

Environmental Impact Study

**165 Melody Bay Road
Buckhorn, Ontario**

D.M. Wills Project Number 5557



D.M. Wills Associates Limited

Partners in Engineering, Planning and
Environmental Services
Peterborough

February 2024

**Prepared for:
Christine Malchelosse**

Submissions Summary

Submission No.	Submission Title	Date of Release	Submissions Summary
1	Draft Environmental Impact Study	July 6, 2023	Draft Submission to Client
2	Final Environmental Impact Study	July 13, 2023	Final Submission to Client
3	Final Environmental Impact Study	February 1, 2024	Revised Final Submission to Client

This report has been formatted considering the requirements of the Accessibility for Ontarians with Disabilities Act.

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Executive Summary

D.M. Wills Associates Limited (Wills) was retained by Christine Malchelosse (Client) for Environmental Services to address the requirements for an Environmental Impact Study (EIS) in support of a proposed cottage addition and garage construction at 165 Melody Bay Road in Buckhorn, Ontario within the Municipality of Trent Lakes (Subject Property).

Due to the proposed dwelling expansion occurring within 30 m of the shoreline of Buckhorn Lake, an EIS is required in order to move forward with the Project.

Potential impacts of the Project on existing natural heritage features and associated wildlife, including Species at Risk, were evaluated based on a review of publicly available resources, agency consultation, as well as on-site field investigations.

Field investigations identified the following features:

- An unevaluated wetland.
- Suitable Snapping Turtle (Special Concern) habitat within the wetland to the south of the Subject Property and Buckhorn Lake.
- Suitable turtle nesting habitat on the existing driveway within the Subject Property.
- Black Ash (Endangered) were identified within the impacted wetland community situated on the Subject Property.

In order to move forward with the Project, a number of mitigation measures are necessary, including:

- The implementation of a 15 m setback on the wetland situated along the southern boundary of the Subject Property (**Figure 4**).
- A Vegetation Planting Plan within the 15 m setback to provide protection to the wetland community (**Figure 5**).
- The implementation of a 20 m setback from the high-water mark of Buckhorn Lake (**Figure 4**).
- The implementation of an Erosion and Sediment Control measures including stockpiling and isolating waste material outside of the setbacks identified in **Figure 4**.
- A breeding bird timing window where vegetation must be removed outside of **April 5th to August 31st**.
- It is recommended that a qualified professional be retained to perform a health assessment of the Black Ash (Endangered) identified on the Subject Property.

In summary, Wills does not anticipate any significant negative environmental impacts associated with the Project provided the environmental mitigation measures described in this report are implemented effectively throughout the construction period.

1.0 Introduction

D.M. Wills Associates Limited (Wills) was retained by Christine Malchelosse (Client) to undertake an Environmental Impact Study (EIS) to address potential impacts associated with the expansion of an existing cottage and the construction of a new garage (Project) at 165 Melody Bay Road, Buckhorn, Ontario (Subject Property). See **Appendix A** for Statement of Limitation details.

Under the *County of Peterborough Official Plan (1994)*, an EIS is required to help guide recommendations for applications for development within, or adjacent to, natural heritage features or areas. The area of the proposed expansion and construction of the garage is within 30 m of Buckhorn Lake, which prompted the need for the EIS.

The EIS must demonstrate that there will be no negative ecological or hydrological impacts to the natural heritage system, connectivity, and linkages associated with the site and surrounding area. The EIS should identify environmental constraints, develop appropriate setbacks, consult with regulatory agencies and identify the activities required to address project compliance with Provincial and Federal statutes and policies including, but not limited to: the *Planning Act* (R.S.O. 1995), the *Conservation Authorities Act* (R.S.O. 1990), the *Growth Plan for the Greater Golden Horseshoe*, the *Migratory Birds Convention Act* (S.C. 1994), the *Endangered Species Act* (R.O. 2007) and the *Provincial Policy Statement* (2020).

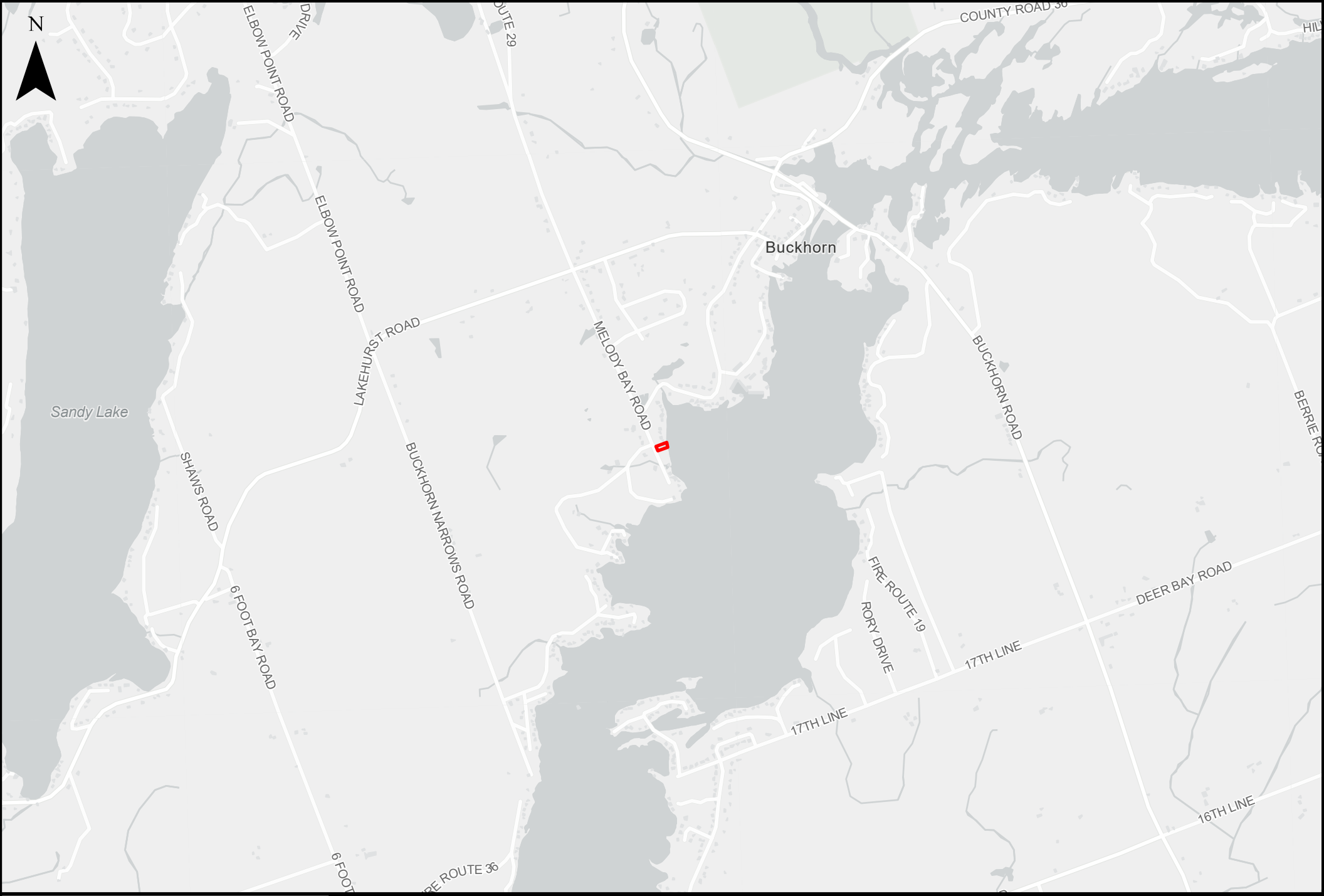
To meet the requirements of the EIS, Wills' biologists undertook a site visit to collect information on existing conditions. This document provides an existing conditions background review, a summary of the observations made during the site visit, describes the potential impacts of the proposed expansion and construction, and recommends measures to mitigate impacts of the Project.

1.1 Subject Property/Project Details

The Subject Property encompasses approximately 0.23 ha of land with access from Melody Bay Road to the west and fronts Buckhorn Lake to the east. The cottage expansion is proposed to occur on the west side of the existing cottage structure. The proposed new garage structure is being constructed on an area of manicured lawn to the west of the existing cottage structure.

The Subject Property is primarily characterised by a manicured lawn, with a few scattered trees present throughout the property. Existing residential properties are located to the north of the Subject Property and on the west side of Melody Bay Road. An unevaluated wetland also occurs on the west side of Melody Bay Road, opposite the Subject Property, but also extends to the south of the Subject Property.

Wills understands that the Client wishes to obtain approval to expand an existing cottage and construct a garage on the Subject Property. See **Figure 1** for the Site Location and **Figure 2** for the Subject Property. The location of the proposed dwelling expansion and new garage can be found in (**Appendix B**).



Legend

 Subject Property

Figure 1 - Site Location

Environmental Impact Study

165 Melody Bay Road Buckhorn,
Ontario



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Drawn By	JG	Scale	1:30,000
Checked	SF	Date	6/28/23
Project No.	5557	Drawing File No.	Figure 1



Legend

 Subject Property

Figure 2 - Subject Property
Environmental Impact Study
165 Melody Bay Road Buckhorn,
Ontario



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Drawn By	JG	Scale	1:350
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Project No.	5557	Drawing File No.	Figure 2

2.0 Existing Conditions

2.1 Background Review

2.1.1 Surrounding Land Use

Properties adjacent to the Subject Property are currently being utilized for residential purposes. NHIC mapping indicates there is a forested area on the Subject Property which continues to the north, south and west. An unevaluated wetland is located on private land across Melody Bay Road to the west and appears to extend to the south of the Subject Property.

2.1.2 Designated Areas

A review of the MNRF natural heritage/resources data obtained through the Natural Heritage Information Centre (NHIC) database was completed to identify the presence or absence of any Valued Ecosystem Components such as local, provincial, and federally Designated Areas (DAs). DAs include lands covered under the Provincial Policy Statement (2020), as well as other natural heritage features of local or federal interest including Federal Parks, Environmental Sensitive Landscapes or Areas, such as significant woodlands, locally significant wetlands or otherwise natural heritage features identified for conservation. A copy of the NHIC data map is located in **Appendix C**.

Furthermore, Wills sent out a formal information request to the MECP to obtain additional records with reference to restricted Species at Risk (SAR), see **Appendix D** for detail). To date, no response has been received.

A summary of the results of the database searches is outlined below with reference to DAs.

Areas of Natural and Scientific Interest

No Areas of Natural and Scientific Interest (ANSI) were identified on the Subject Property.

Conservation Reserves

No Conservation Reserves are located on, or within 120 m of the Subject Property.

Provincial Parks

No Provincial Parks are located on, or within 120 m of the Subject Property.

Significant Wildlife Habitat

No SWH records were identified through background review.

Provincially Significant Wetlands

No Provincially Significant Wetlands (PSW) were identified on or within 120 m of the Subject Property based on background review. The nearest PSW (Buckhorn South

Complex) is located approximately 2 km east of the Subject Property across Buckhorn Lake.

Woodlands

NHIC mapping indicates woodlands as being present on the Subject Property.

Other Wetlands

According to the NHIC map of the area, an unevaluated wetland of approximately 1.73 ha is located within 120m to the west of the Subject Property across Melody Bay Road.

2.1.3 Soils

The Subject Property falls within Ecoregion 6E (Lake Simcoe, Rideau), a region underlain by carbonate rich Paleozoic bedrock, and dominated by a wide variety of deep glacial deposits (Ecological Stratification Working Group, 1996).

2.1.4 Hydrology/Topography

It is anticipated that surface water on the Subject Property flows from west to east following the topography of the landscape. The landscape generally slopes from the road on the west to Buckhorn Lake to the east. The area of the proposed development has minimal elevation change (~247m-245m). A copy of the Site Plan showing the existing floodline is located in **Appendix B**.

2.1.5 Fish Habitat

Buckhorn Lake is adjacent to the Subject Property to the east. Fish ON-Line, the MNRF fisheries database, provided fisheries information for Buckhorn Lake and identified the presence of Black Crappie (*Pomoxis nigromaculatus*), Bluegill (*Lepomis macrochirus*), Brown Bullhead (*Ameiurus nebulosus*), Common Carp (*Cyprinus carpio*), Largemouth Bass (*Micropterus salmoides*), Muskellunge (*Esox masquinongy*), Pumpkinseed (*Lepomis gibbosus*), Rock Bass (*Ambloplites rupestris*), Smallmouth Bass (*Micropterus dolomieu*), Walleye (*Sander vitreus*), White Sucker (*Catostomus commersonii*), Yellow Bullhead (*Ameiurus natalis*), and Yellow Perch (*Perca flavescens*).

2.1.6 Significant Wildlife Habitat (SWH)

In accordance with the Provincial Policy Statement (2020) and the MNRF's Significant Wildlife Habitat Technical Guide (2000), SWH is generally defined as areas where wild mammals, birds, reptiles, amphibians, fishes, invertebrates, plants, fungi, algae, bacteria and/or other wild organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations, and where areas are considered ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System. Specific wildlife habitats of concern may include:

- 1) Seasonal Concentration Areas of Animals.
- 2) Rare Vegetation Communities or Specialized Habitats.
- 3) Habitat of Species of Conservation Concern.
- 4) Animal Movement Corridors.

No SWH was identified through background review or field investigations.

Based on the Natural Heritage Reference Manual (NHRM) guidelines, a SWH assessment is not required.

2.2 Field Investigations

A field investigation took place on May 11, 2023, to evaluate existing ecological conditions within the Subject Property. The field investigations included the following surveys:

- Confirm presence/absence of hydrological features (wetlands, watercourses, seeps, springs) and delineate their boundaries.
- Ecological Land Classification was assessed.
- Incidental wildlife and wildlife habitat observations were completed (auditory, visual, tracks, scat, burrows, nests, etc.) throughout the Subject Property, with particular attention to any species of conservation concern noted to be present within the area.
- Species at Risk Assessment.

A photographic record to support field investigations is located in **Appendix E**.

2.2.1 Ecological Land Classification

Ecological Land Classification (ELC) mapping of the Subject Property was completed using the *Ecological Land Classification for Southern Ontario* (Lee, 1998). From this, **Figure 3** and **Table 1** were created.

Two ELC units were identified within the Subject Property:

1. Mineral Cultural Meadow (CUM1)

This ecosite spans the majority of the Subject Property and extends from Melody Bay Road to the shoreline of Buckhorn Lake. The vegetation community is representative of an anthropogenically maintained landscape, with the predominant cover being grass species (*Poaceae* spp.) associated with a manicured lawn. Some tree species such as White Spruce (*Picea glauca*) and White Birch (*Betula papyrifera*) were sporadically present throughout the community, but most trees were limited to the edges of the Subject Property. Furthermore, the existing dwelling, gravel driveway and parking area are also situated within this community.

2. Mineral Thicket Swamp (SWT2)

An unevaluated wetland was identified during the May 11, 2023, site investigation and is situated along the southern boundary of the Subject Property, near the southwest corner of the lot. The wetland to the south of the property remains in a natural state and is representative of a thicket swamp with sections of open water. This section of the wetland is dominated by shrub species such as Speckled Alder (*Alnus incana*), Sweet Gale (*Myrica gale*) and Red-osier Dogwood (*Cornus sericea*), but tree and herbaceous species such as Eastern White Cedar (*Thuja occidentalis*), Tamarack (*Larix laricina*), Red Maple (*Acer rubrum*), Sensitive Fern (*Onoclea sensibilis*), Burreed (*Sparganium spp.*) Duckweed (*Lemna spp.*) were also present.

It was observed that this wetland does extend to Melody Bay Road, where standing water joins with a ditch line and continues north along the road until it crosses through a culvert spanning the driveway. Standing water within the ditch line persists until about 5 m north of the driveway before drying up and transitioning into what appears to be a historically impacted wetland community. The impacted wetland community is situated north of the driveway and borders the western boundary of the Subject Property, eventually wrapping around to the northern boundary before stopping approximately 1.4 m to the north of the proposed garage. The impacted wetland is also bordered by a second driveway situated on the neighboring property to the north. Field investigations confirmed the presence of hydric soils and wetland plant species such as Black Ash (*Fraxinus nigra*), Balsam Fir (*Abies balsamifera*), White Elm, (*Ulmus americana*), Speckled Alder and Eastern White Cedar within this portion of the wetland. However, the impacted wetland currently appears to function as a drainage ditch, seasonally conveying flow into the thicket community to the south of the Subject Property.

Table 1– Soil Auger Sample Summary

ELC Community	Soil Auger ID	Total Auger Depth	Effective Texture	Depth of Organics	Moisture Regime	Depth (cm) to Gleys (G) or Mottles (g)	Depth to Water
CUM1	Auger #1	37cm	Loamy medium Sand (LmS)	2 cm	Dry (0)	N/A	N/A
SWT2	Auger #2	100 cm	Loamy medium Sand (LmS)	30 cm	Moderately Fresh (1)	N/A	5 cm
CUM1	Auger #3	30 cm	Silty fine Sand (SifS)	15 cm	Moderately Fresh (1)	N/A	N/A
SWT2	Auger #4	65 cm	Loamy fine Sand (LfS)	15 cm	Moderately Fresh (1)	N/A	15 cm



Legend

-  Soil Auger
-  Subject Property
-  Ditchline/Impacted Wetland Boundary
-  SWT2
-  Wetland Boundary
-  CUM1

Figure 3 - ELC Map

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Checked	SF	Date	7/05/23
Project No.	5557	Drawing File No.	Figure 3

2.2.2 Wetland Delineation

Wills' biologists conducted a desktop review of aerial imagery within the Subject Property for wetlands using the NHIC mapping, prior to the field investigation. Mapping indicated that an unevaluated wetland was present west of the Subject Property across Melody Bay Rd. However, field investigations identified one wetland feature situated on the Subject Property adjacent to the area of proposed development. The wetland is located along the southern boundary of the Subject Property but also continues along the eastern/northern boundary of the Subject Property, stopping approximately 1.4 m to the north of the proposed garage. It is anticipated that this wetland drains into Buckhorn Lake to the east.

On May 11, 2023, Wills' biologists conducted a ground confirmation exercise by foot, within the Subject Property, following the Ontario Wetland Evaluation System, 2022 (OWES) standard methods for identifying wetland communities. Wills' biologists traversed the Subject Property, conducting an evaluation of wetland presence/absence in the wetland polygons indicated by NHIC mapping. When a wetland was found, the boundary was delineated using a handheld Garmin GPS, marking a waypoint approximately every 5 m. The extent of the delineated wetland boundary is shown in **Figure 3**.

The OWES methodology involves identifying vegetation species and determining the relative abundance or "cover" of wetland indicator species versus upland vegetation species. If the vegetation community consists of greater than 50% wetland indicator species, this area is identified as a wetland. This is commonly known as the "50% wetland vegetation rule". If the percent composition of wetland indicator species is equal to that of upland indicator species, that space represents the wetland boundary. Soil augers were taken at various locations to assist in confirming wetland communities/boundaries.

2.2.3 Incidental Wildlife Observations

The following wildlife species were observed during field investigations:

- Green Frog (*Rana clamitans*).
- Midland Painted Turtle (*Chrysemys picta marginata*).

2.2.4 Species at Risk Assessment

Information from the following sources was reviewed for all species of conservation concern prior to completing the field investigation to assist in assessing the Subject Property for SAR.

1. Land Information Ontario Natural Heritage Areas database.
2. Other SAR species identified through other data sources (OBBA, iNaturalist, e-Bird).

In addition to reviewing the above-mentioned sources, Wills sent out a formal information request to the MECP to obtain additional records with reference to restricted Species at Risk (SAR), see **Appendix D** for detail). To date, no response has been received.

A SAR Screening Assessment was completed comparing known occurrences within the area against specific local habitat features identified during the field investigation; see **Table 2** for details.

Table 2 – Species at Risk Screening Assessment

Species	Provincial ESA Status	COSEWIC Status	Federal SARA Status	Habitat Requirements	Likelihood of Occurrence	Site Area Suitability/Observations
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Special Concern	Not at Risk	Not listed	In Ontario, typical Bald Eagle nesting habitat is described as mature forest with scattered supercanopy trees, and adjacent large productive waterbodies (Szuba and Naylor 1998). Bald Eagles typically nest within 2 km of water with suitable foraging opportunities and often adjacent to large waterbodies, in forested areas of mature or old growth forest with some edge habitat (Buehler 2000).	Negligible	Habitat requirements not present. Although the Subject Property fronts onto Buckhorn Lake, the vegetation communities present lack mature forest ecosystems with super canopy trees. Furthermore, no Bald Eagles were observed/heard nor was any evidence of stick nests observed during site investigations.
Black Ash (<i>Fraxinus nigra</i>)	Endangered	Threatened	Threatened	Black Ash is a medium-sized, shade-intolerant hardwood tree species that occurs on moist to wet sites such as swamps, bogs and riparian areas. Black Ash is highly susceptible to the invasive Emerald Ash Borer, which is projected to cause declines in the total number of Black Ash trees by greater than 70% over the next two generations (100 years) (MNRF, 2024).	Confirmed	Black Ash was confirmed to be present within the impacted wetland community on the Subject Property. Applicable mitigation measures are described in Section 4.6 .
Barn Swallow (<i>Hirundo rustica</i>)	Special Concern	Special Concern	Threatened	Terrestrial open and man-made structures. Barn Swallow nesting sites include the use of a variety of artificial structures (e.g., beams, posts, light fixtures, ledges over windows and doors) that provide either a horizontal nesting surface or a vertical face, often with some sort of overhang that provides shelter. Often nesting sites are associated with open barns, sheds, garages, and docks.	Low	Habitat requirements present. Subject Property has man made structures suitable for nesting. However, no Barn Swallows were observed/heard nor were any cup nests observed during site investigation.
Black Tern (<i>Chlidonias niger</i>)	Special Concern	Not at Risk	Not listed	Black Terns nest in shallow marshes, especially in cattails, ponds, mouths of rivers and shores of large lakes where they build floating nests in loose colonies (MNRF, 2024).	Low	Habitat requirements present. The east side of the Subject Property fronts onto Buckhorn Lake. However, no Black Tern were observed/heard nor were any nests observed along the shoreline of the Subject Property during site investigations.
Bobolink (<i>Dolichonyx oryzivorus</i>)	Threatened	Threatened	Threatened	Bobolink prefers tall grass prairies but is also known to nest in forage crops (e.g., hayfields and pastures dominated by a variety of species such as clover, Timothy, Kentucky Bluegrass, and broadleaved plants).	Negligible	Habitat requirements not present. Subject property lacks open habitat such as tall grass prairie or pasture.
Common Nighthawk (<i>Chordeiles minor</i>)	Special Concern	Special Concern	Threatened	Traditional Common Nighthawk habitat consists of open areas with little to no ground vegetation, such as logged or burned-over areas, forest clearings, rock barrens, peat bogs, lakeshores, and mine tailings. Although the species also nests in cultivated fields, orchards, urban parks, mine tailings and along gravel roads and railways, they tend to occupy natural sites (MNRF, 2018).	Low	Habitat requirements low. The Subject Property is predominantly characterised by a CUM1 community associated with a manicured lawn, which does not provide high quality habitat for this species. Furthermore, no Common Nighthawks were observed/heard during field investigation. However, it must be noted

Species	Provincial ESA Status	COSEWIC Status	Federal SARA Status	Habitat Requirements	Likelihood of Occurrence	Site Area Suitability/Observations
						that no targeted surveys were carried out as part of the field investigations.
Eastern Meadowlark (<i>Sturnella magna</i>)	Threatened	Threatened	Threatened	Native grasslands, pastures and savannahs. Eastern meadowlark also uses a wide variety of other anthropogenic grassland habitats, including hayfields, weedy meadows, young orchards, golf courses, restored surface mines, grassy roadside verges, young oak plantations, grain fields, herbaceous fencerows, and grassy airfields. Eastern Meadowlarks occasionally nest in crop fields such as corn and soybean, but these crops are considered low-quality habitat.	Negligible	Habitat requirements not present. Subject property lacks open habitat such as tall grass prairie or pasture.
Eastern Whip-poor-will (<i>Caprimulgus vociferus</i>)	Threatened	Threatened	Threatened	The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as savannahs, open woodlands or openings in more mature, deciduous, coniferous and mixed forests. It forages in these open areas and uses forested areas for roosting (resting and sleeping) and nesting. It lays its eggs directly on the forest floor, where its colouring means it will easily remain undetected by visual predators (MNRF, 2018).	Low	Habitat requirements low. The Subject Property is predominantly characterised by a CUM1 community associated with a manicured lawn, which does not provide high quality habitat for this species. There is also limited forested habitat in the immediate vicinity of the Subject Property due to the presence of residential development along the shoreline of Buckhorn Lake. Furthermore, no Eastern Whip-poor-will were observed/heard during the field investigation. However, it must be noted that no targeted surveys were carried out as part of the field investigations.
Eastern Wood-pewee (<i>Contopus virens</i>)	Special Concern	Special Concern	Special Concern	In Canada, the Eastern Wood-pewee is mostly associated with the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in forest stands of intermediate age and in mature stands with little understory vegetation. During migration, a variety of habitats are used, including forest edges, early successional clearings, and primary and secondary lowland (and submontane) tropical forest, as well as cloud forest. In South America in the winter, the species primarily uses open forest, shrubby habitats, and edges of primary forest. It also occurs in interior forests where tree-fall gaps are present (COSEWIC, 2012).	Negligible	Habitat requirements not present. The Subject Property is predominantly characterised by a CUM1 community associated with a manicured lawn, which does not provide high quality habitat for this species. Furthermore, no Eastern Wood-pewee were observed/heard during site investigations. However, it must be noted that no surveys targeting breeding birds were carried out as part of the field investigations.
Golden-winged Warbler (<i>Vermivora chrysoptera</i>)	Special Concern	Threatened	Threatened	Golden-winged Warblers prefer to nest in areas with young shrubs surrounded by mature forest – locations that have recently been disturbed, such as field edges, hydro or utility right-of-ways, or logged areas (MNRF, 2018).	Negligible	Habitat requirements not present. The Subject Property is predominantly characterised by a CUM1 community associated with a manicured lawn, which does not provide suitable habitat for this

Species	Provincial ESA Status	COSEWIC Status	Federal SARA Status	Habitat Requirements	Likelihood of Occurrence	Site Area Suitability/Observations
						species. Furthermore, no Golden-winged Warbler were observed/heard during site investigations. However, it must be noted that no surveys targeting breeding birds were carried out as part of the field investigations.
Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	Special Concern	Special Concern	Special Concern	It lives in open grassland areas with well-drained, sandy soil. It will also nest in hayfields and pasture, as well as alvars, prairies and occasionally grain crops such as barley. It prefers areas that are sparsely vegetated. Its nests are well-hidden in the field and woven from grasses in a small cup-like shape. The Grasshopper Sparrow is a short-distance migrant and leaves Ontario in the fall to migrate to the southeastern United States and Central America for the winter (MNRF, 2018).	Negligible	Habitat requirements not present. Subject property lacks open habitat such as tall grass prairie or pasture.
Snapping Turtle (<i>Chelydra serpentina</i>)	Special Concern	Special Concern	Special Concern	Slow-moving water with a soft mud bottom and dense aquatic vegetation. Established populations are most often located in ponds, sloughs, shallow bays or river edges and slow streams, or areas combining several types of wetland habitat (Harding 1997).	Moderate	Habitat requirements present. While no Snapping Turtles were observed during site investigations, a painted turtle was observed basking within the wetland to the south of the Subject Property, suggesting that the open water present within this ecosite is sufficient to support habitat for Snapping Turtles. This wetland likely has connectivity to Buckhorn Lake, which also supports suitable turtle habitat. Furthermore, the existing gravel driveway has the potential to provide suitable substrates for turtle nesting. While the proposed garage and expansion of the existing dwelling occurs within 30 m of the SWT2 community and the proposed expansion of the existing dwelling occurs within 30 m Buckhorn Lake, no impacts are anticipated to occur to these communities or the existing driveway as a result of the proposed work. Therefore, no additional mitigation measures are necessary for this species.
Wood Thrush (<i>Hylocichla mustelina</i>)	Special Concern	Threatened	Threatened	During the breeding season, the Wood Thrush is found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches (Gauthier and Aubry 1995; Friesen et al. 1999; Holmes and Sherry 2001; Friesen 2007; Evans et al. 2011; Suarez-Rubio et al. 2011). It	Negligible	Habitat requirements not present. The Subject Property is predominantly characterised by a CUM1 community associated with a manicured lawn, which does not provide high quality habitat for

Species	Provincial ESA Status	COSEWIC Status	Federal SARA Status	Habitat Requirements	Likelihood of Occurrence	Site Area Suitability/Observations
				is noted that in southern Ontario, the Wood Thrush prefers second growth over mature forests (Peck and James, 1987).		this species. Furthermore, no Wood Thrush were observed/heard during site investigations. However, it must be noted that no surveys targeting breeding birds were carried out as part of the field investigations.

3.0 Regulatory Context

3.1 Provincial Policy Context

The *Provincial Policy Statement 2020* (PPS) is a consolidated statement of the government's policies on land use planning. The PPS was issued under section 3 of the Planning Act and came into effect May 1, 2020. It replaces the PPS issued April 30, 2014.

The PPS states:

Section 2.1.4: Development and site alteration shall not be permitted in:

- a) Significant wetlands in Ecoregions 5E, 6E and 7E.*

The Subject Property is located in Ecoregion 6E. No PSW is situated on the Subject Property. The closest PSW is Mississauga River Mouth Wetland, which is situated approximately 2.5 km to the north of the Subject Property.

Section 2.1.5: Development and site alteration shall not be permitted in:

- b) Significant woodlands in Ecoregions 6E and 7E unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.*

While NHIC indicates that a woodland occurs within the Subject Property. Site investigations carried out on May 11, 2023, confirmed the absence of a forested ecosite on the Subject Property.

The also PPS states:

Section 2.1.8: Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, 2.1.6 and 2.1.7, unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on the ecological functions.

The Ontario Natural Heritage Reference Manual for the Provincial Policy Statement defines adjacent lands as:

- 120 m from PSW.
- 50 m from – significant woodlands; significant valley lands; significant wildlife habitat; significant portions of habitat for threatened or endangered species, significant ANSIs.
- 30 m from fish habitat.

The expansion of the existing dwelling occurs within 30 m of Buckhorn Lake. An assessment to meet regulatory requirements is provided in Sections 4.0.

3.2 Provincial Plans

3.2.1 Growth Plan for the Greater Golden Horseshoe

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020) was developed to ensure for growth and development within the Golden Horseshoe of Ontario, in a way that supports economic prosperity, protects the environment, and helps communities achieve a high quality of life.

Relative to the Subject Property, the following is applicable:

Section 4.2.2

1. *A Natural Heritage System for the Growth Plan has been mapped by the Province to support a comprehensive, integrated, and long-term approach to planning for the protection of the region's natural heritage and biodiversity. The Natural Heritage System for the Growth Plan excludes lands within settlement area boundaries that were approved and in effect as of July 1, 2017.*
4. *Provincial mapping of the Natural Heritage System for the Growth Plan does not apply until it has been implemented in the applicable upper-or single-tier official plan. Until that time, the policies in this Plan that refer to the Natural Heritage System for the Growth Plan will apply outside settlement areas to the natural heritage systems identified in official plans that were approved and in effect as of July 1, 2017.*
6. *Beyond the Natural Heritage System for the Growth Plan, including within settlement areas, the municipality:*
 - a) *Will continue to protect any other natural heritage features and areas in a manner that is consistent with the PPS; and,*
 - b) *May continue to protect any other natural heritage system or identify new systems in a manner that is consistent with the PPS.*

Section 4.2.3

1. *Outside of settlement areas, development or site alteration is not permitted in key natural heritage features that are part of the Natural Heritage System for the Growth Plan or in key hydrologic features, except for:*
 - a) *Forest, fish, and wildlife management.*
 - b) *Conservation and flood or erosion control projects, but only if they have been demonstrated to be necessary in the public interest and after all alternatives have been considered.*
 - c) *Activities that create or maintain infrastructure authorized under an environmental assessment process.*
 - d) *Mineral aggregate operations and wayside pits and quarries.*

Expansions to existing buildings and structures, accessory structures and uses, and conversions of legally existing uses which bring the use more into

conformity with this Plan, subject to demonstration that the use does not expand into the key hydrologic feature or key natural heritage feature or vegetative protection zone unless there is no other alternative, in which case any expansion will be limited in scope and kept within close geographical proximity to the existing structure;

Section 4.2.4

1. *Outside settlement areas, a proposal for new development or site alteration within 120 metres of a key natural heritage feature within the Natural Heritage System for the Growth Plan or a key hydrologic feature will require a natural heritage evaluation or hydrologic evaluation that identifies a vegetation protection zone, which:*
 - a) *Is of sufficient width to protect the key natural heritage feature or key hydrologic feature and its functions from the impacts of the proposed change.*
 - b) *Is established to achieve and be maintained as natural self-sustaining vegetation; and,*
 - c) *For key hydrologic features, fish habitat, and significant woodlands, is no less than 30 metres measured from the outside boundary of the key natural heritage feature or key hydrologic feature.*
2. *Evaluations undertaken in accordance with policy 4.2.4.1 will identify any additional restrictions to be applied before, during, and after development to protect the hydrologic functions and ecological functions of the feature*
3. *Development or site alteration is not permitted in the vegetation protection zone, with the exception of that described in policy 4.2.3.1 or shoreline development as permitted in accordance with policy 4.2.4.5.*

The Subject Property is located within the Natural Heritage System of the Growth Plan and encompasses a wetland community as well as fronts onto Buckhorn Lake. Provincial mapping of the Natural Heritage System for the Growth Plan has not yet been implemented in the County of Peterborough or the Municipality of Trent Lakes Official Plan. Furthermore, no Natural Heritage Systems are identified on the Subject Property in Schedule B1 of the Municipality of Trent Lakes. Therefore, policies referring to Natural Heritage System for the Growth Plan and associated key natural heritage features are not applicable. However, policies referring to key hydrological features are still applicable. A 15 m buffer has been proposed for the unevaluated wetland situated along the southern boundary of the Subject Property. However, no setback is recommended for the impacted portion of the unevaluated wetland situated at the northwest corner of the Subject Property. Furthermore, the expansion of the existing dwelling occurs within 30 m of Buckhorn Lake. Further mitigation measures have been provided in Section 4.0 to address the Growth Plan policies as they pertain to Key Hydrological Features.

3.3 County of Peterborough Official Plan (1994)

Section 4.1.3.4

1. *Local plans will prohibit development and site alterations within the following types of significant natural heritage features:*
 - a) *Significant wetlands.*
 - b) *Significant portions of the habitat of endangered and threatened species.*
2. *Local plans may permit development and site alteration in:*
 - a) *Significant woodlands south and east of the Canadian Shield.*
 - b) *Significant valleylands south and east of the Canadian Shield.*
 - c) *Significant wildlife habitat.*
 - d) *Significant areas of natural and scientific interest.*

Development and site alteration will not be permitted in fish habitat except in accordance with provincial and federal requirements.

Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas listed above unless the ecological function of the adjacent lands has been evaluated in accordance with an environmental impact assessment as described in Section 4.1.3.1 and it has been determined that there will be no new negative impacts on the natural features or on their ecological functions.

No PSW is situated on the Subject Property. The closest PSW is Mississauga River Mouth Wetland, which is situated approximately 2.5 km to the north of the Subject Property. However, Black Ash (Endangered) was confirmed to be present within the impacted wetland community on the Subject Property. No other Endangered and Threatened species was identified during site investigations. However, the wetland community to the south supports habitat for Snapping Turtles (Special Concern) and the existing driveway provides suitable nesting habitat for this species. However, no work is being completed on the driveway, so no mitigation for this habitat is required. Further mitigation measures have been provided in Section 4.0 to address Peterborough County policies as they pertain to endangered and threatened species.

Section 4.4.3

10. *Notwithstanding any other policy of Section 4.4.3, local plans and zoning by-laws will require that all new development and leaching beds be set back at least 30 metres from the ordinary high-water marks of all waterbodies. Excepted from this requirement are marina facilities, docks and other water access facilities, pumphouses, and minor accessory buildings and structures as defined in zoning by-laws.*

12. *Local municipalities may authorize minor variances from the 30-metre setback requirement, without the variance being considered to be inconsistent with the general intent and purpose of the local plan, in the following situations:*
 - a. *On a lot existing on the date this Official Plan Amendment No. 3 comes into effect.*
 - b. *The addition to an existing building.*

The proposed garage is situated approximately 50 m from the shoreline of Buckhorn Lake. The expansion of the existing dwelling occurs within 30 m of Buckhorn Lake. Section 3.4 below outlines how the proposed development adheres to local plan policies.

3.4 Municipality of Trent Lakes

3.4.1 Municipality of Trent Lakes Official Plan (2013)

Section 5.1.10.11 - Water Setbacks

1. *Shoreline development inclusive of sewage system leaching beds shall be set back from the high-water mark of water bodies and watercourses to encourage minimal adverse impacts on both the shoreline and water body/watercourse.*
2. *For the purpose of this Plan and the implementing Zoning By-law, all new development on a lot shall be set back a minimum of 30 metres from the established high-water mark of water bodies and watercourses.*

3.4.2 Municipality of Trent Lakes Zoning By-law 2014-070

Section 4.30.1 - General Setback Provisions

1. *Except as otherwise specifically provided for herein, no new building or structure, or new sewage system leaching bed, shall be erected within 30.0 metres (98.4 feet) of the normal high-water mark of any water body and/or watercourse. This setback distance shall be applied horizontally from the high-water mark.*

Section 4.30.4 - Existing Lots

1. *Where it is not possible to achieve the 30-metre (98.4 ft.) setback on an existing lot, new buildings or structures shall be set back as far as possible from the high-water mark. In this regard, a minor variance for a reduced setback for an existing lot may be permitted provided that the variance maintains the general intent and purpose of the Official Plan of the Municipality of Trent Lakes and this By-law, is minor in nature, and is desirable for the appropriate development or use of the land.*

Section 4.30.7 - Wetlands

1. *New development within 30 metres (98.4 feet) of the boundary of a wetland either within the Environmental Protection (EP) Zone or in any other zone*

category shall only be permitted with the approval of Council, or the local Conservation Authority, where applicable. An approved Environmental Impact Study (EIS) may require a greater setback.

3.4.3 Municipality of Trent Lakes Zoning By-law Amendment B2015-085

Zoning By-law Amendment B2015-085 supersedes Section 4.30.3 of the Municipality of Trent Lakes Zoning By-law and replaces it with the following.

Notwithstanding Section 4.30.1, expansions to or replacement of an existing dwelling located within the required 30 metre setback from high-water mark shall be permitted subject to the following provisions:

Section 4.30.3 - Expansions to or Replacement of Existing Buildings

Notwithstanding Section 4.30.1, expansions to or replacement of an existing dwelling located within the required 30 metre setback from high-water mark shall be permitted subject to the following provisions:

- a) Where the ground floor area of an existing dwelling is 112 square metres or greater, the expansion or replacement building shall not result in an increase to the existing ground floor area of more than 25%.*
- b) Where the ground floor area of an existing dwelling is less than 112 square metres, the expansion or replacement building shall not result in an increase to the existing ground floor area of more than 50%.*
- c) In no case shall any expanded or replacement dwelling cause a further reduction to the existing setback from the high-water mark. For the purpose of this provision the existing setback shall be the furthest distance between the high-water mark and the exterior wall of the dwelling.*
- f) This section shall not apply to any other building or structure located within the setback from high-water mark, with the exception that any existing dwelling located in the setback from high-water mark may be permitted to construct or expand an attached deck provided the entire dwelling is a minimum of 10 metres from the high-water mark, the new or expanded attached deck, including any stair does not project more than 3 metres from the exterior wall of the dwelling.*
- g) This section shall only accommodate one expansion or replacement to an existing dwelling located in the shoreline setback that existed prior to the passage of this By-law and further such existing dwelling shall not have not have been the subject of any previous variance or zoning by-law amendment to permit expansion.*

The expansion of the existing dwelling occurs within 30 m of Buckhorn Lake. The existing dwelling possesses a ground floor area of approximately 95m² and the proposed expansion to the dwelling will result in an increase of ground floor space > 50% from the existing footprint. Therefore, the proposed development does not conform to the requirements outlined in Section 4.30.3 of the Zoning By-law Amendment B2015-085 and

a reduced 20 m buffer from the high-water mark of Buckhorn Lake is recommended to accommodate the proposed development. Section 4.0 provides recommended mitigation measures to ensure no adverse impacts to Buckhorn Lake result from the proposed development.

3.5 Endangered Species Act, 2007

The *Endangered Species Act, 2007* (ESA) was implemented to protect SAR in Ontario. An independent body, the Committee on the Status of Species at Risk in Ontario (COSSARO), was developed to classify native plants or animals into one of four categories of at-risk status:

1. Extirpated: lives somewhere in the world, and at one time lived in the wild in Ontario, but no longer lives in the wild in Ontario.
2. Endangered: lives in the wild in Ontario but is facing imminent extinction or extirpation.
3. Threatened: lives in the wild in Ontario, is not endangered, but is likely to become endangered if steps are not taken to address factors threatening it.
4. Special Concern: lives in the wild in Ontario, is not endangered or threatened, but may become threatened or endangered due to a combination of biological characteristics and identified threats.

Species at Risk in Ontario (SARO) are provided by MECP, who administer the ESA regulations for SAR in Ontario. The ESA applies to native species that have been proven to be in danger of becoming extinct or extirpated from Ontario. The ESA provides protection of both the species and their habitat, as well as provides a recovery strategy and stewardship program for those SAR.

Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing, or taking a member of a species listed as endangered, threatened, or extirpated on the SARO list. In addition, Section 10(1) of the ESA prohibits the damage or destruction of habitat of a species listed as threatened, endangered or extirpated on the SARO list.

A permit from MECP is required under Section 17(2)(c) of the ESA for any proposed work to be completed within the habitat of one (1), or more, species listed as threatened or endangered.

Black Ash (Endangered) was confirmed to be present within the impacted wetland community on the Subject Property. No other Endangered and Threatened species was identified during site investigations. However, the wetland community to the south supports habitat for Snapping Turtles (Special Concern) and the existing driveway provides suitable nesting habitat for this species. However, no work is being completed on the driveway, so no mitigation for this habitat is required. Section 4.0 outlines necessary mitigation measures to ensure that the proposed development adheres to the protections provided by the ESA.

3.6 Migratory Birds Convention Act, 1994

The *Migratory Birds Convention Act, 1994* (MBCA) was developed to protect migratory birds, their nests and eggs anywhere they are found in Canada. Relative to the Subject Property, the following is applicable:

Prohibitions

5(1) A person must not engage in any of the following activities unless they have a permit that authorizes them to do so, or they are authorized by these Regulations to do so:

- (a) Capture, kill, take, injure, or harass a migratory bird or attempt to do so.
- (b) Destroy, take or disturb and egg.
- (c) Damage, destroy, remove, or disturb a nest, nest shelter, eider duck shelter or duck box.

Exceptions

(2) However, the following may be damaged, destroyed, removed, or disturbed without a permit:

- (a) A nest shelter, eider duck shelter or duck box that does not contain a live bird or a viable egg.
- (b) A nest that was built by a species that is not listed in a Table to Schedule 1 if that nest does not contain live bird or a viable egg.
- (c) A nest that was built by a species that is listed in a Table to Schedule 1 if the following conditions are met:
 - (i) The person who damages, destroys, removes, or disturbs that nest provided a written notice Minister a number of months beforehand that corresponds to the number of months set out in column 3 of the relevant Table to that Schedule for the species, and
 - (ii) The nest has not been used by migratory birds since the notice was received by the Minister.

No evidence of nesting birds was observed during the site investigation. However, as nesting birds are probable on the Subject Property due to the presence of trees, the requirements to ensure that the Project complies with the MBCA are outlined in Section 4.0.

4.0 Impact Assessment and Mitigation

Any future site development works including building erection, grading, and pavement development have the potential to incur adverse impacts on the surrounding environment including natural heritage features, sensitive species (e.g., SAR), and/or Significant Wildlife Habitat (often described under the umbrella of VECs), particularly

concerning works in undeveloped natural landscapes. Locally specific mitigation measures are implemented to prevent or mitigate impacts to the VECs identified.

To address any potential impacts to the existing natural features or any potential wildlife species of conservation concern which may reside in the area, as shown in **Table 2**, the following mitigation measures should be implemented.

4.1 General Recommendations

The following general recommendations should be applied to any future development:

- All necessary precautions must be taken to prevent the accumulation of litter and construction debris within any natural areas outside of the construction limits. Daily inspections and clean-up must take place.
- Upon project completion, all construction materials must be removed off-site. Natural Heritage Features.

4.2 Wetlands

An unevaluated wetland was identified during the May 11, 2023, site investigation. The portion of the wetland situated along the southern boundary of the Subject Property remains in a naturalized state and supports open water habitat suitable for turtle species. In contrast, the historically impacted wetland which now functions as a ditch line bordering the eastern/northern boundaries of the Subject Property provides little ecological value to wildlife and primarily serves to seasonally convey drainage to the wetland to the south. Therefore, it is recommended that a 15 m setback be applied from the wetland situated along the southern boundary of the Subject Property (**Figure 4**). Furthermore, it is recommended that a Vegetation Planting Plan, outlined in **Section 4.3**, be implemented within this 15 m setback to improve protection to the form and function of this wetland. While no setback is recommended for the impacted wetland or ditch line, any development should ensure hydrological inputs are not altered. The following recommendations should be addressed:

- The Vegetation Planting Plan outlined in **Section 4.3** should be implemented within the recommended buffer as shown in **Figure 5**.
- Mitigation measures described in **Section 4.5** should be implemented to ensure no negative impacts to wetland occur during construction.



Figure 4 - Natural Heritage Constraints Map


Environmental Impact Study
165 Melody Bay Road Buckhorn, Ontario

- Legend
- + Ditchline/Impacted Wetland Boundary
 - Wetland Boundary
 - High Waterline
 - Impacted Wetland
 - Natural Heritage Buffers
 - Proposed Structure
 - Existing Driveway
 - Subject Property

0 5 10 20 Meters
PCS: NAD 1983 UTM Zone 17N Scale: 1:450

Data Sources
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Created In:	ArcGIS Pro
Drawn By:	JG
Checked By:	SF
Map Date:	1/31/24
Project Number:	5557



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4.3 Vegetation Planting Plan

Currently, the 15 m setback from the wetland situated along the southern boundary of the Subject Property primarily consists of manicured grass. See **Appendix E** for representative photographs of existing conditions. The purpose of this plan is to improve protection to the wetland community by softening the transition between the developed area and the wetland. The specific details regarding this plan are outlined in the sub-sections below.

4.3.1 Planting Area

The location and extent of the planting area identified in **Figure 5** was primarily determined due to the presence of manicured grass adjacent to the wetland situated along the southern boundary of the Subject Property. However, the planting area was also influenced by the boundaries of the Subject Property and the presence of existing woody vegetation, which prevented plantings activities from extending to the wetland boundary. Therefore, planting activities will be concentrated in the grassed area within the 15 m setback which abuts the wetland boundary near the southwest corner of the Subject Property. The planting area identified in **Figure 5** covers approximately 107m² and will contribute to increasing the quality of the buffer abutting the wetland.

4.3.2 Vegetation Species List

The planting area identified in **Figure 5** will be planted with native tree species observed to occur on the Subject Property during the May 11, 2023, site investigation. **Table 3** provides a non-exhaustive list of native tree species recommended to be incorporated into the Planting Plan which can adapt to both wetland and upland environments.

Table 3– Tree Species List for Planting Area

Vegetation Type	Species
Trees	<ul style="list-style-type: none"> • Balsam Fire • Eastern White Cedar • Red Maple • White Birch • White Elm

4.3.3 Substitution

Where evidence is submitted that a specified plant or seed base cannot be obtained, substitution may be made, upon approval of a qualified biologist.

4.3.4 Planting Method and Period of Establishment

The timing of planting activities may vary based on the Project schedule. However, tree plantings should occur either in early spring, just after the ground has thawed, or in autumn after deciduous leaves have shed their leaves. To further increase the probability of successful establishment of planted species, the conditions outlined below should be implemented:

- The spacing of trees should be at least 2 m.
- Freshly planted trees shall not be disturbed by subsequent activities that would cause uprooting, displacement or injury.
- Watering of newly planted trees should occur at the following intervals:
 - 1 - 2 weeks after planting – water daily.
 - 3 - 12 weeks after planting – water every 2 - 3 days.
 - 12 weeks after planting – water weekly until roots are established.
- If plantings occur in autumn, frosts may be encountered during the watering schedule outlined above.
 - Follow the watering schedule outlined above until a frost occurs.
 - When frost is encountered, reduce waterings to every other week. Continue watering plantings at the same rate until the ground freezes.
 - Resume biweekly waterings following spring thaw until roots are established.
- An organic mulch layer (~ 2 - 3 in thick) or weed mat should be applied to each tree planting.
 - These measures contribute to decreasing water evaporation, soil compaction, weed growth and insulate the tree from extreme temperatures.
- The trees should be monitored for two years following their planting, and any deceased trees are to be replanted/replaced.

- Predator guards or tree tubes are recommended to be installed on newly planted trees to ensure they are not damaged or killed from animal browsing.

4.4 Buckhorn Lake

The Subject Property is adjacent to Buckhorn Lake which contains fish habitat and is considered a key hydrologic feature in the *Growth Plan for the Greater Golden Horseshoe*. While the proposed garage is situated approximately 50 m from the shoreline of Buckhorn Lake, the proposed expansion of the existing dwelling is situated approximately 23 m from the shoreline of Buckhorn Lake. Therefore, a reduced 20 m setback from the high-water mark has been recommended for the proposed dwelling expansion. Although the proposed expansion will result in an increased impermeable footprint, the footprint of the expansion will not further encroach upon the high-water mark of Buckhorn Lake relative to the existing dwelling. The proposed dwelling expansion is also situated on the west side of the existing cottage structure in areas currently covered by a manicured lawn. Therefore, the expansion will not result in the removal of any trees on the Subject Property. Furthermore, both the proposed garage and dwelling expansion are situated above the existing flood line of Buckhorn Lake and therefore will not interfere with the floodplain.

With the proposed expansion, there is an increase of permeable surfaces, which has the potential to increase overland sheet flow during rain events causing additional sedimentation/inputs into the lake as well as decrease groundwater recharge within the Subject Property. However, site topography across the property is relatively flat, therefore it is expected that any additional inputs from eaves troughs would be absorbed into the vegetated areas on the property rather than enter the lake. Therefore, provided the mitigation measures described in **Section 4.5** are implemented, no negative impact to Buckhorn Lake is anticipated as a result of this project.

4.5 Erosion and Sediment Control

It is recommended that Erosion and Sediment Control (ESC) measures be developed and implemented to minimize the risk of sedimentation into the wetland and Buckhorn Lake during all phases of development.

The ESC measures should include:

- Waste material should be contained and stabilized outside of the buffers identified in **Figure 4**. Alternatively, waste materials should be removed off-site.
- Inspection and maintenance of erosion and sediment control measures and structures should take place during the course of construction.
- Erosion and sediment control measures and structures should be repaired if damage occurs.
- Site isolation measures for containing stockpiled material should be implemented.
- A response plan should be developed that will be implemented immediately in the event of a sediment release or spill of a deleterious substance.

- An emergency spill response kit, including the appropriate absorbency materials, will be on site at all times. Proper containment, clean up and reporting, in accordance with provincial requirements, is required.
- Installation of sediment fencing at the north corner of the garage (**Figure 5**) before construction activities commence to prevent soil deposition into the impacted wetland/ditch line.

4.6 Species at Risk/Wildlife

The background review and field investigations determined 13 species of conservation concern had recent or historically confirmed presence in the area surrounding the Subject Property. The SAR Screening Assessment (**Table 2**) identified suitable habitat on the Subject Property for Snapping Turtles (Special Concern) within the wetland situated along the southern boundary of the Subject Property and within Buckhorn Lake. Site investigations also confirmed the presence of Black Ash (Endangered) within the impacted wetland community within the Subject Property.

4.6.1 Birds

While no habitat for any SAR bird species was identified as being present within the Subject Property, there is still potential for the occurrence of nesting birds due to the presence of trees within the Subject Property. Therefore, in order to remain compliant with the MBCA, the following mitigation measures are required:

- While no clearing of trees is currently proposed, should any vegetation clearing occur, it must take place outside of the breeding bird season of **April 5th to August 31st**.
 - If this time period is unavoidable, alternatively, a nest sweep for birds must be conducted by a qualified biologist, prior to any clearing of vegetation on-site.
 - Following a bird nest sweep, vegetation removal must be completed within 72 hours. If it is not completed within this time period, an additional sweep is required.
 - If, during a nest sweep a bird nest is encountered, all construction activities should cease, and a buffer should be placed around the location until after **August 31st**. The size of the buffer will be dependent on the species and should be consulted with the MNRF and/or MECP.
- The MECP and/or MNRF must be contacted in the case that any rare or SAR species are identified during pre-construction or throughout the construction phases.

4.6.2 Black Ash

Black Ash (Endangered) was confirmed to be present within the impacted wetland community on the Subject Property. On January 26, 2024, the MECP put into force two

new regulations (O. Reg. 6/24 and O. Reg. 7/24) under the Endangered Species Act which specifically pertain to the protection of Black Ash.

As of January 26, 2024, any Black Ash which meets all of the following characteristics are provided protection under sections 9 of the Endangered Species Act and afforded a 30 m protective buffer:

- Stem height measuring more than 1.37 m
- Stem diameter measuring greater than 8 cm at breast height (1.37 m)
- The Black Ash in question is assessed to be in good health by a qualified professional, as defined in O. Reg. 6/24.

Therefore, it is recommended that a qualified professional be retained to perform a health assessment of the Black Ash identified on the Subject Property to determine whether the protections provided under the ESA apply to the specimens present on the Subject Property. It must be noted that additional permit applications and authorizations with the ESA may be required following the results of the Black Ash health assessment.

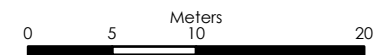


Figure 5 - Planting Area & Sediment Fencing Map

Environmental Impact Study
165 Melody Bay Road Buckhorn, Ontario

Legend

- - - Sediment Fencing
- + Ditchline/Impacted Wetland Boundary
- Wetland Boundary
- Impacted Wetland
- Planting Area
- Subject Property
- Existing Driveway
- Proposed Structure



PCS: NAD 1983 UTM Zone 17N

Scale: 1:450

Data Sources

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Created In:	ArcGIS Pro
Drawn By:	JG
Checked By:	SF
Map Date:	1/31/24
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5.0 Conclusions

Given the results of background review and on-site investigations, long-term adverse impacts to natural heritage features, associated habitat, and local wildlife populations are not anticipated to be resultant from the proposed development, provided that the environmental protection/mitigation measures outlined herein are implemented. Appropriate implementation of the mitigation measures outlined herein will ensure that proposed activities do not conflict with the natural heritage policies set out by the County of Peterborough, the Municipality of Trent Lakes, the Province of Ontario, or other relevant environmental legislation.

If you have any further questions, please do not hesitate to contact the undersigned.

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JG/SF/ck

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Appendix A

Statement of Limitations



Statement of Limitations

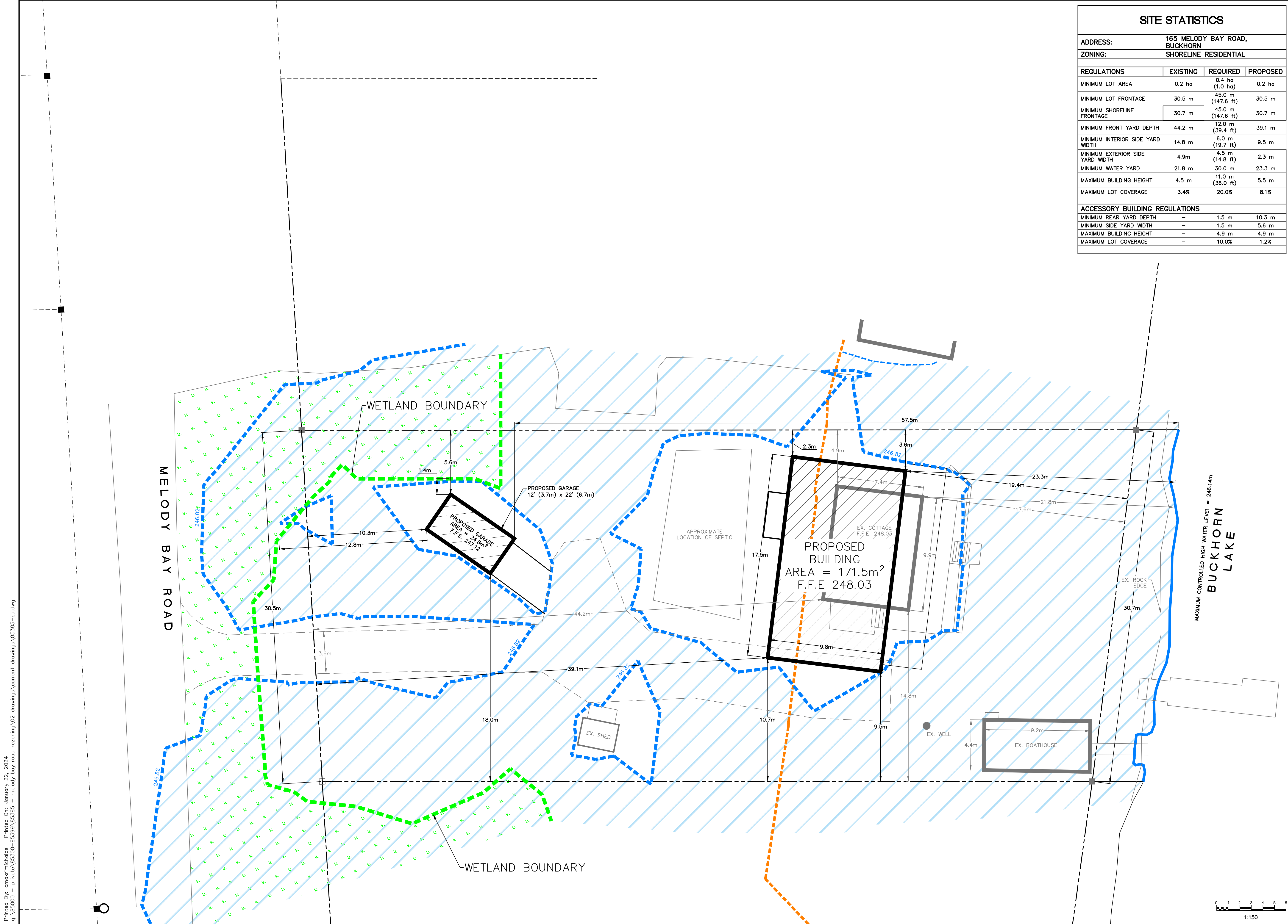
This report is provided solely for the benefit of Christine Malchelosse and not for the benefit of any other party. No other party shall be entitled to rely on this report or any information, documents, records, data, interpretations, advice or opinions or other materials given to Christine Malchelosse by D.M. Wills Associates Limited (Wills). The report relates solely to the specific project for which Wills has been retained and shall not be used or relied upon by any third party for any variation or extension of this project or any other purpose. Any unpermitted use by any third party shall be at such party's own risk.

The conclusions and recommendations outlined in the Environmental Impact Study are based on the results and findings associated with the scope of field investigations as outlined in **Section 2.2** of this report, as they relate to The Project, as described in **Section 1.0**.

Appendix B

Site Plan





SITE STATISTICS			
ADDRESS:	165 MELODY BAY ROAD, BUCKHORN		
ZONING:	SHORELINE RESIDENTIAL		
REGULATIONS	EXISTING	REQUIRED	PROPOSED
MINIMUM LOT AREA	0.2 ha	0.4 ha (1.0 ha)	0.2 ha
MINIMUM LOT FRONTAGE	30.5 m	45.0 m (147.6 ft)	30.5 m
MINIMUM SHORELINE FRONTAGE	30.7 m	45.0 m (147.6 ft)	30.7 m
MINIMUM FRONT YARD DEPTH	44.2 m	12.0 m (39.4 ft)	39.1 m
MINIMUM INTERIOR SIDE YARD WIDTH	14.8 m	6.0 m (19.7 ft)	9.5 m
MINIMUM EXTERIOR SIDE YARD WIDTH	4.9m	4.5 m (14.8 ft)	2.3 m
MINIMUM WATER YARD	21.8 m	30.0 m	23.3 m
MAXIMUM BUILDING HEIGHT	4.5 m	11.0 m (36.0 ft)	5.5 m
MAXIMUM LOT COVERAGE	3.4%	20.0%	8.1%
ACCESSORY BUILDING REGULATIONS			
MINIMUM REAR YARD DEPTH	—	1.5 m	10.3 m
MINIMUM SIDE YARD WIDTH	—	1.5 m	5.6 m
MAXIMUM BUILDING HEIGHT	—	4.9 m	4.9 m
MAXIMUM LOT COVERAGE	—	10.0%	1.2%

KEY PLAN

REVISIONS		Date
No.	Description	

METRICDimensions are in METRES and/or MILLIMETRES unless otherwise shown

LEGENDTO BE READ IN CONJUNCTION WITH OPSD 100 SERIES

LEGEND

- X.X m— PROPOSED DIMENSION
- X.X m— EXISTING DIMENSION
- PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- PROPOSED EDGE OF GRAVEL
- EXISTING BUILDING
- PROPOSED BUILDING
- HIGH WATER MARK
- EXISTING FLOODLINE (ELEV. 246.82)
- WETLAND BOUNDARY
- 30m WATER YARD SETBACK
- FLOODPLAIN (ELEV. 246.82)
- WETLAND

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Project Name/Location
MELODY BAY ROAD ZBA
PART 2 - PLAN 45P-283
165 MELODY BAY ROAD, BUCKHORN, ON

Drawing Title
SITE PLAN

Drawn By: CM	SCALE: Horz. 1:150	Vert. N/A
Designed By: MW	Issue Date: January 22, 2024	
Checked By: AT	Project No.: 23-85385	Sht. No.: 01
Engineer: —	Dwg File No.: 85385-SP	

NOT FOR CONSTRUCTION

Appendix C

NHIC Map





Notes:



0.2 0 0.08 0.2 Kilometres Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources and Forestry (OMNRF) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

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Legend

- Assessment Parcel
- Woodland
- Conservation Reserve
- Provincial Park
- Natural Heritage System
- Ecoregion

Wetland

- Provincially Significant Wetland Evaluated
- Non - Provincially Significant Wetland Evaluated
- Unevaluated Wetland

Area of Natural Heritage & Scientific Interest (ANSI)

- Provincially Significant Life Science ANSI
- Provincially Significant Earth Science ANSI

Greenbelt Plan

- Boundary
- River Valley Connections

Land Use Designations

- Protected Countryside
- Towns and Villages
- Hamlets
- Urban River Valley
- Specialty Crop Area

Niagara Escarpment Plan (NEP)

- Boundary
- Parks and Open Space System

Land Use Designations

- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area
- Mineral Resource Extraction Area
- Escarpment Recreation Area
- Urban Area
- Minor Urban Centre

Oak Ridges Moraine Conservation Plan (ORM)

- Boundary
- Natural Core Area
- Natural Linkage Area
- Countryside Area
- Rural Settlement
- Palgrave Estates Residential Community
- Settlement Area

NHIC Map

165 Melody Bay Road, Buckhorn,
Ontario



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Drawn By	JG	Scale	See Scale Bar
Checked	SF	Date	May 2023
Project No.	5557	Drawing File No.	

Appendix D

Records of Correspondence



Henrietta Duff

From: Ben Radford
Sent: March 15, 2023 3:01 PM
To: sarontario@ontario.ca
Subject: 165 Melody Bay Road, Buckhorn - SAR Information Request
Attachments: Subject Property.jpg

Good afternoon,

My name is Ben Radford from D.M. Wills Associates Limited in Peterborough. We have been contracted to complete an EIS on a parcel of land located at 165 Melody Bay Road in Buckhorn, see the attached map for details. Subject Property is highlighted in red.

The client is proposing to expand their existing cottage and add a garage, which will come within Buckhorn Lake's floodplain. Through background research, we have identified the following Species at Risk (SAR) as having the potential to be present on the Subject Property:

- Bald Eagle (Special Concern)
- Barn Swallow (Threatened)
- Black Tern (Special Concern)
- Bobolink (Threatened)
- Common Nighthawk (Special Concern)
- Eastern Meadowlark (Threatened)
- Eastern Whip-poor-will (Threatened)
- Eastern Wood-pewee (Special Concern)
- Golden-winged Warbler (Special Concern)
- Grasshopper Sparrow (Special Concern)
- Snapping Turtle (Special Concern)
- Wood Thrush (Special Concern)

If you could please confirm and/or add/remove SAR from this list, that would be greatly appreciated. In addition, could you please provide the Active Turtle Season and the Breeding Bird Season for the Subject Property.

Thanks,



Ben Radford, B.Sc. · Project Biologist

D.M. Wills Associates Limited

150 Jameson Drive · Peterborough, ON · K9J 0B9
Cell: 705-768-4296 · Fax: (705) 748-9944

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Appendix E

Site Photographs



<div>Photo # 1</div> <div>Location: 44.54209 -78.36025</div> <div>Photo Direction: Northwest</div> <div>Date: 2023/05/11</div> <div>Photo Description: Driveway entrance to Subject Property.</div>		<div>Photo # 2</div> <div>Location: 44.5421 -78.36021</div> <div>Photo Direction: Northwest</div> <div>Date: 2023/05/11</div> <div>Photo Description: Manicured lawn adjacent to wetland community along southern boundary of Subject Property.</div>	
<div>Photo # 3</div> <div>Location: 44.54206 -78.36011</div> <div>Photo Direction: Northeast</div> <div>Date: 2023/05/11</div> <div>Photo Description: Soil auger #1 retrieved from manicured lawn habitat.</div>		<div>Photo # 4</div> <div>Location: 44.54226 -78.36016</div> <div>Photo Direction: Northwest</div> <div>Date: 2023/05/11</div> <div>Photo Description: Impacted wetland adjacent to proposed garage along northern boundary of Subject Property.</div>	



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Photographic Log

Client Name: Christine Malchelosse

Project #: 5557

Site Location: 165 Melody Bay Road,
Harcourt, ON K0L 1J0

Page #: 1 of 5

Photo # 5

Location: 44.54225 -78.36015

Photo Direction: Northwest

Date: 2023/05/11

Photo Description:
Impacted wetland along northern boundary of Subject Property bordered to the north by driveway and to the south by a manicured lawn.




Photo # 6

Location: 44.5422 -78.36021

Photo Direction: North

Date: 2023/05/11

Photo Description:
Soil Auger #2 retrieved from wetland community.




Photo # 7

Location: 44.54221 -78.36022

Photo Direction: Northwest

Date: 2023/05/11

Photo Description:
Water table near ground surface at Auger #2.





Photo # 8





Location: 44.5422 -78.36013

Photo Direction: Northwest

Date: 2023/05/11

Photo Description:
Soil Auger #3 retrieved from manicured grass community



<div>Photo # 9</div> <div>Location: 44.54221 -78.35924</div> <div>Photo Direction: Northeast</div> <div>Date: 2023/05/11</div> <div>Photo Description: Shoreline of existing property abutting Buckhorn Lake.</div>		<div>Photo # 10</div> <div>Location: 44.54228 -78.35925</div> <div>Photo Direction: Northeast</div> <div>Date: 2023/05/11</div> <div>Photo Description: Evidence of high-water mark along Shoreline of Buckhorn Lake</div>	
<div>Photo # 11</div> <div>Location: 44.54249 -78.35935</div> <div>Photo Direction: South</div> <div>Date: 2023/05/11</div> <div>Photo Description: Shoreline of existing property abutting Buckhorn Lake.</div>		<div>Photo # 12</div> <div>Location: 44.54218 -78.35954</div> <div>Photo Direction: North</div> <div>Date: 2023/05/11</div> <div>Photo Description: Proposed cottage expansion location.</div>	



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Photographic Log

Client Name: Christine Malchelosse

Site Location: 165 Melody Bay Road,
Harcourt, ON K0L 1J0

Project #: 5557

Page #: 3 of 5

<div>Photo # 13</div> <div>Location: 44.5422 -78.35968</div> <div>Photo Direction: Northeast</div> <div>Date: 2023/05/11</div> <div>Photo Description: Proposed cottage expansion location.</div>		<div>Photo # 14</div> <div>Location: 44.54221 -78.35979</div> <div>Photo Direction: West</div> <div>Date: 2023/05/11</div> <div>Photo Description: Proposed garage location</div>	
<div>Photo # 15</div> <div>Location: 44.54221 -78.35981</div> <div>Photo Direction: Southeast</div> <div>Date: 2023/05/11</div> <div>Photo Description: Existing shed.</div>		<div>Photo # 16</div> <div>Location: 44.54215 -78.35993</div> <div>Photo Direction: Southeast</div> <div>Date: 2023/05/11</div> <div>Photo Description: Wetland community to the south of the Subject Property.</div>	



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Project #: 5557

Page #: 4 of 5

<div>Photo # 17</div> <div>Location: 44.54206 -78.36003</div> <div>Photo Direction: North</div> <div>Date: 2023/05/11</div> <div>Photo Description: Wetland transitioning to ditch line, draining across driveway.</div>		<div>Photo # 18</div> <div>Location: 44.54209 -78.36013</div> <div>Photo Direction: North</div> <div>Date: 2023/05/11</div> <div>Photo Description: Ditch line north of driveway, drying up 5 m to the north.</div>	
<div>Photo # 19</div> <div>Location: 44.54214 -78.35985</div> <div>Photo Direction: West</div> <div>Date: 2023/05/11</div> <div>Photo Description: Auger #4 retrieved from wetland community</div>		<div>Photo # 20</div> <div>Location: 44.54201 -78.35988</div> <div>Photo Direction: Southwest</div> <div>Date: 2023/05/11</div> <div>Photo Description: Painted turtle observed within wetland community situated along southern boundary of Subject Property.</div>	



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Page #: 5 of 5