the species historical range and this species is found in moist deciduous and mixed forests, this butterfly requires a supply of toothwort (*Cardamine concatenata*), a perennial woodland wildflower since it is the only food source for larvae. As this plant was not observed within the study area, suitable habitat cannot be confirmed for this species, though migrant West Virginia Whites may transit the area.
Amphibians								
Five-lined Skink (Great Lakes / St. Lawrence population)	*Plestiodon fasciatus*	Special Concern	No	Special Concern	No	NHIC, ORAA	N/A	No. Species typically inhabits early successional habitat with low to moderate canopy cover, where individuals seek refuge under rocks overlaid on open bedrock or enter crevices and fissures.
Western Chorus Frog Great Lakes - St. Lawrence - Canadian Shield population	*Pseudacris triseriata*	No Status	No	Threatened	Yes	NHIC, ORAA, GR	N/A	No. This species may breed in vernal forest pools and wetlands, which were not observed to be present within the study area.
Turtles								
Blanding's Turtle	*Emydoidea blandingii*	Threatened	Yes	Endangered	Yes	LIO, NHIC, ORAA	FWCA	Yes. Based on element occurrence data, there are known occurrences of the Blanding's Turtle (MNR, 2024b) within 2 km of the study area which is less than 100 m west from

Table 4: Species at Risk Potentially Present within the Study Area								
Species Name	Scientific Name	Provincial Status under the ESA	Provincial Habitat Protection	Federal Status under the SARA	Federal Protection of Individual and *Residence* outside of Federal lands	Source	Other Applicable Legislation	Suitable Habitat Present Within Study Area
								buckhorn Lake. As such, functional habitat in the form of a terrestrial movement corridor (i.e., area within 240 m of aquatic habitat as described above) is present within the study area. For a more detailed discussion on Blanding's Turtle see Section 5.7.2.
Common Snapping Turtle	*Chelydra serpentina*	Special Concern	No	Special Concern	No	LIO, NHIC, ORAA	FWCA	Yes. See Blanding's Turtle discussion.
Eastern Musk Turtle	*Sternotherus odoratus*	Special Concern	No	Special Concern	No	NHIC	FWCA	No. There is no suitable habitat available. Species can be found in lakes and large rivers with slow moving water and soft substrates.
Midland Painted Turtle	*Chrysemys picta marginata*	No Status	No	Special Concern	No	NHIC, ORAA	FWCA	Yes. See Blanding's Turtle discussion.
Northern Map Turtle	*Graptemys geographica*	Special Concern	No	Special Concern	No	NHIC, ORAA	FWCA	No. There is no suitable habitat available. Species can be found in lakes and large rivers with slow moving water and soft substrates.
Snakes and Lizards								
Eastern Hog-nosed Snake	*Heterodon platirhinos*	Threatened	Yes	Threatened	No	ORAA	FWCA	Yes. Species prefers sandy, well-drained habitats such as beaches and dry forests where they can lay their eggs and hibernate.
Eastern Milksnake	*Lampropeltis triangulum triangulum*	No Status	No	Special Concern	No	NHIC, ORAA, GR	FWCA	Yes. Species is a habitat generalist and may be encountered within the study area.
Eastern Ribbonsnake	*Thamnophis sauritus sauritus*	Special Concern	No	Special Concern	No	GR	N/A	No. Species is usually found close to water, especially in marshes, where it hunts for frogs and small fish.
Birds								
Bank Swallow	*Riparia riparia*	Threatened	Yes	Threatened	No	OBBA, GR	MBCA	No. Species nests in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits.
Barn Swallow	*Hirundo rustica*	Special Concern	No	Threatened	No	OBBA, GR	MBCA	Yes. This species often lives in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. No suitable structures are known to exist within the subject property, though there is potentially suitable habitat within the study area.
Bobolink	*Dolichonyx oryzivorus*	Threatened	Yes	Threatened	No	NHIC, OBBA, GR	MBCA	No. Species is found in open meadows such as tallgrass prairies and hayfields.

Table 4: Species at Risk Potentially Present within the Study Area								
Species Name	Scientific Name	Provincial Status under the ESA	Provincial Habitat Protection	Federal Status under the SARA	Federal Protection of Individual and *Residence* outside of Federal lands	Source	Other Applicable Legislation	Suitable Habitat Present Within Study Area
Canada Warbler	*Cardellina canadensis*	Special Concern	No	Threatened	No	NHIC, GR	MBCA	Yes. This species breeds in a range of deciduous and coniferous forests, usually wet forest types, all with a well-developed, dense shrub layer often near water.
Cerulean Warbler	*Setophaga cerulea*	Threatened	Yes	Endangered	No	NHIC, GR	MBCA	Yes. This species breeds in mature, deciduous forest (FOD)s with large, tall trees and an open under storey.
Eastern Meadowlark	*Sturnella magna*	Threatened	Yes	Threatened	No	NHIC, OBBA, GR	MBCA	No. Species is found in grasslands such as pastures and hayfields, as well as within the weedy borders of roadsides, orchards, or other open areas.
Eastern Whip-poor-will	*Antrostomus vociferus*	Special Concern	Yes	Threatened	Yes	NHIC, OBBA	MBCA	Yes. Species can be found in fairly open forests, often adjacent to roads with open clearings and lots of leaf litter.
Eastern Wood-pewee	*Contopus virens*	Special Concern	No	Special Concern	No	NHIC, OBBA, GR	MBCA	Yes. Species lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in intermediate-age mature forest stands with little understory vegetation.
Evening Grosbeak	*Hesperiphona vespertina*	Special Concern	No	Special Concern	No	NHIC, OBBA	MBCA	Yes. Study area is within the southern limits of this species year-round range. Species is generally found in open, mature mixed-wood forests dominated by fir species, White Spruce and/or Trembling Aspen. Its abundance is strongly linked to the cycle of its primary prey, the Spruce Budworm.
Golden-winged Warbler	*Vermivora chrysoptera*	Special Concern	No	Threatened	No	NHIC, GR	MBCA	No. Species prefer to nest in thicket habitat with young shrubs surrounded by mature forest – locations that have recently been disturbed, such as field edges or logged areas. Though a recently cleared area does exist within the study area, no thicket habitat was observed to be present there.
Grasshopper Sparrow	*Ammodramus savannarum*	Special Concern	No	Special Concern	No	NHIC, GR	MBCA	No. Species can be found in open areas such as hayfields, meadows, and other open grassland with well-drained soil.
Least Bittern	*Ixobrychus exilis*	Threatened	Yes	Threatened	Yes	NHIC, GR	MBCA	No. Species can be found in wetland habitats such as cattail marshes. This assessment is subject to change pending the findings of the 2024 field investigation(s), specifically is suitable wetland habitat is observed to exist within the study area.
Olive-sided Flycatcher	*Contopus cooperi*	Special Concern	No	Special Concern	No	NHIC, GR	MBCA	Yes. This species is most often found along natural mixed forest edges and openings, close to rivers or wetlands. The study area is present within the southernmost range of this species.
Wood Thrush	*Hylocichla mustelina*	Special Concern	No	Threatened	No	NHIC, OBBA, GR	MBCA	Yes. Species lives in mature deciduous and mixed (conifer-deciduous) forests, with moist stands of trees with well-

Table 4: Species at Risk Potentially Present within the Study Area								
Species Name	Scientific Name	Provincial Status under the ESA	Provincial Habitat Protection	Federal Status under the SARA	Federal Protection of Individual and *Residence* outside of Federal lands	Source	Other Applicable Legislation	Suitable Habitat Present Within Study Area
								developed undergrowth and tall trees for singing perches, though they may make use of smaller stands of trees as well.
Mammals								
Eastern Small-footed Myotis	*Myotis leibii*	Endangered	Yes	No Status	No	GR	FWCA	No. This species prefers to utilize rocky outcroppings, rock barrens or cliff and treed talus, and occasionally in structures such as buildings, under bridges, or in caves.
Hoary Bat	*Lasiurus cinereus*	Endangered	Yes	Endangered (pending)	No	GR	FWCA	Yes. Deciduous forest (FOD) on the property contains snag trees large enough to act as maternity roost for bats (i.e., Little Brown Myotis) and support the Northern Myotis, Tri-colored Bat, Eastern Red Bat, Hoary Bat, and Silver-haired Bat. In addition, seven (7) suitable snag trees were observed in the study area, which could provide suitable conditions for the Little Brown Myotis, while the other five (5) aforementioned species may be encountered throughout the forested lands and are not dependent on large snag trees for roosting.
Eastern Red Bat	*Lasiurus borealis*	Endangered	Yes	Endangered (pending)	No	GR	FWCA	
Little Brown Myotis	*Myotis lucifugus*	Endangered	Yes	Endangered	No	GR	FWCA	
Northern Myotis	*Myotis septentrionalis*	Endangered	Yes	Endangered	No	GR	FWCA	
Silver-haired Bat	*Lasionycteris noctivagans*	Endangered	Yes	Endangered (pending)	No	GR	FWCA	
Tri-colored Bat	*Perimyotis subflavus*	Endangered	Yes	Endangered	No	GR	FWCA	

Of the SAR identified by background information as potentially present within the vicinity of the study area, the habitat observed during the field investigation does not appear to be suitable for the life processes of the following SAR: Monarch, Black Ash, Eastern Musk Turtle, Northern Map Turtle, Flooded Jellyskin, West Virginia White, Western Chorus Frog, Five-lined Skink (Great Lakes / St. Lawrence population), Bank Swallow, Bobolink, Eastern Ribbonsnake, Eastern Meadowlark, Golden-winged Warbler, Grasshopper Sparrow, Least Bittern, and Eastern Small-footed Myotis. These species will not be discussed further in this report.

Suitable habitat for the following SAR was deemed to be present within the study area during the field investigation: Butternut, Eastern Hog-nosed Snake, Blanding's Turtle, Eastern Milksnake, Barn Swallow, Canada Warbler, Cerulean Warbler, Evening Grosbeak, Eastern Whip-poor-will, Eastern Wood-Pewee, Olive-sided Flycatcher, Wood Thrush, Little Brown Myotis, Northern Myotis, Tri-colored Bat, Midland Painted Turtle, and Common Snapping Turtle. Suitable habitat exists for the Hoary, Eastern Red and Silver-haired Bats within the property. These species have been recently assessed as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), recognized provincially as Endangered (ESA) and under consideration federally (SARA).

3.7.1 Plants

Butternut is listed as 'Endangered' under the ESA and SARA. Habitat for this species and individuals of this species are afforded protection. Habitat is available within the study area due to the wide range of habitat preferences for Butternuts in which to grow. Butternuts are shade intolerant and prefer open areas but often become crowded out by other tree species. No Butternuts were observed during the 2024 field investigations.

3.7.2 Turtles

No aquatic habitat for the Blanding's Turtle, Midland Painted Turtle, and Common Snapping Turtle was found within the study area. However, during the active season, turtles may be encountered using the general study area as a travel corridor due to the presence of the surrounding lakes and Mississauga River Mouth Wetland to the north.

The Blanding's Turtle is listed as 'Threatened' under the ESA and 'Endangered' under the SARA; therefore, individuals and their habitat are afforded protection under these acts. Blanding's Turtle occurrence squares (i.e., 1 km^2 occurrence data provided by the NHIC database) are present within and surrounding the study area. Based on the *General Habitat Description for the Blanding's Turtle (Emydoidea blandingii)* by the MNR (2013), Category 2 habitat for Blanding's Turtle is available in any connected wetland and waterbody complex extending up to 2 km from the Blanding's Turtle occurrences as well as 30 m around these suitable wetlands/waterbodies. Category 3 Blanding's Turtle habitat is the area between 30 m and 220 m around Category 2 habitat. Due to the mapped occurrence of two (2) unevaluated wetlands as well as the presence of Buckhorn Lake to the east (NHIC, 2024b), Category 2 and Category 3 habitats are present within the study area (Figure 3), though only Category 3 habitat is present within the subject property. It should be noted that the Category 2 Habitat mapped in Figure 3 is based on available GO mapping. Because the unevaluated wetlands within the study area are present on residential/private properties, they could not be verified during the field investigation.

Category 3 Blanding's Turtle Habitat is considered to have the highest tolerance to alteration and primarily functions as a movement corridor for the species in between suitable wetland habitats. This habitat serves an important function for the species, as turtles depend on these movement corridors for access to Category 2 and Category 1 Habitat, which are used for critical life processes such as mating, nesting, feeding, thermoregulation, hibernation, and protection from predators.

Midland Painted Turtles inhabit a variety of shallow, lentic systems, ranging from swamps to lakes. This species prefers soft substrate, macrophyte cover and an abundance of emergent objects for basking. Female nesting sites are gravelly soils with little to no canopy cover, allowing for high sun exposure. This species is not listed under the ESA and is listed as 'Special Concern' under the SARA and does not receive habitat protection. Common Snapping Turtles are closely associated with water as their life processes are mainly aquatic. Although they can be found in most freshwater habitats, they prefer shallow lentic systems with detritus substrates and vegetative cover. During breeding periods, females will travel overland for suitable breeding sites, often using anthropogenically placed structures (gravel shoulders, aggregate sites, etc.) This species is listed as 'Special Concern' under the ESA and SARA and does not receive protection under these acts. However, its habitat constitutes significant wildlife habitat, which will be further discussed in Section 3.8.

3.7.3 Snakes

The Eastern Milksnake is listed as 'Special Concern' under the SARA only and, therefore, does not receive protection of individuals or their habitat on provincial lands. The Eastern Milksnake may be present within the study area for life processes such as foraging, breeding, and/or overwintering. This species is considered a habitat generalist and may utilize a variety of habitats.

The Eastern Hog-nosed snake can be found in forests, specifically those with well-drained, sandy soil suitable for burrowing. During the summer months (June/July), this species may also deposit eggs in rotting logs or under rocks or leaves. The forest habitat throughout the study area has the potential to provide this species with suitable habitat, as the top layer of the soil profile within open canopy areas was observed to be dry and sandy during the May 6, 2024, field investigation (Photo 5). This is characteristic of the Wendigo Association, which is mostly loamy sand. In addition, this snake is usually only found in habitats where toads are present, as these amphibians are their main source of food. Because of the lack of wetlands and vernal pooling within the study area, this habitat may only be marginally suitable for this species, which relies on amphibians for sustenance. This species is listed as 'Threatened' under both the ESA and SARA; therefore, individuals and their habitat receive protection under these acts.

No snakes were observed during the field investigation.

3.7.4 Birds

The study area contains potentially suitable habitat for the Canada Warbler, Eastern Whip-poor-will, Eastern Wood-Pewee, Olive-sided Flycatcher, Cerulean Warbler, Evening Grosbeak, Barn Swallow, and Wood Thrush.

Suitable habitat for the Barn Swallows exists within the study area as there are houses and commercial buildings present surrounding the subject property, though not within the subject property itself, as this species makes use of anthropogenic structures to build their nests. Barn swallows are listed as 'Special Concern' under the ESA and 'Threatened' under the SARA, and as this species is also protected under the MBCA, its listing under the SARA applies on private lands as well. During the field investigation, one (1) Barn Swallow was observed flying over the property to the south (i.e., near commercial buildings; Figure 3), though it was not observed to be using the subject property for the purposes of nesting.

The Canada Warbler and Wood Thrush are listed as 'Special Concern' under the ESA and 'Threatened' under the SARA and therefore receive protection federally. As these species are also protected under the MBCA, SARA applies on private lands as well. These species breed in a range of deciduous and coniferous forests with a well-developed, dense shrub layer.

The Eastern Whip-poor-will nests on the ground within open deciduous or mixed woodland and lots of leaf litter, such as that which is found within the study area, with a sparse shrub layer often adjacent to open areas such as road shoulders. This species is currently listed as 'Special Concern' under the ESA and, therefore, does not receive habitat protection. The Eastern Whip-poor-will has been recommended to be downlisted federally to Special Concern.

The Eastern Wood-pewee, Olive-sided Flycatcher, and Evening Grosbeak are listed as 'Special Concern' under both the ESA and SARA and do not receive habitat protection under these acts. The Eastern Wood-pewee and Olive-sided Flycatcher can often be found near forest clearings and edges of deciduous and mixed forests. The Eastern Wood-pewee was observed (auditory) calling north of the subject property and within during the July 8, 2024, field investigation (Figure 3). The Olive-sided Flycatcher is usually found nesting in proximity to water bodies such as Buckthorn Lake, which is present close to the study area. The Evening Grosbeak is usually found in coniferous forests, though they do nest in deciduous woodlands as well on occasion. During the winter, Evening Grosbeaks live in coniferous and deciduous forests as well as in urban and suburban areas, often near bird feeders.

The Cerulean Warbler is listed as 'Threatened' under the ESA and 'Endangered' under SARA, and therefore, individuals and their habitat receive protection under these acts. This species can be found in large areas of older deciduous forests with tall trees and sparse understory, favouring species such as white oak (*Quercus Alba*) and sugar maple (*Acer saccharum*) for nesting. Based on the results of the field investigation, the study presents suitable habitat for this species.

3.7.5 Bats

The Little Brown Myotis utilizes large diameter snag trees (dead or dying trees) that have potential cavities suitable for roosting and maternity colonies. Trees large enough to support this species were found to be present within the property within the deciduous forest community (Figure 3). This species is listed as 'Endangered' under both the ESA

and SARA; and, therefore, receives habitat protection. The Northern Myotis and Tri-colored Bat are not heavily dependent on large cavities or snag trees. They often roost singly or in small groups during the maternity period. In addition, they are generally considered to utilize forested habitats at the landscape scale and often move maternity roosts between years. These species are listed as 'Endangered' under the ESA and SARA and therefore receive habitat protection. Similar to the Little Brown Myotis, suitable habitat for the Northern Myotis and Tri-colored Bat are present throughout the forest habitat within the property.

In addition, the forest community presents suitable habitat to support the Eastern Red Bat, Hoary Bat, and Silver-haired Bat, three (3) species recently listed as 'Endangered' under the ESA as of January 27, 2025. Similar to the Northern Myotis and Tri-colored Bat, these species are not dependent on large diameter snag trees for roosting.

3.8 Significant Wildlife Habitat

The study area is located in the Havelock Ecodistrict (6E - 9) of the Lake Simcoe-Rideau (6E) Ecoregion within the Mixedwood Plains Ecozone (Ecological Stratification Working Group, 1996). Characteristic wildlife present within this Ecoregion includes American Bullfrog (*Lithobates catesbeianus*), Eastern Newt (*Notophthalmus viridescens*), Northern Leopard Frog (*Lithobates pipiens*), Spring Peeper (*Pseudacris crucifer*), Common Snapping Turtle, Eastern Gartersnake (*Thamnophis sirtalis sirtalis*), Northern Watersnake (*Nerodia sipedon sipedon*), groundhog (*Marmota monax*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and white-tailed deer (*Odocoileus virginianus*). Representative bird species include the Great Blue Heron (*Ardea herodias*), Hairy Woodpecker (*Leuconotopicus villosus*), Rose-breasted Grosbeak (*Pheucticus ludovicianus*), Scarlet Tanager (*Piranga olivacea*), Wilson's Snipe (*Gallinago delicata*), Wood Duck (*Aix sponsa*), and Wood Thrush (Crins et al., 2009).

The study area was examined under the *Significant Wildlife Habitat Technical Guide* (Ministry of Natural Resources and Forestry [MNR], 2000) and its supporting document *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (MNR, 2015), to determine if significant wildlife habitat is potentially present within the existing study area. Table 5 outlines the various significant wildlife habitat (SWH) categories and the rationale for their designation within the study area.

Table 5: Significant Wildlife Habitat within the Study Area

Specialized Wildlife Habitat Category	Candidate Significant Wildlife Habitat (Y/N)	Confirmed Significant Wildlife Habitat (Y/N)
Waterfowl Stopover and Staging Areas (Terrestrial)	No	No
Waterfowl Stopover and Staging Areas (Aquatic)	No	No
Shorebird Migratory Stopover Area	No	No
Raptor Wintering Area	No	No
Bat Hibernacula	No	No
Bat Maternity Colonies	Yes	No

Table 5: Significant Wildlife Habitat within the Study Area		
Specialized Wildlife Habitat Category	Candidate Significant Wildlife Habitat (Y/N)	Confirmed Significant Wildlife Habitat (Y/N)
Turtle Wintering Area	No	No
Reptile Hibernaculum	No	No
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff)	No	No
Colonially-Nesting Bird Breeding Habitat (Tree/Shrubs)	No	No
Colonially-Nesting Bird Breeding Habitat (Ground)	No	No
Migratory Butterfly Stopover Areas	No	No
Landbird Migratory Stopover Areas	No	No
Deer Yarding Areas	No	No
Deer Winter Congregation Areas	No	No
Cliffs and Talus Slopes	No	No
Sand Barren	No	No
Alvar	No	No
Old Growth Forest	No	No
Savannah	No	No
Tallgrass Prairie	No	No
Other Rare Vegetation Communities	No	No
Waterfowl Nesting Area	No	No
Bald Eagle and Osprey Nesting, Foraging, and Perching Habitat	Yes	No
Woodland Raptor Nesting Habitat	Yes	No
Turtle Nesting Area	No	No
Seeps and Springs	No	No
Amphibian Breeding Habitat (Woodland)	No	No
Amphibian Breeding Habitat (Wetlands)	No	No
Woodland Area-Sensitive Bird Breeding Habitat	Yes	No
Marsh Bird Breeding Habitat	No	No
Open Country Bird Breeding Habitat	No	No
Shrub/Early Successional Bird Breeding Habitat	No	No

Table 5: Significant Wildlife Habitat within the Study Area		
Specialized Wildlife Habitat Category	Candidate Significant Wildlife Habitat (Y/N)	Confirmed Significant Wildlife Habitat (Y/N)
Terrestrial Crayfish	No	No
Special Concern and Rare Wildlife Species	Yes	No
Amphibian Movement Corridors	No	No
Deer Movement Corridors	No	No

Based on the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (MNR, 2015), five (5) Candidate SWH habitats were determined to be present within the study area: Bald Eagle and Osprey Nesting, Foraging and Perching Habitat, Woodland Raptor Nesting Habitat, Woodland Area-Sensitive Bird Breeding Habitat, Bat Maternity Colonies, and Special Concern and Rare Wildlife Species.

Candidate Bald Eagle and Osprey Nesting, Foraging and Perching habitat exists within the study area due to the presence of deciduous forest (FODM1-4) in proximity to Buckhorn Lake, which serves as foraging ground for these species. Osprey (*Pandion haliaetus*) nests are usually at the top of a tree, whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. In addition, GO data (MNR, 2024b) showed two (2) Osprey nests approximately 1.79 km northeast of the subject property. No Osprey or Bald Eagle nest was observed during the field investigation.

Candidate Woodland Raptor Nesting Habitat is present within the study area as the larger continuous forest community surrounding the site is greater than 30 ha. The study area itself contains a portion of this forest community, which may constitute an interior habitat for woodland raptor nesting as a 200 m buffer of forest community exists in the western, northern, and eastern directions from the property.

Candidate Woodland Area-Sensitive Bird Breeding Habitat exists within the study area. The forest community here is greater than 30 ha within the wider landscaper and is likely to contain a mature (60 years of age and older) forest stand with larger trees.

Candidate Special Concern and Rare Wildlife Species may exist within the study area for a variety of species. Suitable habitat may also exist for the Common Snapping Turtle due to the site's proximity to Buckhorn Lake and the presence of an occurrence square within 2 km (NHIC, 2024b). In addition, suitable habitat for special concern woodland bird species such as the Eastern Wood-pewee (auditory observation on July 8, 2025; Figure 3), Evening Grosbeak, and olive-sided Flycatcher (Table 4) as well as the Eastern Ribbonsnake, a habitat generalist, may exist within the study area.

Candidate Bat Maternity Colonies may exist within the study area throughout the deciduous forest (FODM1-4) and in association with the snag trees observed within the study area (Figure 3). Maternity colonies can be found in many different forest ecosites, tree cavities, and often in buildings. The forest habitat within the study area is suitable for

SAR bats such as those listed in Section 3.7.5 and species such as the Big Brown Bat (*Eptesicus fuscus*), which is not a SAR.

4.0 DESCRIPTION OF THE PROPOSED PROJECT

As per the PPS, development is defined 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...". The proposed development within the subject property involves the following:

- Re-zoning the property from "Rural Settlement" to "Tourist Commercial" to permit a marina storage facility on the lot;
- Clearing of the vegetation within the planned work area (approximately 10,237 m^2);
- Grading and laying down of gravel within the planned area (10,237 m^2); and
- Construction of two (2) new storage/warehouse facilities to house boats in the winter, which are planned to be 1486 m^2, resulting in a total area of 2972 m^2.

A major consideration for this project that is considered an environmental benefit is that once this project is complete, it will aid in eliminating a tremendous amount of single-use plastic shrink wrap and non-toxic antifreeze (potential contaminant) that are normally required to store boats outdoors. The new facility will be heated and enclosed which removes the need for these items that can be detrimental to the environment.

Refer to Appendix A for a Site Plans for the proposed development.

5.0 IMPACT ASSESSMENT & RECOMENDATIONS

The following section outlines and assesses any potential impacts that are expected as a result of the proposed development based on a review of available background information and the results of the field investigations. Recommendations for mitigation measures to avoid these impacts are outlined in Section 6.0 of this report.

5.1 Natural Heritage Systems Components

During the field investigation, the unevaluated wetland within the subject property, which had been previously mapped based on GO data (MNR, 2024b), was confirmed to be absent. The presence of the other two (2) unevaluated wetlands known to be within the study area based on this mapping were unable to be verified as they are located within private properties. No work is proposed within these Natural Heritage Systems, and it is not anticipated that the proposed development will negatively impact the unevaluated wetlands potentially present within the study area. In addition, no areas of vernal pooling were observed within the study area during the field investigations, which took place at a time of year when any seasonal pooling of water is likely to have been observed.

As outlined in Section 3.2 and Section 3.5.2, the forest habitat within the study area is unlikely to be designated as 'Significant', as it is non-continuous in the wider landscape, and surrounded by residential and commercial development, including roads which create crown gaps of greater than 20 m.

5.2 Landforms, Soils, and Geology

The property contains minimal landform types according to the Municipality's *Official Plan* (County of Peterborough, 2022), as well as the Township's *Official Plan* (Township of Galway-Cavendish and Harvey, 2011). Several large granite boulders were observed within the study area during the field investigation, though no significant habitat was found to be associated with these features. No other significant landforms or geology were noted within or adjacent to the study area.

5.3 Surface Water, Fish Habitat, and Groundwater

Buckhorn Lake is located approximately 100 m east of the study area and, as it is considered fish habitat, is protected under the *Fisheries Act* (1985). No in-water works are planned as part of the scope of the proposed development, as no fish habitat was observed within the subject property during the field investigations. Landscaping and a 15 m setback will also occur along the ditch line adjacent to Adam and Eve Road, which may be a contributing watercourse, flowing into Buckhorn Lake. Stormwater flow will be directed into the ditch line as part of the proposed project works.

No significant groundwater resources or surface water features were identified within the study area during the spring 2024 field investigation, and it is not anticipated that the proposed development will negatively impact Buckhorn Lake to the east (provided proper sediment and erosion control methods are employed during development) as it is well outside of the development area.

5.4 Vegetation Cover

Construction activities associated with the proposed development will impact vegetation and trees directly surrounding or within the construction area. The entirety of the subject property is a Dry-Fresh Mixed Oak Deciduous Forest (FODM1-4), as well as the majority of the study area (Figure 2). In addition, a historically cleared area is present within the footprint of the proposed development, and signs of selective cutting of mature trees were present throughout the forest community during the May 6, 2024, field investigation. No significant woodlands, SAR plants, or other vegetation communities were identified within or adjacent to the study area. It is not anticipated that the clearing of the proposed development area will have significant impacts on the function of the larger forest mosaic.

No plant species listed as 'Restricted' or 'Prohibited' under the *Invasive Species Act*, 2015 were observed within the study area during the spring 2024 filed investigation.

Two (2) species listed as 'Noxious Weeds' under the *Weed Control Act*, 1990 were noted during the field investigation. To prevent further degradation and colonization by noxious or invasive species (based on the colonization of the property by invasive plant species), it is advised during development that workers follow the *Clean Equipment Protocol for Industry* (Halloran, Anderson, and Tassie, 2013).

5.5 Habitat for Species at Risk

5.5.1 Plants

Although suitable habitat for Butternuts is available in the study area, none were identified within the study area. No impacts to this species are anticipated to occur as part of the development. However, if a Butternut is observed prior to construction (i.e., sprouts from the time of the submission of this report and the beginning of proposed development works), it will require a Butternut Health Assessment (BHA) to determine whether the Butternut(s) are retainable for the recovery of the species.

5.5.2 Turtles

Migratory habitat for Blanding's Turtles is available through the study area in the form of Category 3 Blanding's Turtle habitat throughout the subject property. Category 3 habitat is considered to have the highest tolerance to alteration and acts as a travel corridor for the species between wetlands. In addition, Category 2 habitat may be present within the study area due to the unevaluated wetlands mapped there, though these areas are outside of the footprint of planned development. These areas may also contain other SAR turtles (i.e., Common Snapping Turtle). As mentioned in this report, no areas which provide specialized habitat (i.e., overwintering, nesting sites, etc.) were observed or are known to occur within the study area in association with the proposed development. Given the occurrence of the Blanding's Turtle within 2 km and the presence of several wetlands and Buckhorn Lake within 240 m of the study area, the primary function of the immediate study area appears to be travel corridors during the active season.

Though the proposed development will impact the use of the immediate area for turtle species, it is not anticipated to impact the function of the larger landscape. In addition, it is not anticipated that the proposed works will impact individual turtles, provided construction activities take place outside of the turtle nesting season (May 1 to July 15).

However, it is recommended that any contractor be made aware of the potential to encounter turtles (regardless of occurrence probability) at this location during the active period for turtles. Recommended mitigation measures to avoid impacting SAR turtles will be discussed in Section 6.3.

5.5.3 Snakes

Potential general habitat for the Eastern Milksnake and Eastern Hog-nosed Snake is found throughout the study area. As mentioned in this report, no areas of habitat which provide specialized habitat (i.e., hibernacula) were observed or are known to occur within the study area in association with the proposed development. No snakes were observed within the study area during the 2024 field investigation; however, targeted surveys for snakes were not performed. The proposed development is unlikely to negatively impact snake habitat as no snake hibernacula was identified within the subject property.

It is not anticipated that individual snakes will be impacted by the proposed works. However, it is recommended that any contractor be made aware of the potential to encounter snakes (regardless of occurrence probability) at this location during the active period for the region (April 1 to October 31). Recommended mitigation measures to avoid impacting SAR snakes will be discussed in Section 6.3.

5.5.4 Birds

Migratory birds may be encountered nesting in vegetation present within the study area during development activities. Timing windows allow vegetation removal activities to avoid periods when birds are actively nesting. As such, any required removal of vegetation should be completed prior to or after the core bird breeding window for this region (April 15 – September 15 of any year) to ensure migratory birds or their nests are not adversely impacted.

If vegetation removal is required prior to September 15 but later than April 15, a visual inspection of the areas to be cleared should be conducted by a qualified avian specialist prior to disturbance to ensure that no birds are using the area for the purposes of nesting. If migratory bird breeding and/or nesting activity is encountered at any time of year within the study areas, an appropriate setback distance should be maintained from the nest/nesting birds. Works should not continue in the location of the nest until after it has been determined by an avian specialist that the young have fledged and vacated the nest and work areas.

Due to their status as ‘Threatened’, habitat for the Cerulean Warbler is protected under the ESA. These species prefer open forests consisting of mature deciduous trees. Habitat for these species is available in the Dry – Fresh mixed Oak Deciduous Forest (FODM1-4) present throughout the study area. The proposed development will include vegetation clearing to accommodate the new footprint of the development. It is anticipated that conducting any clearing outside of the breeding bird window would minimize impacts on individual Cerulean Warblers. Two (2) targeted surveys for SAR birds occurred in July (Section 2.2) with a focus on the Cerulean Warbler and Eastern Whip-poor-will. No observations of either species were made during the targeted surveys (evening).

Due to their status of ‘Special Concern’, habitat for the Olive-sided Flycatcher, Barn Swallow, Canada Warbler, Eastern Wood-Pewee (observed calling north of the subject property and within during the July 8, 2024), Evening Grosbeak, and Wood Thrush is not protected under the ESA. However, the Barn Swallow, Canada Warbler, and Wood Thrush

have a higher status under the SARA, which applies to private lands. Suitable habitat for these species is present within the Dry – Fresh mixed Oak Deciduous Forest (FODM1-4) present throughout the study area. The proposed development is planned within this forested habitat, and therefore vegetation removal outside of the core bird breeding window for this region (April 15 – September 15 of any year) is recommended.

Further recommendations for the mitigation of harm to individual birds and their habitat will be discussed in Section 6.0.

5.5.5 Bats

During the field investigations, the study area was searched for potential specialized habitats suitable for SAR bats, such as snag trees, which may be used as maternity roosts. Seven (7) such snag trees were observed within the study area (Figure 3), three (3) of which occurred within the footprint of the proposed development (Photos 10 a/b/c). These trees can act as significant habitat for the life processes of SAR bats such as the Little Brown Myotis, and the deciduous forest within the study area was observed to be suitable roosting and maternity habitat for SAR species such as the Tri-coloured Bat and the Northern Myotis. In addition, the forest community presents suitable habitat for the Eastern Red Bat, Hoary Bat, and Silver-haired Bat, three (3) species which were recently listed as 'Endangered' under the ESA as of January 27, 2025, and listed under Ontario Regulation 230/08. Table 3 (Section 3.6) includes all of the SAR bats observed during the targeted surveys for bats (Section 2.2).

It is required that vegetation clearing take place outside of the active season for SAR bats within this region (April 1 – September 30 of any year) due to the presence of several SAR bats within the subject property. This is noted as a requirement from MECP (Appendix C).

5.6 Wildlife & Significant Wildlife Habitat

5.6.1 Migratory and Non-migratory Birds

A nesting window reflective of the species known to occur within the study area based on the May 6, 2024, field investigation, as well as the sources listed in Section 2.1 has been recommended for this location. The Birds Canada *Nesting Calendar Query Tool* (Hussel and Lepage, 2015) was used to determine the most appropriate nesting period based on the individual bird species known to utilize the study area for the purposes of nesting. The nesting calendar query tool utilizes a very large data set collected over decades by the Canadian Wildlife Service, Birds Canada, and other agencies to calculate the dates when individual species are most likely to be actively nesting within a given geographic area. The core nesting period for birds within the study area is approximately April 15 to September 15 (i.e., the period when most birds are anticipated to be actively nesting). This long nesting period is due to species such as the American Goldfinch (*Spinus tristis*) and Pine Siskin (*Spinus pinus*), which are known to nest later and earlier in the year. It is important to note that several species (i.e., Least Bittern, Bobolink, etc.) were not included in the nesting query as they are not anticipated to be encountered (i.e., specific habitat is required which is not present within the study area) during vegetation removals based on observations made during the desktop background review and field investigation.

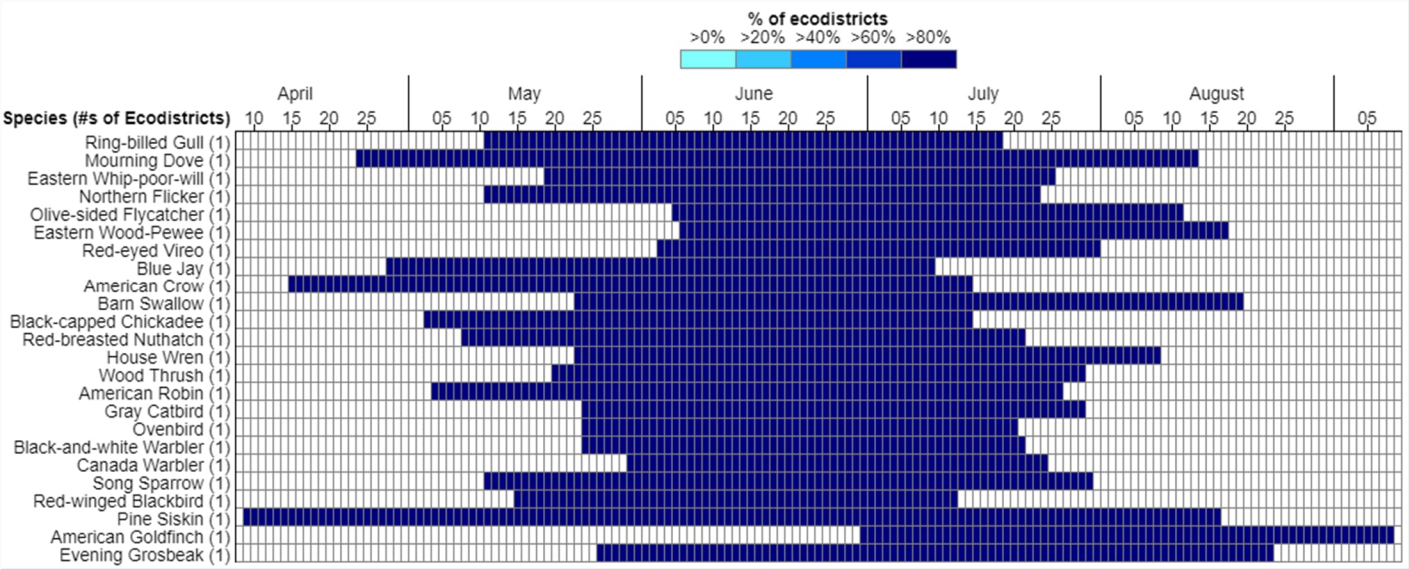


Figure 4: Bird Nesting Period by Species for the Study Area (Hussell and Lepage, 2015)

Vegetation removal should be completed prior to or after the bird nesting period of April 15 to September 15 of any given year to ensure migratory birds or their nests are not adversely impacted. In the event that vegetation removal will be required prior to September 15, but later than April 15, a visual inspection of the areas to be cleared should be conducted by a qualified avian specialist before disturbance to ensure that no birds are using the area for the purposes of nesting. If migratory bird breeding and/or nesting activity is encountered at any time of year within the study area, an appropriate setback distance should be maintained from the nest/nesting birds. Works should not continue in the location of the nest until after it has been determined by an avian specialist that the young have fledged and vacated the nest and work areas. This is recommended in order to prevent negative impacts to migratory birds and other bird species, their nests, and eggs, which are protected under the MBCA or the FWCA. Provided that the appropriate mitigation measures are implemented during construction, it is not anticipated that the proposed works will negatively impact migratory birds or other wildlife species.

5.6.2 Invasive Species

No restricted invasive species were observed, and the noxious weeds observed (Section 3.5.3) were sporadic and not found in large stands. As such, no invasive species removals are considered viable due to their sporadic occurrences. However, it is advised during development that workers follow the *Clean Equipment Protocol for Industry* (Halloran, Anderson, and Tassie, 2013).

Further recommendations regarding invasive species will be discussed in Section 6.0.

5.6.3 Significant Wildlife Habitat

Candidate Significant Wildlife Habitat exists within the study area as:

- Bald Eagle and Osprey Nesting, Foraging, and Perching Habitat;
- Woodland Raptor Nesting Habitat;
- Woodland Area-Sensitive Bird Breeding Habitat;
- Special Concern and Rare Wildlife Species, and
- Bat Maternity Colonies.

Candidate Bald Eagle and Osprey Nesting, Foraging, and Perching Habitat, Woodland Raptor Nesting Habitat, Woodland Area-Sensitive Bird Breeding Habitat, and Special Concern and Rare Wildlife Species Habitat are present throughout the study area. These candidate SWH's include the forested area within the study area. Removal of all vegetation within the project footprint will be required for the development. These trees provide potential significant habitat for avian species as discussed previously, though they are not likely to be limiting habitat within the context of the wider landscape. Connectivity of the candidate habitat and functionality is anticipated to be impacted as part of the planned tree clearing. Provided the appropriate mitigation measures are followed (Section 6.0) regarding birds, it is not anticipated that the proposed development will negatively impact individual birds or their nests. However, the proposed development will have a negative overall impact on the Candidate Significant Habitat within the study area. As such, targeted surveys within the subject property are recommended as part of the overall scope of this project in order to confirm the presence of these habitats within the study area.

Candidate Bat Maternity Colonies are present throughout the study area where snag trees are located (Figure 3). SAR bats were also confirmed to be present within the subject property during the targeted SAR bat surveys. Three (3) snag trees were identified within the proposed footprint for the development (Photos 10 [a/b/c]). As discussed in Section 3.7.5 and 5.5.5, these trees, as well as the forest community present within the study area, create habitat for SAR bat species, which is important in their life processes. As tree removal is planned within confirmed SAR bat habitat as part of project works, Egis has consulted with MECP via an IGF and AAF on January 10, 2025 (Appendix C). The recommendations provided by MECP are discussed in Section 6.3.

5.7 Identifying Cumulative Impacts

Based on the proposed development, there will be a net loss of trees within the study area. These trees are not deemed as high value or form significant vegetation communities or significant natural heritage features, though they are deemed candidate significant wildlife habitat, as well as providing suitable habitat for a variety of species, including SAR birds and bats as discussed previously.

It is recommended that the current site plan include compensation tree planting as part of the landscape design in order to partially mitigate cumulative impacts at a local site level through the loss of native tree species. It is not anticipated that cumulative negative impacts on a wider landscape context will occur as part of the development if the mitigation measures are followed.

6.0 RECOMMENDATIONS

In order to minimize or eliminate environmental impacts and to help achieve ecological and environmental improvements from the proposed construction and development, the following mitigation measures are recommended.

6.1 Surface Water, Groundwater, and Fish Habitat

- All lands cleared as part of future developments should be revegetated as soon as practicable to stabilize disturbed soils and prevent the mobilization of sediment-laden surface runoff into the unevaluated wetlands;
- An erosion and sediment control (ESC) plan should be developed and all applicable measures to mitigate erosion and sediment transport to the unevaluated wetland / riparian corridor should be implemented and maintained until disturbed soils are stabilized by successful revegetation or other permanent means of soil stabilization;
- No stockpiles of erodible construction materials and excess or surplus materials shall be placed within 30 m of a waterbody/watercourse; and
- Erosion and sediment control measures shall be inspected for effectiveness regularly throughout construction and deficiencies corrected.

6.2 Vegetation Cover

To mitigate the cumulative and long-term impacts on the study area and adjacent areas, the following principles should be implemented during the proposed development.

- Natural areas to be retained are to be isolated by sturdy construction fencing or similar barriers at least 1 m in height during any future construction in order to ensure their retention;
- To prevent the introduction or spread of invasive, noxious, or otherwise undesirable vegetation species, the *Clean Equipment Protocol for Industry* (Halloran, Anderson, and Tassie, 2013) should be followed. This includes mitigation such as:
    - Work shall occur in a manner to prevent the spread of invasive species and noxious vegetation to, from and within the Working Area;
    - Soil from areas impacted by invasive species shall not be stockpiled for reuse;
    - Debris, including earth clods and invasive and noxious vegetation material attached to the outside surfaces of equipment, is prohibited from entering the Working Area. Equipment coming on-site shall be inspected as close to the site entrance as possible for debris. If present, debris shall be completely removed prior to the equipment proceeding to the Working Area and shall be collected and managed by disposal to a licensed waste disposal site as non-hazardous solid industrial waste prior to the equipment proceeding to the Working Area;
    - Equipment shall also be inspected for debris prior to leaving the Working Area. Any debris shall be removed and managed as specified above and in a manner that prevents equipment from coming into further contact with standing, sprayed or cut invasive or noxious vegetation;

- For more best management practices can be found at: Best Management Practices - Ontario Invasive Plant Council (ontarioinvasiveplants.ca);
- Replace vegetative cover with topsoil and seed. It is recommended that a permanent seed mix comprised of primarily native species be utilized for all re-vegetation activities within the study area. This may include but is not necessarily limited to:
  - A seed mix such as the OSC Rural Ontario Roadside Native Seed Mixture 8145 (https://www.oscseeds.com/product/rural-ontario-roadside-native-mixture-8145/) may also be utilized, as this seed mix contains a variety of native plant species able to establish and grow within a roadside environment;
- If there is insufficient time in the growing season for the seed to sprout, the site shall be stabilized with temporary erosion and sediment control measures and seeded in the following spring. It is important to note that many of the seed mixes outlined above are best established through fall seeding to allow normal dormancy and then germination the following spring as these species are adapted to the Ontario environment;
- It is recommended that cover be utilized for areas where seeding is required, given the sensitivities associated with the study area. Recommended covers include:
  - Straw mulch (where conditions permit);
  - Bonded Fiber Matrix or Fiber Reinforced Matrix (where conditions permit);
  - Erosion control blankets made of natural fiber (i.e., with no nylon or synthetic netting/materials etc.);
- Herbicides will not be used unless to control noxious and/or invasive plants such as common buckthorn; and
- It is recommended that only locally appropriate native species be used for landscaping within the subject property. This would contribute to re-establishing native plants within the wider landscape and potentially have a positive impact on biodiversity (i.e., using native species for pollinators such as Monarchs and bees). Disturbed areas should be replanted with locally grown native species. The use of non-native plant material should be discouraged.

6.3 Habitat for Species at Risk

Based on consultation with MECP concerning Blanding's Turtle and SAR bats (Appendix C) and the proposed development, neither sections 9 nor 10 of the ESA will be contravened. The MECP requires the following mitigations to meet their requirements and avoid the need for authorization to proceed:

- No tree or vegetation removal will occur between April 1 and September 30.
- Temporary exclusion fencing will be installed around the construction zone prior to April 1 and will remain in place until October 31 or when construction activities are completed. MECP recommends the exclusion fencing be inspected regularly and repaired immediately if damaged. Wildlife sweeps should also be conducted within the excluded area to ensure no SAR have been trapped within the construction zone.

Due to the potential for several SAR species to be present or are known to be present within the study area, the following should occur prior to the proposed project works:

- Vegetation clearing should take place outside of the core bird breeding window for this region (April 15 – September 15 of any year), which overlaps with the timing window for SAR bats provided by MECP (see above). Therefore, no vegetation clearing between April 1 and September 30 to protect SAR bats and migratory birds.
- SAR Awareness Training: This training shall be provided for the Contractor and all staff working on site if demolition or vegetation removals occur between April 1 and October 31 of any year (i.e., when SAR may be present and active). All employees involved in construction activities should be trained in the identification and life cycles of the SAR that may be encountered during road improvements. The training should focus on the identification of SAR likely or possible to be present within the study area (i.e. Blanding's Turtle, Little Brown Myotis, Northern Myotis, Tri-colored Bat, and Hoary Bat);
- Daily Site Inspections for SAR: For the duration of the project works, a thorough sweep of the construction zone before works are to begin to encourage any SAR on-site to move away between April 1 and October 31 of any year (i.e., when SAR may be present and active). Site inspections shall be undertaken throughout the workday to determine if SAR have entered the work area. The following mitigation measures are required if SAR enter the site and to prevent adverse impacts to the SAR:
    - Temporary Work Stoppage during SAR Encounter: If any SAR or their nest is observed during the site inspection or at any other time, the Contractor shall immediately halt construction. SAR that are encountered within the work zone should be allowed a reasonable amount of time to leave the work area, and
    - Report SAR Observations within the Work Area to the MECP: Report the SAR observation to MECP within 24 hours of the observation to seek advice on how to proceed if a SAR is encountered within or adjacent to the work area. All SAR observations and any relocation shall be documented. SAR should only be handled by qualified professionals who have knowledge of the species and the correct approvals to undertake SAR handling.
- During the active season for turtles and snakes (April 1 to October 31), a thorough sweep of the construction zone should be conducted before works are to begin to encourage any SAR on-site to move away:
    - If turtle eggs are encountered or unearthed during the construction activities, all operations must immediately stop within 5 m of the turtle eggs;
    - If a turtle is encountered that has already begun to nest (i.e., digging and/or sitting in a nest pit), construction activities should stop within 10 m of the turtle, and the turtle be allowed to finish nesting and leave the area of its own accord,
    - All exposed soils and/or stockpiled topsoil, sand, and gravel must be encircled with temporary turtle fencing or completely covered with geotextile to prevent turtles from accessing and nesting in the materials from May 1 to July 15 of any year.
- Should any Butternuts be identified within the planned development limits (i.e., sprouts from the time of the submission of this report and the beginning of proposed development works), the following actions may be

taken:

- An E*ndangered Species Act* authorization for the planned activity may be obtained; or
- The planned development may be exempt under O.Reg 242/08.

6.4 Wildlife and Significant Wildlife Habitat

To mitigate the cumulative and long-term impacts on the study area and adjacent areas, the following mitigation measures for wildlife should be implemented during the proposed development.

- The April 15 to September 15 timeframe represents the core bird breeding period when most bird species within the study area would be nesting based on the species observed within the study area. If migratory birds or their nests are encountered at any time of the year, works should not continue in the location of the nest until:
  - After it has been determined by an avian specialist that the young have fledged and vacated the nest and work area; or
  - An avian specialist determines a suitable buffer distance at which work may continue to prevent disturbance of the bird(s); and
  - Where a buffer distance has been implemented, an avian specialist must undertake monitoring during construction to ensure migratory birds, their nests, and eggs are not disturbed, destroyed or taken, and
  - Targeted "nests searches" should be avoided as this may be in contravention of the MBCA and its regulations.

7.0 CONCLUSION

This EIS supports the proposed development of two (2) boat winter storage facilities on the property at A-14 Adam & Eve Road, in the Town of Buckhorn, Ontario, legally known as Lot 8, Concession 9 in the Geographic Township of Harvey, given the condition that the mitigation measures recommended in this report are followed before and during construction. The design of the development should incorporate considerations that will help mitigate or offset impacts on habitat for birds, mammals, and SAR reptiles.

8.0 LIMITATIONS

The investigations undertaken by Egis with respect to this report and any conclusions or recommendations made in this report reflect Egis's judgment based on the site conditions observed at the time of the site inspection(s) on the date(s) set out in this report and on information available at the time of the preparation of this report.

This report has been prepared for specific application to this site, and it is based, in part, upon visual observation of the site and terrestrial investigation at various locations during a specific time interval, as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future site conditions or portions of the site which were unavailable for direct investigation.

If site conditions or applicable standards change or if any additional information becomes available at a future date, modifications to the findings, conclusions, and recommendations in this report may be necessary.

9.0 REFERENCES

Bird Studies Canada, Environment Canada's Canadian Wildlife Service, Ontario Nature, Ontario Field Ornithologists, and Ontario Ministry of Natural Resources (OBBA). 2006. *Atlas Data Summary*. Ontario Breeding Bird Atlas (OBBA) Website. 31 January 2008. http://www.birdsontario.org/atlas/index.jsp. Accessed February 2024.

Bird Studies Canada, Environment Canada's Canadian Wildlife Service, Ontario Nature, Ontario Field Ornithologists, and Ontario Ministry of Natural Resources. 2020. *Breeding Evidence Codes*. Ontario Breeding Bird Atlas (OBBA) Website. https://www.bsc-eoc.org/dataentry/codes.jsp?page=breeding. Accessed February 2024.

Blazing Star Environmental. 2022. *Survey Protocol for 2022 Western Chorus Frog Long-Term Monitoring Program*. Blazing Star Environmental. 13 p.

Peterborough County. 2022. *Official Plan*. Peterborough County. 270p.

Township of Galway-Cavendish and Harvey. 20211. *Official Plan*. Corporation of The Township of Galway-Cavendish and Harvey.

County of Peterborough. 2022. *PublicGIS- Interactive Mapping Tool*. Peterborough County. Accessed February 2024.

Crins, W.J., P.A. Gray, P.W.C. Uhlig, and M.C. Wester. 2009. *The Ecosystems of Ontario, Part 1: Ecozones and Ecoregions*. Inventory, Monitoring and Assessment Section. Science and Information Branch. Ontario Ministry of Natural Resources. Ontario, Canada: Queen's Printer for Ontario. 87p.

Endangered Species Act. 2007. S.O. 2007, c. 6. Current version 22 February 2024.

Fish and Wildlife Conservation Act. 1997. S.O. 1997, c. 41. Current version 08 June 2023.

Fisheries Act. 1985. R.S.C., 1985, c. F-14. Current version 16 February 2024.

Fisheries and Oceans Canada (DFO). 2023. *Aquatic Species at Risk Map*. Fisheries and Oceans Canada. https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html. Accessed February 2024.

Halloran, J., Anderson, H., and Tassie, D. 2013. *Clean Equipment Protocol for Industry*. Peterborough: Peterborough Stewardship Council and Ontario Invasive Plant Council. 20 p.

Hussell, J. and D. Lepage. 2015. *Bird Nesting Calendar Query Tool. Project NestWatch*. Bird Studies Canada. http://www.birdscanada.org/volunteer/pnw/rnest/warning.jsp?lang=en. Accessed February 2024.

Invasive Species Act. 2015. S.O. 2015, c. 22 – Bill 37. Current version 01 July 2019.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig, and S. McMurray. 1998. *Ecological Land Classification for Southern Ontario: First Approximation and its Application*. Ontario Ministry of Natural Resources, South Central Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Maxar Technologies. 2024. *Google Earth Image*. Google Earth Pro. http://www.earth.google.com. Accessed February 2024.

Migratory Birds Convention Act. 1994. S.C. 1994, c. 22. Current version 20 June 2022.

Ministry of Environment, Conservation and Parks. 2021. *Reptile and amphibian exclusion fencing*. King's Printer of Ontario. https://www.ontario.ca/page/reptile-and-amphibian-exclusion-fencing. Accessed February 2024.

Ministry of Municipal Affairs and Housing. 2024. *Provincial Planning Statement*. King's Printer of Ontario. 56 p.

Ministry of Natural Resources (MNR). 2000. *Significant Wildlife Habitat Technical Guide*. Toronto: Queen's Printer of Ontario. 151 p.

Ministry of Natural Resources (MNR). 2013. *General Habitat Description for the Blanding's Turtle (*Emydoidea blandingii*)*. Toronto: Queen's Printer of Ontario. 7 p.

Ministry of Natural Resources (MNR). 2015. *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E*. Toronto: Queen's Printer of Ontario. 39 p.

Ministry of Natural Resources (MNR). 2024a. *Make A Map: Natural Heritage Areas*. Ministry of Natural Resources and Forestry. http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US. Queen's Printer for Ontario. Accessed February 2024.

Ministry of Natural Resources (MNR). 2024b. *Geospatial Ontario [GO] metadata tool*. https://www.ontario.ca/page/land-information-ontario. Queen's Printer of Ontario. Accessed February 2024.

Ministry of Natural Resources (MNR). 2024c. *Fish ON-Line*. Queen's Printer of Ontario. https://www.gisapplication.lrc.gov.on.ca/FishONLine/Index.html?site=FishONLine&viewer=FishONLine&locale=en-US. Accessed February 2024.

Ministry of Natural Resources (MNR). 2023. Ontario Watershed Boundaries (OWB). https://geohub.lio.gov.on.ca/maps/53a1c537b320404087c54ef09700a7db/explore?location=44.540103%2C-78.343749%2C11.93. Accessed February 2024.

Ontario Geological Survey. 2010. *Surficial geology of Southern Ontario*. Ontario Geological Survey. http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=MRD128-REV Accessed February 2024.

Soil Association of Southern Ontario. 1964. *Report No. 30 of the Ontario Soil Survey*. Soil Associations of Southern Ontario - Agriculture and Agri-Food Canada (AAFC). Accessed February 2024.

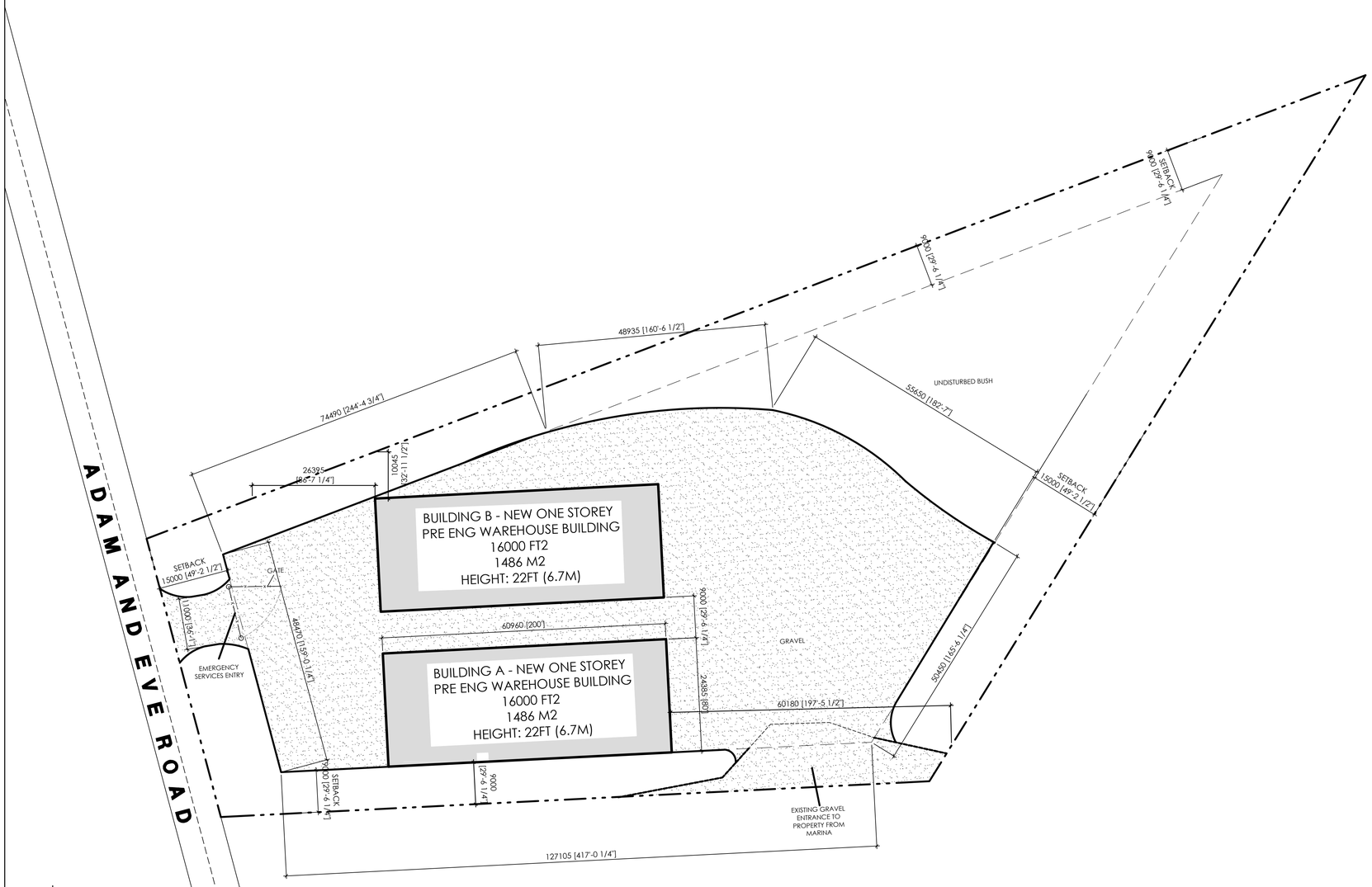
Ontario Nature. 2020. *Ontario Reptile and Amphibian Atlas: A citizen science project to map the distribution of Ontario's reptiles and amphibians*. Ontario Nature. http://www.ontarionature.org/atlas. Accessed February 2024.

Species at Risk Act. 2002. S.C. 2002, c. 29. Current version 20 June 2022.

Toronto Entomologists' Association. 2020. *Ontario Butterfly Atlas*. Toronto Entomologists' Association. https://www.ontarioinsects.org/atlas/. Accessed February 2024.

Weed Control Act. 1990. R.S.O. 1990, c. W.5. Current version 01 January 2022

APPENDIX A: Site Plan



LEGEND

	UNDISTURBED BUSH
	GRAVEL
	LOT LINE / PROPERTY LINE
	REQUIRED SETBACK LINE
X	FENCE

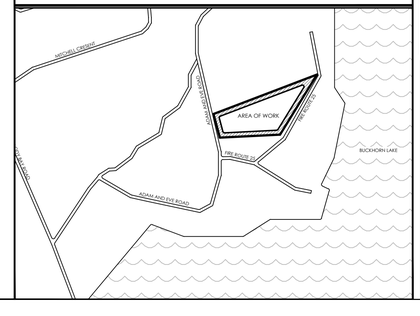
SITE STATISTICS

DESCRIPTION	PROVIDED	REQUIRED
FRONT YARD DEPTH	61m	15m
REAR YARD DEPTH	38m	15m
INTERIOR SIDE YARD WIDTH (NORTH)	9m	9m
INTERIOR SIDE YARD WIDTH (SOUTH)	9m	9m
BUILDING HEIGHT	6.7m	11m MAX

DESCRIPTION	PROVIDED	PERCENT %
TOTAL LOT AREA	19853 sq.m.	100.0 %
GRAVEL AREA	10231 sq.m.	65 %
UNDISTURBED AREA	6644 sq.m.	33 %
PROPOSED ADDITION AREA	2972 sq.m.	2 %

NO.	DATE	REVISIONS	BY

KEY PLAN



BEL-CON DESIGN-BUILDERS LTD

TELEPHONE: (613) 968-6707
WWW.BEL-CON.COM

1-335 UNIVERSITY AVE
BELLEVILLE, ONTARIO

NEW BUILDING FOR:
BUCKHORN YACHT HARBOUR
ADAM AND EVE ROAD
BUCKHORN, ONTARIO

SITE PLAN

DATE: 10.25.2023	CONTRACT No.: 2320
CHECKED BY:	DWG. No.: A1
DESIGNED BY: BDN	
DRAWN BY: BDN	
SCALE: AS SHOWN	

1 / A1 **SITE PLAN**
SCALE: 1 : 500

APPENDIX B: Photo Log

Photo 1: View of Adam and Eve Road meeting the subject property at the edge of the Mixed Oak Deciduous Forest (FODM1-4). May 6, 2024.

Photo 2: View of the interior of the Mixed Oak Deciduous Forest (FODM1-4) present throughout the Study Area. May 6, 2024.

Photo 3: View of the interior of the Mixed Oak Deciduous Forest (FODM1-4) present throughout the Study Area. Note the orange marker which has been placed. May 6, 2024.

Photo 4: View of the cleared path present throughout the Study Area. May 6, 2024.

Photo 5: An example of the sandy soil profile present throughout the Study Area. May 6, 2024.

Photo 6: One of the boulders which exists within the study area. May 6, 2024.

Photo 7: The more prevalent part of the row of rocks/boulders present along the southern boundary of the subject property. May 6, 2024.

Photo 8: View of the tapering row of rocks/boulders present along the southern boundary of the subject property. May 6, 2024.

Photo 9: View of the historically cleared area present within the proposed development area. May 6, 2024.

Photos 10 (a/b/c): Three (3) bat snag trees were observed within the proposed development area. May 6, 2024.

Photo 11: The area of unevaluated wetland present on LIO mapping within the proposed development area (shown in the photograph) was confirmed to be absent during the field investigation. May 6, 2024.

Photos 12(a/b): The two (2) unknown wellheads present within the proposed development area. May 6, 2024.

Photo 13: One of four (4) holes found present within the study area. May 6, 2024.

APPENDIX C: MECP Correspondence

Outlook

RE: Proposed Development at A-14 Adam & Eve Road, Buckhorn

From Charette, Monique (MECP) <monique.charette@ontario.ca>
Date Fri 2025-03-28 2:40 PM
To fuderer@nexicom.net <fuderer@nexicom.net>
Cc HEFFERNAN Chris <Chris.HEFFERNAN@egis-group.com>; LONGMUIR David <David.LONGMUIR@egis-group.com>; VIVEKANANDAN Vithulan <Vithulan.VIVEKANANDAN@egis-group.com>; LYON Christian <Christian.LYON@egis-group.com>

Good afternoon, Mr. Fuderer,

The Ministry of the Environment, Conservation and Parks (MECP) has reviewed the Information Gathering Form concerning the proposed development at A-14 Adam & Eve Road, Buckhorn submitted by Egis on January 10, 2025, to assess the potential impacts of the proposal on Blanding's Turtle and Species at Risk bats protected under the *Endangered Species Act, 2007* (ESA).

Based on the ministry's review of the project documentation and information that has been provided, the conclusions that neither sections 9 nor 10 of the ESA will be contravened for species at risk and therefore authorization is not required – appear reasonable and valid given the following:

- No tree or vegetation removal will occur between April 1 to September 30
- Temporary exclusion fencing will be installed around the construction site prior to April 1 and will remain in place until October 31 or when construction activities are completed. We recommend that the exclusion fencing be inspected regularly and repaired immediately if damaged. Wildlife sweeps should also be conducted within the excluded area to ensure no species at risk have been trapped within the construction area.

Should any of the project activities change, please notify MECP immediately to obtain advice on whether the changes require authorization under the ESA. Failure to carry out these activities as described could potentially result in contravention of the ESA. The proponent remains responsible for ensuring compliance with the ESA and may be subject to prosecution or other enforcement action if activities result in any harm to an at-risk species or habitat.

The ministry's position here is based on the information that has been provided to MECP by Egis and/or its project team. Should information not have been made available and considered in MECP's review or new information come to light that changes the conclusions made, or if on-site conditions and circumstances change so as to alter the basis for the conclusions, please contact the Species at Risk Branch as soon as possible to discuss next steps.

We also note that while it does not appear that an ESA authorization will be required, the proposed activities may be subject to other approvals, such as those issued by local municipalities and conservation authorities. Please be advised that it is your responsibility to be

aware of and comply with all other relevant provincial or federal requirements, municipal by-laws or required approvals from other agencies. It is also your responsibility to ensure that all required approvals are obtained and relevant policies adhered to.

Please let me know if you have any questions.

Monique Charette
Management Biologist | Species at Risk Branch
Ministry of the Environment, Conservation and Parks | Ontario Public Service
613-583-3162 | Monique.charette@ontario.ca

Ontario

Taking pride in strengthening Ontario, its places and its people

---

From: LYON Christian <Christian.LYON@egis-group.com>
Sent: Friday, January 10, 2025 4:49 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Cc: fuderer@nexicom.net; HEFFERNAN Chris <Chris.HEFFERNAN@egis-group.com>; LONGMUIR David <David.LONGMUIR@egis-group.com>; VIVEKANANDAN Vithulan <Vithulan.VIVEKANANDAN@egis-group.com>
Subject: Proposed Development at A-14 Adam & Eve Road, Buckhorn

Good afternoon,

Attached are the IGF, AAF, and supporting documents for a proposed boat storage facility in Buckhorn, Ontario.

Please note that although an Overall Benefit Permit is selected in the AAF, the proponent has indicated that the site plan can be rearranged to avoid removals of the bat snag trees within the property. Once this file is assigned to a management biologist, it would be great if we could have a quick meeting to discuss.

Please let us know if there are any questions.

Regards,
Christian

egis

Christian Lyon
Practice Area Lead Natural Sciences, Canada
Phone: +1 613-714-4672, Mobile: +1 613-223-1858
