ENVIRONMENTAL IMPACT STUDY

Latremoille Property
Hastings Highlands
September 2024

RIVERSTONE

ENVIRONMENTAL SOLUTIONS INC.

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September 3, 2024
RS# 2024-133

Susan Latremoille

***SUBJECT*: Environmental Impact Study, 264 Ponacka Road, Municipality of Hasting Highlands, Hastings County**

Dear Susan,

RiverStone Environmental Solutions Inc. is pleased to provide you with the attached report.

Please contact us if there are any questions regarding the report, or if further information is required.

Best regards,

RiverStone Environmental Solutions Inc.

Bev Wicks, Ph. D.
Principal / Senior Ecologist

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REPORT SUMMARY

Type of Study		**Date**
Environmental Impact Study		September 3, 2024
Project Manager	**Legal Description**	**Development Proposed**
Bev Wicks	264 Ponacka Road, Part of Lot 30, Concession 6, Geographic Township of Herschel Municipality of Hastings Highlands, County of Hastings	Retroactive review of cottage placement and deck addition/ consent application and Zoning-bylaw Amendment.
	Approval Authorities	**Owner/Agent**
	Municipality of Hastings Highlands, County of Hastings	Susan Latremoille

Report Summary

This Environmental Impact Study has been prepared to retroactively review a cottage placement and as part of a development application to sever a lot with an existing cottage. The west basin of Baptiste Lake, which has been identified as a Lake Trout Lake a capacity is sensitive to new development. Additionally, the application seeks to permit a deck with has been constructed in proximity to the lake. During the onsite review of existing conditions, it was determined that the subject property contained or was adjacent to the following natural heritage features:

1. A watercourse
2. Potential habitat of endangered and threatened species; and
3. Fish Habitat (Lake Trout Lake at capacity).

Potential impacts of the proposed application on the identified natural heritage features and species of conservation interest were evaluated. Potential negative impacts resulting from the proposed development can be mitigated using the recommendations contained within **Section 5** of this report (reiterated below).

RECOMMENDATIONS

- **A Site Plan Agreement or similar instrument that restricts further vegetation removal, site alteration and/or disturbance within the 30 m vegetation buffer and the variable watercourse setback outside of the development envelope as shown on Figure 2 should be required.**
- **No further vegetation or trees outside of the existing development envelope should be removed within the buffer unless they are a safety hazard (assessed by an ISA certified arborist).**
- **The overland flow that is currently piped into the Baptiste Lake should be corrected**
- **Trees should only be removed from October 1st to April 1st.**
- **If tree clearing or demolition must occur between April 1 and October 1, a qualified professional should complete a combination of snag surveys and acoustic monitoring, with technical guidance from the MECP, for the area where tree clearing is proposed.**

- **Limit any tree clearing to condensed development envelope, avoid unnecessary tree removals, and retain trees that are in poor health but do not represent a hazard.**

1 BACKGROUND

RiverStone Environmental Solutions Inc. (hereafter "RiverStone") was retained by Susan Latremoille to complete an Environmental Impact Study (EIS) for the property located at 264 Ponacka Road with frontage on Baptiste Lake in the Municipality of Hasting Highlands (hereafter "subject property") (**Figure 1**).

According to the Municipality of Hastings Highlands Zoning By-law 2004-35 (December 2020) the subject property is zoned (LSR-72). It is RiverStone's understanding that the proposal is to sever 264 Ponacka Road that contains an existing cottage from the properties at 252/244 Ponacka Road. The property is located on the western basin of Baptiste Lake which has been identified as a Lake Trout Lake at capacity for development. Additionally, the cottage was relocated closer than the permitted 15 m (12.1 m) and a deck has been added to the front of the cottage at 264 Ponacka Road which is located 8.1m from Baptiste Lake. Based on communications with Planning Staff at the Municipality of Hastings Highlands, the Zoning Bylaw Amendment application to address the reduced setbacks require the completion of an EIS to assess the potential impacts of the development on identified natural heritage features. The EIS is scoped to an assessment of existing vegetation deer wintering habitat, species at risk, fish habitat, and water quality. RiverStone has interpreted "species of concern" to include both endangered and threatened species.

This EIS is required to demonstrate how the proposed development of can occur while still protecting the components of the natural environment that require protection and provide mitigation measures to minimize impacts to natural features and the ecological functions. RiverStone has prepared this EIS as scoped above, to address the requirements outlined in the County of Hastings Official Plan policies, the Lake Capacity Handbook, as well as the Provincial Policy Statement.

2 APPROACH AND METHODS

The general approach used to complete this EIS involved the following:

1. Identify a study area in which to focus assessment efforts (subject property and adjacent lands).

2. Assemble and review background biophysical information for the subject property and adjacent lands, to become familiar with any previously identified significant natural heritage feature (SNHF) and records of species at risk (SAR) prior to the site investigation.

3. Conduct a site investigation to field-verify the presence or absence of SNHFs, confirm the biophysical features and functions identified during background information gathering, and to collect additional field data (e.g., habitat information, etc.) that will assist with completing the report.

4. Determine the potential for negative impacts associated with implementation of the proposed development and provide recommendations on how identified negative impacts can be avoided, mitigated, minimized, and/or compensated (as necessary).

5. Provide an assessment of consistency and conformity of the proposed development plan with applicable municipal, provincial, and federal environmental policies.

2.1 Identification of Study Area

The focus of this assessment is the subject property on which development is proposed (see **Figure 1** and **Figure 2**). Informally, the study area also incorporates a minimum 120 m radius around the limits of the proposed development, a measure that is intended to ensure appropriate consideration for natural heritage features and functions of adjacent lands, consistent with direction in the Natural Heritage Reference Manual (NHRM) under the Provincial Policy Statement (PPS). The study area may also include consideration for adjacent privately-owned lands; however, assessment of such areas is informal and limited to a desktop review.

2.2 Information Sources Used to Assess Site Conditions

Background biophysical information pertaining to the subject property and adjacent lands was collected from a variety of sources. This includes:

- **County of Hastings Official Plan (December 2017)** for natural features mapping including:
    - Schedule B – Natural Heritage Features and Areas
- **Municipality of Hasting Highlands Comprehensive Zoning By-law** (2004-035) (Consolidated February 2024) for applicable zoning and environmental protection areas mapping
- **MNRF Natural Areas Mapping and Natural Heritage Information Centre (NHIC) database** regarding information on occurrences of species at risk (SAR), provincially tracked species, and natural heritage features near the subject property (square: 17QK3398 accessed July 20, 2024 at https://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US)
- **Species at Risk in Ontario List** as provided by Ministry of the Environment, Conservation and Parks: https://www.ontario.ca/page/species-risk-ontario (last accessed December 2023)
- **Ontario Breeding Bird Atlas (OBBA) database and the Atlas of the Breeding Birds of Ontario, 2001–2005** (Cadman et al. 2007) regarding birds that were documented to be breeding near the Site between 2001–2005 (square: 17TQK39 accessed at: http://www.birdsontario.org/atlas/squareinfo.jsp).
- **Ontario Reptile and Amphibian Atlas** database regarding records of reptiles and amphibians that have been observed within the vicinity of the subject property (square: 17QK39; accessed July 20, 2024, at https://www.ontarioinsects.org/herp/).
- **iNaturalist Mapping and Online Database** regarding citizen scientist observations documented in the vicinity of the subject lands accessed July, 2024 at: https://inaturalist.ca/projects/nhic-rare-species-of-ontario
- **Atlas of the Mammals of Ontario** (Dobbyn 1994) regarding mammals recorded near the subject property.
- **Great Lakes Conservation Blueprint for Terrestrial Biodiversity, Volume 2** (Henson and Brodribb (2005) regarding terrestrial biodiversity within Ecodistrict 5E.
- **Great Lakes Conservation Blueprint for Aquatic Biodiversity, Volume 2** (Phair et al. (2005) regarding aquatic biodiversity.

- **Physiography of Southern Ontario** (Chapman and Putnam 2007) for information pertaining to the physiography and soils within and adjacent to the subject property.
- **Digital Ontario Base Maps** (OBMs; 1:10,000).
- **Historical and Current Aerial Photographs** of the subject property and adjacent lands.
- RiverStone's **in-house databases and reference collections**.
- On-site investigations by RiverStone staff (see **Section 2.3.5**)

2.3 Site Assessment Methods

The sections below outline the various methods used to characterize and assess natural heritage features and associated functions within the subject property.

2.3.1 Habitat-based Wildlife Assessment

RiverStone's primary approach to site assessment is habitat-based. We first focus on evaluating the potential for natural heritage features and species within an area of interest, prior to undertaking any targeted assessments or surveys. An area is considered potential habitat if it satisfies several criteria, usually specific to a species, but occasionally characteristic of a broader group (*e.g.*, several species of turtles use sandy shorelines for nesting, several species of bats use cavity trees as day roosts and maternity sites, etc.). If habitat features are demonstrably absent from a study area, then targeted surveys would not be considered warranted to further support conclusions of the assessment.

Physical attributes of a site that can be used to assess habitat function include structural characteristics (*e.g.*, age and composition of forest canopy, water depth), ecological community (*e.g.*, meadow marsh, rock barren, coldwater stream), and structural connectivity to other habitat features required by a species of interest or indicator species. Species-specific habitat preferences and/or affinities are determined from status reports produced by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Cadman et al. (2007), unpublished documents, and direct experience.

Evidence for the presence of a species (or use of an area by a species) was determined from visual and/or auditory documentation (e.g., song, call) and/or observation of nests, tracks, burrows, browse, skins, and scats (where applicable). Significant natural heritage features (e.g., wildlife habitat, fish habitat, etc.) were delineated in the field with a high accuracy GPS. Features of interest were photographed, and all information collected was catalogued for future reference. Overall, the level of effort expended on-site was deemed appropriate to document natural features and functions with recognized status given the location and scale of the proposed development plan. Representative photographs taken during the site investigation are provided in **Appendix 2.**

2.3.2 Targeted Wildlife Assessment

Where appropriate, RiverStone explores further species-specific assessments in accordance with applicable standard methods and protocols. Targeted survey efforts may be undertaken due to one or more triggers, such as a specific request from an approval authority, an existing record for a species of interest, or a limitation to the habitat-based assessment (*e.g.*, limited property access). Given the timing of study initiation and schedule for application submission, targeted survey methodologies were not undertaken for any specific group of wildlife for this property. All potential habitat functions are estimated based on review of background information and expert and conservative interpretation of on-site habitat structure, as discussed above.

2.3.3 Physical Assessment (Topography, Surficial Geology, & Drainage)

The geophysical setting of this property was determined using topographic, soils, and geological mapping, aerial photography, and descriptions gathered through on-site investigations. Drainage features were identified through the review of background mapping resources and/or delineated in the field.

2.3.4 Vegetation Community Assessment

All natural vegetation communities within the subject property were mapped according to the Great Lakes-St. Lawrence (GLSL) Ecosite Fact Sheets (Wester *et al*. 2015), otherwise known as the "Provincial" ELC system. The GLSL Ecosite factsheets represent refinements and a synthesis of several different protocols for describing vegetation communities (primarily forests) within Ecoregions 4 and 5 previously prepared by MNRF in the 1990's. ELC defines ecological units or "Ecosites" based on a hierarchy of influence involving several physical factors including climate (temperature, precipitation), flooding, disturbance regimes, and substrate (depth, texture, moisture, nutrients). ELC provides a common language to describe vegetation communities, which in turn facilitates the identification of vegetation communities likely to support features or functions of conservation interest.

Each Ecosite code consists of three (3) components. The first component is a 1-digit geographic range code; all Ecosites within the GLSL geographic range begin with the letter "G". The second component is a 3-digit Ecosite number that corresponds to a specific vegetation community. The third component is a 1- or 2-digit vegetation cover modifier indicating whether the dominant vegetation is tall-treed (Tt), low-treed (Tl), shrub (S), not woody (N), or not vegetated (X). For example, "G153N" refers to a rock barren community that is dominated by non-woody vegetation occurring within the Great-Lakes St. Lawrence geographic range.

In our experience, the ELC classification key is not comprehensive and improvised classifications are occasionally used to describe communities, particularly for cultural, successional, or otherwise anthropogenic land cover. Vegetation communities were delineated via aerial photo interpretation and subsequently confirmed and refined in the field using a general wandering survey approach. The boundaries of any identified wetland boundaries were delineated in accordance with the "50% wetland vegetation rule" as directed by the Ontario Wetland Evaluation System (OWES), where feasible.

2.3.5 On-Site Investigations

The background information gathered as outlined in **Section 2.1** helped direct data collection during site investigations. The sites features were assessed on June 26, 2024, by J. LeMesurier, Ecologist. Investigations were focused on collecting information pertaining to: (1) topography and drainage, (2) wetlands and vegetation communities, (3) habitat for endangered and threatened species, (4) habitat for significant wildlife habitat, and (5) fish habitat. Representative site photos taken during this investigation are assembled in **Appendix 1**. Overall, the level of effort expended on-site was deemed appropriate to document the features and functions with recognized status given the location and scale of the proposed development.

2.4 Significant Natural Heritage Feature Assessment

Provincial and local planning policies employ varying terms for natural heritage features and designations that have recognized 'statuses' within the applicable planning jurisdiction. Where

relevant, this report employs the terminology of the Provincial Policy Statement (PPS) by referring to features with recognized status as Significant Natural Heritage Features (SNHF). Additionally, natural heritage features which do not constitute SNHF under the PPS but are considered relevant in the local land use planning context are considered in this discussion. A list of SNHF (applicable to Ecoregion 5E and/or the Municipality of Hastings Highlands) that were reviewed as potentially being present on the subject property include the following:

- Fish Habitat & Streams
- Wetlands (including significant wetlands and coastal wetlands)
- Significant Wildlife Habitat
- Significant Areas of Natural and Scientific Interest
- Habitat of Endangered and Threatened Species

The listed applicable features are assessed in accordance with applicable technical guidance documents, including the following:

- *County of Hastings Official Plan (Approved August 3, 2018)*.
- *Natural Heritage Reference Manual (NHRM) for the Natural Heritage Policies of the Provincial Policy Statement* (MNRF 2010)
- *Lakeshore Capacity Handbook (MOE et al. May 2010)*
- *Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E* (MNRF 2015).

In addition to the above references, the potential presence/absence of relevant species of conservation interest, such as endangered and threatened species, are assessed using a combination of the background information review outlined in **Section 2** and the habitat-based and targeted approach outlined in **Section 2.3.1**.

2.4.1 Fish Habitat and Streams

Potential fish habitat was assessed in the field using a habitat-based approach, based on guidance protocols and established criteria provided by both the Ministry of Natural Resources and Forestry (MNRF) and Department of Fisheries and Oceans (DFO). Watercourses present were reviewed for features that would indicate habitat for fish and any barriers that would prevent migration. Where determined to be present, fish habitat is assigned to one of three potential categories, Type 1, Type 2, or Type 3 as outlined in **Table 1** below. Fish habitat mapping, fisheries records, thermal regime, and the known fish community of a lake or watercourse are used in conjunction with site-specific field evaluation, to determine which ‘type’ of habitat is present in any portion of a waterbody.

Table 1. Classification of Fish Habitat Types

Classification Type	Description
Type 1	Habitats have high productive capacity, are rare, in space and/or time, are highly sensitive to development, or have a critical role in sustaining fisheries (*e.g.*, spawning and nursery areas for some species, and ground water discharge areas for summer and/or winter thermal refuges).

Type 2	Habitats are moderately sensitive to development and, although important to the fish population, are not considered critical (*e.g.*, feeding areas and open water habitats of lakes).
Type 3	Habitats have low productive capacity or are highly degraded, and do not currently contribute directly to fish productivity. They often have the potential to be improved significantly (*e.g.*, a portion of a waterbody, a channelized stream that has been highly altered physically).

Any watercourses that were encountered were assessed. Key characteristics assessed include the physical dimensions of the channel, thermal regime, groundwater sources, and adjacent vegetation. The most comprehensive and widely applied habitat assessment protocol for wadeable creeks, streams, and rivers was developed by MNR. The Ontario Stream Assessment Protocol (Stanfield 2010) provides standard assessment techniques to identify key components of fish habitat at discrete locations. The entire protocol can be used to establish baseline conditions to address comprehensive academic questions, whereas individual components of the protocol can be used to provide site-specific information. Useful site-specific information to collect includes channel structure, instream cover, substrate type, stability, type and density of riparian vegetation, and location of groundwater upwellings. Following the methods described in The Stream Permanency Handbook (Bergmann et al. 2005), the flow characteristics (stream permanency) of any watercourses encountered were also assessed. To determine stream permanency, observations of flow duration, instream vegetation, established channel, water temperature, and the presence of aquatic invertebrates were evaluated.

These details allow the watercourse to be characterised and considered on the basis of requirements in the municipal Official Plans. These requirements generally relate to the buffer width and vegetation retention requirements. Wetlands can also be considered habitat for fish where there is suitable open water.

2.4.2 Significant Wildlife Habitat

The PPS (2020) protects SWH from development and site alteration unless it can be demonstrated that no negative impacts on the feature or its function will occur. As outlined in the SWH Technical Guide (OMNR 2000) and supporting Ecoregion Criteria Schedules (OMNRF 2015a, 2015b, 2015c), SWH is composed of four principal components:

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

The process for identifying SWH is outlined in s. 9.2.3 of the Natural Heritage Reference Manual (OMNR 2010). Step 1 considers the nature of the development application proposed and involves the assembly of background ecological information for the subject property and adjacent lands. If the application triggers a need to protect SWH (e.g., a change in land use that requires approval under the Planning Act), a more thorough investigation of potential SWH features on the subject property or adjacent lands must occur. Any confirmed SWH for the subject property and adjacent lands as identified in relevant planning documents or by the MNRF should be noted at this stage (“Adjacent” can include proximate parts of the mainland where there could be a connection between features important to a species of concern).

Where a need to protect SWH is triggered, Step 2 involves undertaking a more thorough analysis of features, functions, and habitats on the subject property via ELC (see **Section 3.3**). The list of ELC Ecosite codes generated for the subject property is compared to those codes considered candidate SWH in the relevant Ecoregion Criterion Schedule (i.e., 5E) in Step 3. Where a positive match between an ELC Ecosite and candidate SWH exists, the area is considered candidate SWH. In Step 4, two options are available for candidate SWH:

1. the area may be protected without further study, or
2. the area may be evaluated to ascertain whether confirmed SWH is present. Evaluation may involve generating more detailed maps of vegetation cover or conducting surveys of the wildlife population within the candidate SWH including reproductive, feeding, and movement patterns.

If the area is confirmed SWH, the final step in the process (Step 5) is the completion of an impact assessment to demonstrate that no negative impacts to the confirmed SWH or its function will occur. The impact assessment process is assisted by SWH Mitigation Support Tool (OMNRF 2014).

The scope of this project does not trigger a full review of SWH for the subject property; however, a Deer Wintering Area was identified on the subject property, which falls under the Seasonal Concentration of Animals category. A full review of deer habitat is provided in **Section 4.5**.

2.4.3 Endangered and Threatened Species

This report considers those species listed as endangered or threatened on the Ontario Species at Risk List (*O. Reg*. 230/08) that receive protection under s.9 and s.10 of the provincial *Endangered Species Act, 2007* (ESA). The ESA includes prohibitions against killing, harming, harassing, capturing, or taking a living member of a species listed as extirpated, endangered, or threatened on the SARO List and against damaging or destroying the habitat of a species listed as endangered or threatened on the SARO List, without an exemption or authorization. Seeking an ESA authorization or exemption is a proponent-led process to ensure proposed development does not contravene the ESA. As described in **Section 2.3.1**, RiverStone's approach to site assessment is primarily habitat-based. The results of these assessments are provided in **Appendix 3**.

2.5 Impact Assessment

To carry out a rigorous and defensible ecological assessment of potential impacts associated with the proposed development, RiverStone employs the following approach.

1. *Predict* impacts to features and species of conservation interest on the subject property and adjacent lands based on the proposed development plan (from construction to post-completion), including both direct (*e.g.*, vegetation clearance) and indirect (*e.g*., light pollution, encroachment post-development) impacts.
2. *Evaluate the significance* of predicted impacts to features and species of conservation interest based on their spatial extent, magnitude, timing, frequency, and duration.
3. *Assess the probability or likelihood* that the predicted impacts will occur at the level of significance expected (*e.g.,* high, medium, low probability).

In instances where the potential for negative impacts to features or species of conservation interest exist, ecologically meaningful mitigation measures are offered to avoid, minimize, and/or compensate

for such impacts. RiverStone's impact assessment and recommended mitigation measures are provided in **Section 5.**

2.6 Assessment of Conformance with Applicable Environmental Policies

To assess whether the application is consistent or complies with the relevant municipal, provincial, and federal requirements with respect to the natural environment, the following policies (e.g., statutes, regulations, plans, guidance documents, etc.) that may be applicable to the proposed application were considered during both the field investigations and the impact analysis. An assessment of the proposed development's consistency and conformity with these policies is provided in **Section 6**.

- Federal *Fisheries Act*, R.S.C. 1985, c. F-14, amended on 2019-08-28 including:
    - *Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations*, S.O.R/2013-191
    - Fish and Fish Habitat Protection Policy Statement (August 2019)
- Federal *Migratory Birds Convention Act*, S.C. 1994, c. 22, including:
    - Migratory Birds Regulations.
- *Provincial Policy Statement*, 2020, pursuant to the *Planning Act*, R.S.O. 1990, c. P.13, including:
    - Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (OMNR 2010)
    - Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF 2015).
- Provincial *Endangered Species Act* (ESA), S.O. 2007, c. 6, including:
    - Ontario Regulation 230/08: Species at Risk in Ontario List
    - Ontario Regulation 242/08: "Exemption Regulation"
- Lakeshore Capacity Handbook (May 2010)
- County of Hastings *Official Plan* (December 19, 2017)
- Municipality of Hastings Highlands *Comprehensive Zoning By-law 2004-035* (Consolidated February 2024)

3 NATURAL HERITAGEFEATURES AND FUNCTIONS

3.1 General Site Conditions

At the time of our site visit on June 26, 2024, development on the subject property consisted of a driveway, a cottage with an attached deck, and a tool shed. The subject property is small and rectangular shaped with frontage on Baptiste Lake to the east, Ponacka Road to the west, and similar properties to the north and south. A watercourse was noted flowing from west to east along the southern property boundary. A small area of wetland vegetation was observed near the road; however, it was not large enough to be map as a wetland and no other wetland features were noted on the subject property. Representative photographs taken during the site investigation are provided in **Appendix 1**.

3.2 Terrain, Drainage, and Soils

The subject property is situated within the central portion of Ecodistrict 5E-11 (Bancroft). Soils on the subject property are the result of the advance and retreat of the last continental glaciation of North America. Soils in this region tend to be shallow; however, the depth to bedrock can vary considerably over short distances. In general, soils are stony, sandy, and acidic in nature. Areas of bare bedrock are common at higher elevations where the glacier was thinner and less morainal sediment was deposited. Areas of typically acidic bare bedrock and very shallow mineral material are more common in the south (Wester, et al, 2018). Prominent bedrock knobs and ridges are common in the region and dominate features in some areas. The Precambrian landform expression strongly influences the topographic patterns of the region as well as the local overland drainage characteristics.

Field observations of topography on site reveal that the property is relatively level with steeper slopes between the cottage and the lake (20-40%). Overland drainage is directed to the east towards Baptiste Lake (**Figure 2**).

3.3 Vegetation Communities

In general, the subject property contains a mix of upland mixedwood forest, wetland habitat, and anthropogenic areas. Ecological communities were characterized and delineated through a combination of field investigations and aerial photograph interpretation; these communities are described below and mapped on **Figure 2**. Each description includes a list of representative plant species within each community. All species observed within the study area are considered common locally and provincially.

3.3.1 Terrestrial Vegetation Communities

G048Tt Dry to Fresh, Coarse: Red Pine - White Pine Conifer

The subject property is a small shoreline property that is naturally vegetated with a forest community dominated by Eastern White Pine (*Pinus strobus*). The property contains mid-aged to mature aged forest with a dense understory that includes native shrubs and groundcover species. Additional trees noted in the canopy include White Spruce (*Picea glauca*), Trembling Aspen (*Populus tremuloides*), Eastern White Cedar (*Thuja occidentalis*), Sugar Maple (*Acer saccharum*), White Birch (*Betula pendula*), American Basswood (*Tilia americana*), White Ash (*Fraxinus americana*), Balsam Fir (*Abies balsamea*), and Red Maple (*Acer rubrum*). Understory species noted throughout the property include Red-osier Dogwood (*Cornus sericea*), Beaked Hazelnut (*Corylus cornuta*), American Fly Honeysuckle (*Lonicera canadensis*), Northern Bush Honeysuckle (*Diervilla lonicera*), Interrupted Fern (*Osmunda claytoniana*), Northern Bracken Fern (*Pteridium aquilinum var. latiusculum*), Rose Twistedstalk (*Streptopus lanceolatus*), Large-leaf Wood Aster (*Eurybia macrophylla*), Wild Sarsaparilla (*Aralia nudicaulis*), Canada Mayflower (*Maianthemum canadense*), Northern Starflower (*Trientalis borealis*), Spinulose Wood Fern (*Dryopteris carthusiana*), and Red Trillium (*Trillium erectum*).

Within the septic field area, additional cultural species were noted including Goldenrod Species (*Solidago sp*), Bindweed Species (*Calystegia sp*), Colts Foot (*Tussilago farfara*), Cow Vetch (*Vicia cracca*), Black Raspberry (*Rubus occidentalis*), Blackberry (*Rubus allegheniensis*), Ox-eye Daisy (*Leucanthemum vulgare*), Common Milkweed (*Asclepias syriaca*), Common Mullein (*Verbascum thapsus*), and European Lily-of-the-valley (*Convallaria majalis*).

While not large enough to be its own community on the property, there is an area of drainage located along the roadway that is connected to adjacent lands by a culvert below the road. Habitat across the road is representative of a wetland. Additional species noted within this section of the property include Tamarack (*Larix laricina*), Black Ash (*Fraxinus nigra*), Wild Raisin (*Viburnum nudum var. cassinoides*), Joe-pye-weed Species (*Eupatorium sp*), Horsetail Species (*Equisetum sp*), Spotted Jewelweed (*Impatiens capensis*), Purple Flowering Raspberry (*Rubus odoratus*), and Sensitive Fern (*Onoclea sensibilis*).

3.4 Wildlife Habitat

Based on our assessment, the subject property has the potential to support habitat for various species of wildlife that are typical to the Canadian Shield landscape. It is reasonably assumed that wildlife in the local area would include those generally found on the local landscapes. We would expect occurrences for general mammalian species, including White-tailed Deer (*Odocoileus virginianus*), Coyote (*Canis latrans*), Eastern Cottontail (*Silvilagus floridanus*), Raccoon (*Procyon lotor lotor*), Grey Squirrel (*Sciurus carolinensis*), etc. We expect that a wide variety of breeding birds (resident and migratory) would make use of the study area, including shoreline environments and woodlands. Targeted bird surveys were not conducted in the assessment area. This report makes conservative estimations on the potential presence of species that may be indicative of significant functions.

The NHIC database includes local element occurrences for at-risk species on the surrounding landscape. An assessment of potential wildlife species and/or habitat features, including individuals of species at risk or other species of conservation concern, is provided in **Section 4** of this report within the context of SNHFs. RiverStone assessed the potential for the subject property and adjoining lands to contain habitat for endangered and threatened species (**Appendix 2**) as well as significant wildlife habitat (deer wintering areas).

3.4.1 Fish Habitat

A watercourse was identified on the subject property (**Figure 2**) which is best characterized as an intermittent warm water watercourse. Bankfull width ranged form 0.25-0.75 m and wetted with was between 0.2-0.6 m. The watercourse flowed from a culvert located at the road and outlets into Baptiste Lake. Substrates consisted of gravel and sand with some detritus and upland vegetation growing in some areas of the stream channel. Given the steep slopes adjacent to Baptiste Lake and depths ranging from 0.06-0.1 m, it is most likely that the watercourse provides indirect fish habitat.

The subject property has frontage on Baptiste Lake, which is a large cold-water Lake Trout Lake, the western basin of which has been identified as at capacity for development. The fish community consists of several major fish species, including Lake Trout (*Salvelinus namaycush*), Black Crappie (*Pomoxis nigromaculatus*), Blue Gill (*Lepomis macrochirus*), Brown Bullhead (*Ameiurus nebulosus*), Burbot (*Lota lota*),Cisco (*Coregonus artedi*), Lake Whitefish (*Coregonus clupeaformis*), Largemouth Bass (*Micropterus salmoides*), Muskellunge (*Esox masquinongy*), Northern Pike (*Esox lucius*), Pumpkinseed (*Lepomis gibbosus*), Rock Bass (*Ambloplites rupestris*), Smallmouth Bass (*Micropterus dolomieu*), Walleye (*Stizostedion vitreum*), White Sucker (*Catostomus commersonii*), and Yellow Perch (*Perca flavescens*).

During our site assessment, we reviewed the entire shoreline of the property to determine the type of nearshore fish habitat present, given the expected fish community. Habitat characteristics are consistent across the frontage. The nearshore habitat features fronting the shoreline of the subject property observed consist of a mix of boulders and cobble with some sand substrates and fallen woody

debris with overhanging vegetation. Sparse patches of aquatic vegetation consisted of Pipewort (*Eriocaulon aquaticum*) and Water Lily sp. (*Nymphaea sp*). Onshore slopes are steep in the range of 20-40 % in the area directly adjacent to the lake. Based on the conditions documented on site, the shoreline frontage is likely classified as Type 2 habitat providing general movement and foraging habitat for a variety of fish species.

Baptiste Lake supports a Lake Trout population and has been identified as at capacity for development. The impact assessment and mitigation measures section, therefore, focuses on potential impacts to water quality related to the development on the subject property. Lake Trout are sensitive to development activities that decrease water quality; attributed to both increase in phosphorous and decreases in dissolved oxygen in deep water habitat.

4 SIGNIFICANT NATURAL HERITAGE FEATURES

Based on the biophysical information collected during background information gathering, and the summarized existing conditions of the subject property as described above, **Table 2** below identifies all SNHFs that are present (or potentially present) within the study area. Although we have identified many natural heritage features across the property, only those that are afforded protection through municipal, provincial, and federal policy and law are considered significant and are discussed further. RiverStone's rationale for identifying such features is provided in the sections that follow.

Table 2. Summary of the Assessment of Significant Natural Heritage Features included in the scope of work and identified within the Study Area.

Significant Natural Heritage Feature	Presence/Absence within the Subject Property/Adjacent Lands
Fish Habitat & Streams	*Present*. See **Section 4.1**
Wetlands (Including PSWs)	*Absent*. See **Section 4.2**
Areas of Natural and Scientific Interest	*Absent*. See **Section 4.3**
Habitat of Endangered and Threatened Species	*Potentially Present*. See **Section 4.4**
Significant Wildlife Habitat	*Present.* **See Section 4.5**

Shaded rows denote significant natural heritage features that are present or have the potential to be present within the study area.

4.1 Fish Habitat & Streams

As noted in **Section** Error! Reference source not found., there is a single watercourse within the assessment area providing indirect fish habitat. The watercourse is connected to Baptiste Lake as mapped on **Figure 2** and described in **Section3.4.1**. Based on criteria outlined in the *Stream Permanency Handbook* and the *Ontario Stream Assessment Protocol*, the watercourse would be most appropriately classified as an intermittent feature. An assessment of potential impacts to the fish habitat that may result from implementation of the proposed development plan is provided in **Section 5.2**.

4.2 Wetlands

There is a small pocket of wetland vegetation present at along the road, however, it is not large enough to map following ELC protocols. No other wetlands are present within the study area. No further assessment undertaken.

4.3 Areas of Natural and Scientific Interest (Life Science)

It is the responsibility of the Ministry of Natural Resources and Forestry (MNRF) to designate and administer mapping for areas of natural and scientific interest (ANSIs). No ANSI features are mapped on the subject property. As a result, there is no expectation that development on the subject lands would impact ANSI features.

4.4 Habitat of Endangered and Threatened Species

To assess the potential presence of individuals and/or habitat for endangered and threatened species within the study area, RiverStone staff conducted the following:

- Review of the list of species designated as endangered and threatened in Ontario, as per Schedules 2 and 3 of Ontario Regulation 230/08 [(Species at Risk in Ontario List (SARO List)], located here: https://www.ontario.ca/laws/regulation/080230. In our experience, the potential presence of most provincially endangered and/or threatened species can be ruled out based on their limited geographical ranges in the province and/or a lack of specific habitat conditions which they require to carry out key life processes.
- Review of the NHIC database for existing records of element occurrences for endangered or threatened species (data squares 17QK3398, 17QK3397 and adjacent squares). Databases of iNaturalist, OBBA, and ORAA were also reviewed as of July 2024.
- On-site investigations undertaken in 2024, during which vegetation conditions were characterized for detailed habitat-based assessment.

Information from the above assessment process was used to inform a site-specific screening, as contained in **Appendix 2**. Through this screening twenty-seven (27) species were identified that have the potential to be present or use vegetation communities on the subject property or on adjacent lands based on existing records and range mapping. This list of species was reduced to five (5) species that had the potential to be present on the subject property based on habitat availability noted during our site assessments.

Black Ash (*Fraxinus nigra*), Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*), may occur on the property based on the presence of suitable forested habitat. Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*) are habitat generalists and can be found in most areas of Ontario, but in small numbers. Each of these species are discussed below, and where relevant, potential development-related impacts to these species are discussed further in **Section 5.3**.

4.4.1 Black Ash (*Fraxinus nigra* - Endangered)

Black Ash was added to the SARO List as of January 27, 2022; habitat-level protections are provided under Regulation 242/08 of the ESA. Black Ash were observed on the subject property along the roadside ditch in association with the wetland ecosite on adjacent lands. The current protections afforded to Black Ash are specific to certain municipalities in Ontario; the Municipality of Hastings

Highlands is not included in this list. No further development on the subject property is proposed at this time and no impacts are anticipated.

4.4.2 Endangered Bat Species (*Myotis lucifugus, M. septentrionalis, Perimyotis subflavus* - Endangered)

These species, assessed as a species guild (related species with similar habitat characteristics), include several bat species listed as endangered in Ontario. Bats are highly mobile; however, individuals and groups of the noted bat species are also recognized as having some degree of fidelity to suitable local sites for daily and seasonal 'roosting' activities. While some species (*i.e., Myotis lucifugus*) exhibit a preference for roosting in anthropogenic structures, natural roosting sites are also important. Natural roosting sites are generally associated with mature forests containing a sufficient density of large trees in various stages of decay, otherwise known as 'snags'. Snags provide features such as cavities and/or loose bark, on which bats rely for shelter and thermoregulation throughout the active season.

Woodland cover within the study area is fairly extensive and while no formal quantitative evaluation of bat habitat was conducted to support this assessment, we estimate that there is potential for on-site trees/woodland to support roosting habitat for endangered bat species.

Current direction from MECP prescribes that targeted surveys of treed habitats/snags are not necessary to quantify the quality/extent of potential habitat for endangered bat species IF a project would involve removal of only a small number of potential maternity or day roost trees in treed habitats (or none at all). This approach assumes that other appropriate mitigation measures (*i.e.*, timing windows) are employed to avoid impacts to individuals of endangered bat species. For our assessment, it is RiverStone's opinion that potential significant habitat features for bats could occur and it is not possible to rule out the potential for *individuals* of endangered bat species (or other bat species) to be present during the active season in any individual trees (*i.e.*, through migration and regular daily movements). Further discussion, including an assessment of potential impacts to individuals of endangered bat species resulting from implementation of the proposed development, is provided in **Section 5.3.1.**

4.4.3 Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*)

Suckley's Cuckoo Bumble Bee is a nest parasite of other Bumble Bee species and is reliant on host species' nests and workers to rear their young. They tend to parasitize species that build their nests within abandoned rodent burrows and overwinter in leaf litter near host nests. This species pollinates a variety of flowers and has the potential to be present within anthropogenic and upland forest areas of the subject property (COSEWIC, 2019). Anthropogenic areas provide opportunities for nectar foraging for Suckley's and other Bumble Bee species, while the adjacent upland forest may provide nesting habitat.

RiverStone's background review did not identify records for Suckley's Cuckoo Bumble Bee on the subject property or adjacent lands and Bumble Bees were not observed on-site. Suckley's Cuckoo Bumble Bee is also more common in western Ontario. The probability of the species being present on the subject property is quite low, and disturbance to anthropogenic and upland forest areas due to the proposed redevelopment will be minimal. RiverStone does not anticipate negative impacts to this species as a result of the proposed severance.

4.5 Significant Wildlife Habitat

Significant wildlife habitat (SWH) represents a range of habitat features that are recognized as providing specialized or otherwise important functions for various forms of wildlife. Designation of confirmed SWH is ultimately the responsibility of the relevant planning authority. Notwithstanding, candidate SWH can be identified on a site-specific basis, often triggered through a proposed change in land use or a large-scale development application. As per guidance provided in Section 9.3.2 of the provincial Natural Heritage Reference Manual, the current application for residential development on the subject property does not trigger a full site-specific SWH assessment; however, MNRF has previously identified Stratum 2 deer wintering habitat across the property. An assessment of this habitat is provided in **Section 4.5.1**.

4.5.1 Deer Yarding Areas

MNRF mapping and Schedule C2: Natural Heritage Features and Areas of the Muskoka Official Plan has identified Stratum 2 deer wintering habitat on the property which is considered SWH. White-tailed Deer concentrate during the winter, after snow accumulates. Deer show a high fidelity to these gathering areas, returning each year. This specialized habitat is considered Significant Wildlife Habitat as deer rely on the thermal cover and food found in these wintering yards. To confirm that an area is being used for deer wintering, it requires suitable vegetation for both thermal cover and food (deciduous shrub, saplings and/or Eastern White Cedar and Eastern Hemlock) in addition to having a history of deer use. During field assessment, signs of deer activity are recorded, as well as type and quantity of vegetation cover and the quality of habitat. The subject property is located in a Stratum 2 deer yard as outlined in the Land Information Ontario database. As described above, the Stratum 2 habitat typically surrounds Stratum 1 habitat and consists of mixed deciduous forest with plenty of understory shrubs and small trees for food.

While a formal deer wintering assessment was not conducted as part of RiverStone's fieldwork on the subject property, review of air photos and field work including assessment of ELC communities was used to assess the potential for deer to use the property for over wintering. Based on the abundance of young deciduous regeneration and deciduous shrub in scattered locations on the subject property, it can be concluded that potential Stratum 2 habitat is present.

5 IMPACT ASSESSMENT AND RECOMMENDATIONS

5.1 Development Proposal

The development proposal being put forward is a Zoning Bylaw Amendment Application to address a reduced setback from Baptiste Lake. The EIS is required to demonstrate no negative impacts to fish and fish habitat to move forward a conditional severance approval. The existing cottage, deck, and tool shed on **Figure 2** illustrates the existing development.

5.2 Water Quality and Fish Habitat

In general, development and site alteration present a series of common potential impacts to water quality, and fish habitat. Mitigation planning for protection of all these features and functions involves similar actions, and so the impact assessment for these natural heritage features is provided under a single section. Negative impacts to near shore and deep-water fish habitat associated with Baptiste Lake resulting from proposed development have the potential to occur via the following processes:

- stormwater runoff during construction activities resulting in increase sediment and nutrient loading
- modification of drainage patterns or flow rates
- inappropriately located sewage treatment systems that increase nutrient (phosphorous) loading to waterbodies
- increased runoff due to an increase in the extent of hard surfaces (e.g., rooftops, patios, pathways)
- changes to terrestrial vegetation and structural features (e.g., removal of vegetation or soil, importation of aggregates) resulting in increased erosion and reduced nutrient uptake.
- construction of in-water structures (e.g., culverts, docks, bridges)
- changes to in-water structural features (e.g., substrates, woody debris, aquatic vegetation)

Although the land use changes during the construction process had the potential to have negative impacts on water quality and deep-water fish habitat, it is RiverStone's opinion that there is sufficient watercourse and shoreline vegetation to offset any impacts from an increase in impervious surfaces caused by the installation of the deck. The severance does not propose any new development, but to separate existing dwellings into separate parcels so no new negative impacts to Baptiste Lake are anticipated.

Alteration Within Shoreline Buffer

The following recommendations related to development and site directly adjacent to Baptiste Lake including the existing cottage and shoreline amenity area:

- **A Site Plan Agreement or similar instrument that restricts further vegetation removal, site alteration and/or disturbance within the 30 m vegetation buffer and the variable watercourse setback outside of the development envelope as shown on Figure 2 should be required.**

- **No further vegetation or trees outside of the existing development envelope should be removed within the buffer unless they are a safety hazard (assessed by an ISA certified arborist).**

5.2.1 Erosion and Hardened Surfaces

Stormwater runoff from hard surfaces, particularly rooftops, extensive flagstone patios, stairways and walkways, have the potential to impact the water quality and deep-water fish habitat of Baptiste Lake in the long term. To address the potential for erosion and reduced nutrient uptake that results from soil coverage and hardened surfaces RiverStone would provide the following commentary. The potential for erosion can be reduced if concentrated flow from the rooftops is avoided by directing rooftop drainage through downspouts into in-ground infiltration chambers. Infiltration chambers are shallow excavations with perforated pipe cut in half, convex side up, covered with filter fabric and topped with stone to create underground reservoirs. The runoff gradually percolates through the chamber and into the surrounding soil. The chambers reduce the volume of overland runoff, can provide ground water recharge, and are able to remove suspended solids and phosphorus. The flow from infiltration chambers should be directed away from the shoreline setback, toward vegetated portions of the lot to increase nutrient uptake. Eves-trough should not be piped directly to the lake. Regarding the above, RiverStone recommends that:

- **The overland flow that is currently piped into the Baptiste Lake should be corrected**

As part of the impact analysis, the potential to cause harmful alteration, disruption or destruction (HADD) to fish habitat was assessed. Although the land use changes have the potential to have negative impacts on water quality, fish and fish habitat, it is RiverStone's opinion that the reduced

setback with not impact fish and fish habitat. The measures recommended above can mitigate potential negative impacts that were associated with the installation of the deck, so that there is no impact associated with nutrient loading to the deep water Lake Trout habitat.

5.3 Endangered and Threatened Species

Appendix 2 presents our assessment of potential impacts on species and ecological communities of conservation interest. The results of our analysis suggest that Little Brown Myotis (*Myotis lucifugus*), the Tricolored Bat (*Perimyotis subflavus*), and the Northern Myotis Bat (*Myotis septentrionalis*) have the potential to use features found on the property.

5.3.1 Endangered Bats

Potential habitat for three (3) endangered bats, (Little Brown Myotis, and Northern Myotis and Tricolored Bat, hereafter "endangered bats") is located across the subject property in the White Pine – Red Pine forested communities, which contain both coniferous and deciduous species. In the absence of detailed site-specific data, and based on RiverStone's professional experience, forested ecosites throughout the subject property may be expected to support some level of seasonal bat activity, which may include endangered bat species. These communities contain snag trees that could support maternal roosting habitat for each of the endangered bats. As endangered species, individuals cannot legally be killed, harmed, or harassed as per Section 9 of Ontario's *Endangered Species Act* (ESA). RiverStone provides a simple mitigation approach below (*i.e.*, restrictive vegetation clearing windows) to ensure that individual endangered bats are not killed, harmed, or harassed through the development process (should they be present).

Habitat for endangered or special concern bats is prevalent throughout Hastings County. As a predominantly forested area, habitat for maternal roosting bats is not limited across the landscape. The primary reason for these species of bats being listed under the *ESA* is the prevalence of White-nose Syndrome, which is a fungus that infects bats as they hibernate over winter. This fungus grows on their muzzle, ears and wing-membranes, continually waking them from hibernation and causing dehydration, resulting in mortality.

Bats predictably depart maternity roosts for hibernacula sites in the fall of any given year, meaning that timing restrictions will reliably avoid any direct harm to individuals. Tree clearing, site alteration, and the construction of structures are all proposed as part of the development associated with the current application. No further development is proposed at this time so there are not impacts anticipated. Should tree clearing be necessary for access or for maintenance to prevent impacts upon the habitat of endangered bats that may be utilizing the forest communities for maternal roosting habitat on the subject property, RiverStone recommends the following for future development:

- **Trees should only be removed from October 1st to April 1st.**
- **If tree clearing or demolition must occur between April 1 and October 1, a qualified professional should complete a combination of snag surveys and acoustic monitoring, with technical guidance from the MECP, for the area where tree clearing is proposed.**
- **Limit any tree clearing to condensed development envelope, avoid unnecessary tree removals, and retain trees that are in poor health but do not represent a hazard.**

With the implementation of the above-noted mitigation measures, it is RiverStone's opinion that the development plan will not result in adverse impacts to any endangered bat species or the availability of their habitat on the local landscape.

5.4 Deer Wintering Habitat

With no further development or tree removal proposed at this time no adverse effects associated with the severance are anticipated. The recommended mitigation measures limiting additional tree removal should be sufficient to address the potential for any negative impacts to deer wintering habitat.

6 CONFORMANCE WITH APPLICABLE ENVIRONMENTAL POLICIES

The following commentary summarizes the municipal environmental legislation and policies that are relevant to the proposal being evaluated here and describes how the recommendations provided in this report will permit the proposed land-use changes to comply with these provisions.

6.1 Federal Fisheries Act (R.S.C., 1985, amended 2019-08-28)

The *Federal Fisheries Act* states that:

34.4 (1) No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish.

35. (1) No person shall carry on any work, undertaking or activity that results in harmful alteration, disruption or destruction of fish habitat.

DFO further states that "under subsection 35(1) a person may carry on such works, undertakings or activities without contravening this prohibition, provided that they are carried on under the authority of one of the exceptions listed in subsection 35(2), and in accordance with the requirements of the appropriate exception. In most cases, this exception would be Ministerial authorizations granted to proponents in accordance with the *Authorizations Concerning Fish and Fish Habitat Protection Regulations."*

The proposed severance and Zoning Bylaw Amendment to allow for approval of an existing deck with reduced setabacks do not contravene the *Fisheries Act*, and that an Authorization under the Section 35(2) is not required. Should however situations arise and lead to occurrences that result in a HADD, persons responsible for the project have a "duty to notify" DFO, take corrective actions, and provide written reports under Section 38 of the *Act*.

6.2 Federal *Migratory Birds Convention Act, 1994* (MBCA)

Section 6 of the Migratory Birds Regulations under the MBCA makes it an offence to "disturb, destroy or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird."

Restricting future clearing of vegetation to times outside of the period April 1 to August 31, will prevent contravention of Section 6 of the regulations.

6.3 Provincial *Endangered Species Act, 2007* (ESA)

The *Endangered Species Act, 2007* (ESA) came into effect June 30, 2008, and replaced the previous provincial *Endangered Species Act*. The following excerpt from the explanatory note provided with the Act summarizes the protection afforded to species:

> If a species is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species, the Bill prohibits killing, harming, harassing, capturing, taking, possessing, transporting, collecting, buying, selling, leasing, trading or offering to buy, sell, lease or trade a member of the species, or selling, leasing, trading or offering to sell, lease or trade anything that is represented to be a member of the species.

Protection afforded to habitats of species is described as follows:

> If a species is listed on the Species at Risk in Ontario List as an endangered or threatened species, the Bill prohibits damaging or destroying the habitat of the species. This prohibition also applies to an extirpated species if the species is prescribed by the regulations. The regulations may specifically prescribe an area as the habitat of a species but, if no habitat regulation is in force with respect to a species, "habitat" is defined to mean an area on which the species depends, directly or indirectly, to carry on its life processes. With respect to certain species that were classified before first reading of the Bill, the prohibition on damaging or destroying habitat does not apply until the earlier of the date a regulation prescribing the habitat of the species comes into force and the fifth anniversary of the date the requirement to establish the Species at Risk in Ontario List comes into existence.

Appendix 2 lists the species protected under provisions of the ESA that have the potential to occur on the subject property and/or the adjoining lands. As outlined in Section 4.4, the likelihood of contravening the ESA can be reduced to an acceptable level by following RiverStone's recommended mitigation measures.

6.4 Provincial Policy Statement, 2020, pursuant to the *Planning Act*, R.S.O. 1990, c. P.13.

The significant natural features documented on the subject property include potential significant wildlife habitat. Based on this identified feature the following provisions from Section 2.1 of the 2020 PPS are relevant to this assessment:

> **2.1.6** *Development* and *site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial* and *federal requirements*.

As per **Section 3.4.1** fish habitat was identified along the shoreline of the subject property fronting onto Baptiste Lake. Adherence to the recommendations outlined in **Section 5.2** of this report will ensure there are no negative impacts to fish habitat.

> **2.1.7** *Development* and *site alteration* shall not be permitted in habitat of endangered species and threatened species, except in accordance with *provincial and federal requirements*.

The impact assessment provided in **Section 5** provides recommendations to avoid impacts to endangered and threatened species. Adherence to the recommendations outlined therein will ensure

that these activities do not occur in areas that could be considered habitat of endangered or threatened species which is consistent with policy 2.1.7.

> **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 and 2.1.6 unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated that there will be no *negative impacts* on the natural features or on their *ecological functions*.

The extent of the area evaluated for negative impacts on potentially significant natural heritage features as described in in **Section 5** and the associated appendices are more than sufficient to ensure that impacts on adjacent lands were appropriately assessed. Careful evaluation of the ecological function of the lands potentially affected by the permissible development and site alteration on the subject property indicates that the activities will be consistent with policy 2.1.8, as long as the recommended mitigation measures are followed.

6.5 Lake Capacity Handbook (MOE 2010)

The Lake Capacity Handbook outlines the practices and policies that are used to assess Lake Trout Lakes relative to capacity and the sorts of development that is permitted once a lake has reached capacity. The western basin of Baptiste Lake has bene identified as a Lake Trout Lake at Capacity. The proposed Zoning Bylaw Amendment and severance is consistent with the requirements and restrictions for development on lakes at capacity outlined in section 5.2 which states that "new lot creation and other planning approvals should only be allowed to separate existing habitable dwellings, each of which is on a lot that is capable of supporting a Class 4 sewage system provided that land use would not change and there would be no net increase in phosphorous loading to the lake".

6.6 Hastings County Official Plan (August 2018)

The Hastings Official Plan provides recommendations regarding the protection of the natural environment across Hastings County. Many of the recommendations parallel the requirements set out in the ESA and PPS; consequently, the preceding discussion of how a development on the subject property would comply with those requirements similarly applies to policies in the Hastings Official Plan.

Section 4.2.4. of the Official Plan outlines the policies related to fish habitat.

4.2.4.1 Fish habitat provides food, cover and conditions for successful reproduction and support of a species throughout its lifecycle. Lakes, rivers, streams, ponds, shoreline areas and many wetlands provide fish habitat. Intermittent and seasonally flooded areas can also provide important habitat for some fish species at certain times of the year. In addition, in-water structures such as logs, stumps and other woody debris, pools and riffle areas, riparian and aquatic vegetation and ground water recharge/discharge areas also provide habitat. Habitat includes the watercourses that act as corridors that allow fish to move from one area to another.

4.2.4.3 New development and/or site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements. New development and/or site alteration shall not be permitted on adjacent lands within 120 metres of fish habitat unless it has been determined in an approved Environmental Impact Statement (EIS) pursuant to Part A - Section 7.8.6 of this Plan that there will be no negative impacts on the natural features or its ecological functions.

4.2.4.6 The policies of Part A - Section 5.4.5 apply to development and/or site alteration along Waterfront areas and are intended to ensure sensitive development adjacent to fish habitat in the County will not negatively impact on natural features or their ecological functions.

4.2.5 Lakes Managed for Lake Trout

4.2.5.1 The County acknowledges the importance of cold waterbodies in sustaining salmonoid fish species, such as lake trout, and the sensitivity to physical, thermal Hastings County Official Plan – December 2017 Prepared by the Hastings County Planning Department 81 and chemical changes to such waterbodies. Cold waterbodies are less common than other water habitats and are relatively reliant on groundwater discharge/recharge, undisturbed shoreline areas and other naturally occurring dynamics that maintain water quality, base flows and temperatures. Lake Trout have two basic water quality requirements, low water temperatures and high levels of dissolved oxygen. Phosphorus loading that tends to promote growth of plants and algae is the key pollutant that can most jeopardize the two key noted water quality requirements.

4.2.5.2 The County and Member Municipalities shall permit development to take place adjacent to lakes managed for lake trout and their associated streams only in a manner that has no adverse effects on habitat essential to the maintenance of a healthy Lake Trout fishery.

Interpretation: The proposed variance and future severance will separate existing buildings without the need for additional construction and is not anticipated to cause any adverse effects on the Lake Trout fishery. This is consistent with Lake Trout policies in place in both the Lake Capacity Handbook and the Official Plan.

6.7 Municipality of Hastings Highlands Zoning By-law 2014-14 (Consolidated February 2024)

The subject property is currently zoned Limited Service (LSR-72) which requires a 15 m setback from the lake. The current application is for a Zoning Bylaw Amendment and Severance which is required to seek approval for the deck attached to an existing cottage within 30 m of a cold water lake trout lake which has been identified as at capacity for development.

Section 5.9 of the Zoning By-law outlines the requirements for “lands adjacent to waterbodies, watercourses, embankments, floodplains and environmentally sensitive lands”. Section 5.9.2 states that no building, structure, or septic tank installation including the weeping tile field (‘no development’) shall be located: i) within 30 metres (98.4 ft.) of the highwater mark of a waterbody or permanent watercourse.

Interpretation: A new septic is not required. The severance application has been conditionally approved pending a Zoning Bylaw Amendment application to address the location of the cottage 12.1 m from the lake and the attached deck which is 8.1 m from the lake which is less than the 15m required for LSR-72.

7 CONCLUSIONS

Based upon the findings presented in this report and contingent upon the implementation of the recommendations made herein, it is our conclusion that the proposed development application on the

subject property will have a very low likelihood of negatively impacting any significant natural heritage features and functions features protected under relevant municipal, provincial, or federal environmental policies as outlined. RiverStone is of the opinion that the proposed development is consistent with the relevant environmental legislation and policies. We suggest that the recommendations in this report be incorporated into the development and site plan agreement or similar instrument for the subject property.

8 REFERENCES

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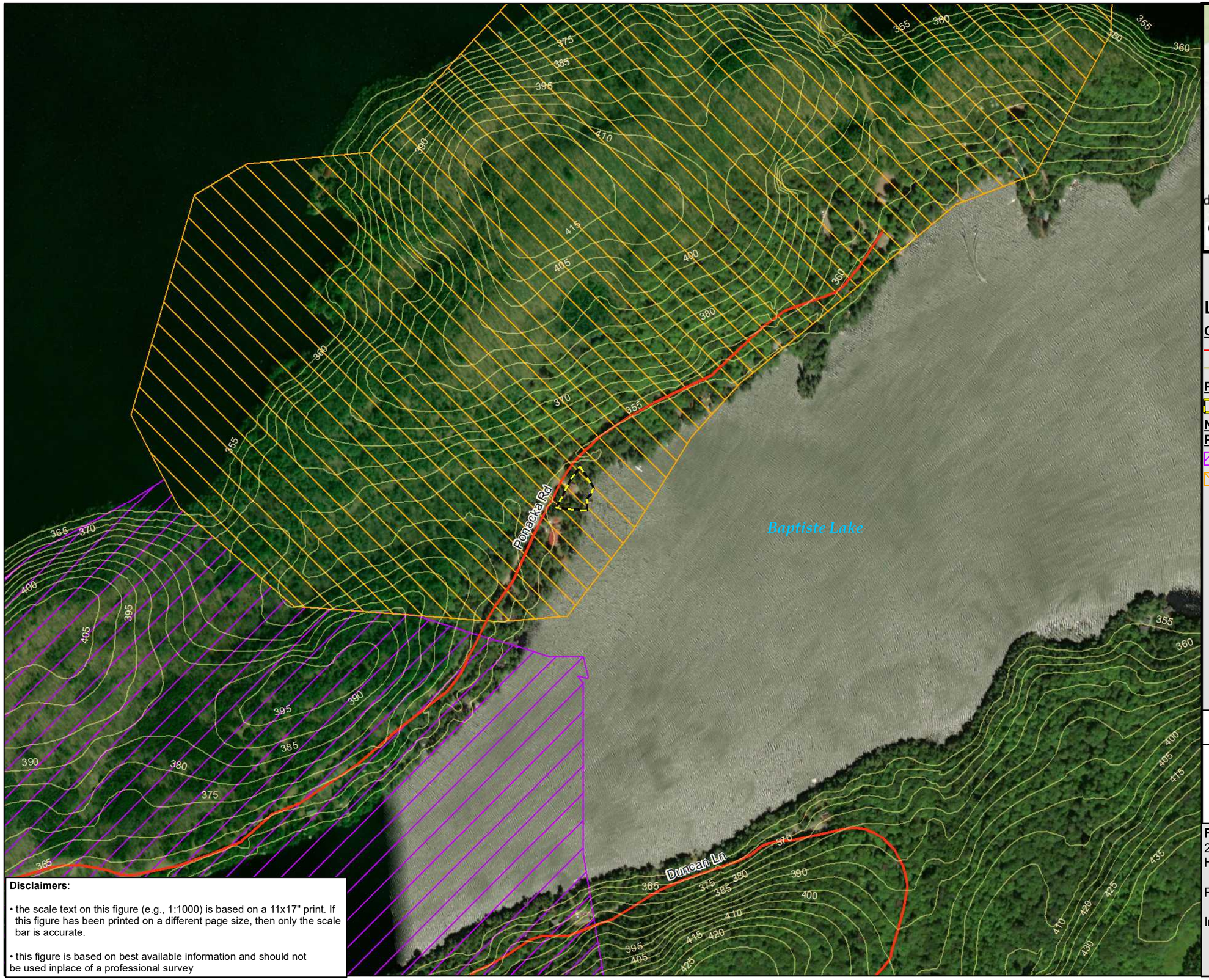

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- this figure is based on best available information and should not be used inplace of a professional survey

Figure 1. Location of Subject Property
264 Ponacka Road, Municipality of Hastings Highlands, Hastings County.

Prepared for: Susan Latremoille

Inset: General Location of Subject Property

Disclaimers:

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Legend

N

Ontario Base Mapping (OBM)

Roads

Planning Boundaries

Subject Property

Features Taken from Existing Survey

Maximum Controlled Water's Edge (Cotour Elev. 351.7 CGVD28)

Natural Heritage Features - Identified by RiverStone

Direction of Overland Flow

Watercourse

Type 2 Fish Habitat

Ecological Communities

G048Tt - Dry to Fresh, Coarse: Red Pine-White Pine Conifer

Development Setbacks Required by Relevant Approval Authorities

30m Vegetation Buffer (Hastings Highlands By-law 5.9.3 iii)

15m Shoreline Setback (Hastings Highlands By-law 27.72)

Measures Recommended by RiverStone to Prevent and/or Reduce Impacts

Variable Width Watercourse Setback

Proposed Development and Site Alteration

Site Plan:
P.A. MILLER SURVEYING
PLAN OF SURVEY SHOWING BUILDING LOCATION
Date Drawn: 14/2/2024,
Project Number:15-8334_rev1

Orthorectified aerial photo - spring 2018

Scale	RS Project No.	Date Last Updated	By
1:300	2024-133	Aug 16, 2024	JG

0 4.5 9 Metres

RiverStone Environmental Solutions Inc.

Figure 2. Existing Development
264 Ponacka Road, Municipality of Hastings Highlands, Hastings County.

Prepared for: Susan Latremoille

Appendix 1. Select Photos from Site Visit

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Photo 1. Existing development on the subject property (June 26, 2024).

Photo 2. Screened area and existing vegetation on the subject property (June 26, 2024).

Photo 3. Deck and surrounding the vegetation on the subject property (June 26, 2024).

Photo 4. Existing shoreline conditons (June 26, 2024).

Photo 5. View of shoreline conditions taken from the dock (June 26, 2024).

Photo 6. Existing shoreline vegetation (June 26, 2024).

Photo 7. Watercourse (June 26, 2024).

Photo 8. Existing tool shed on the subject property (June 26, 2024).

Appendix 2. Assessment of Habitat of Endangered and Threatened Species

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Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
American Ginseng (*Panax quinquefolius*)	END	American Ginseng requires well-drained but moist acidic to neutral soils overlying limestone or marble bedrock. They are obligate understory plants found in undisturbed mature deciduous and mixed forests, and occasionally in coniferous forests and swamps.	YES	NO	NO	NO	Suitable habitat is present on the local and regional landscape; however, the forest community present does not provide the potential to provide habitat. No species were observed during site assessments using a wandering transect. No further assessment undertaken.
Bank Swallow (*Riparia riparia*)	THR	The Bank Swallow is a small aerial insectivore bird that nests colonially in burrows they excavate within banks. Colonies will nest in bluffs, riverbanks, aggregate pits, roadside embankments, and topsoil piles near open habitat that provides a steady source of insects. Colony sites must also be near roosting areas in wetland, reed, or cane beds.	YES	YES, OBBA	NO	NO	The OBBA contains a possible breeding record for the associated 10km2 data square. No local records are present in NHIC or iNaturalist. No suitable habitat was observed on the subject property. No further assessment undertaken.
Black Ash (*Fraxinus nigra*)	END	The Black Ash grows everywhere in Ontario except the Far North. These trees require moisture, and are commonly found in northern swampy woodlands, from eastern Manitoba, throughout Ontario, and as far east as Newfoundland.	YES	YES	YES	YES	Suitable habitat is present on the local and regional landscape and this species was observed during site investigations. This species was observed within the drainage ditch along the roadway and on adjacent lands where a hardwood swamps communities was observed. Further assessment provided in report.
Blanding's Turtle (*Emydoidea blandingii*)	THR	Blanding's Turtle are semi-aquatic and use wetland habitats with shallow water and abundant vegetation. Their habitat includes a broad range of wetlands, forest clearings, and meadows. They breed in aquatic habitat and nest in open natural and anthropogenic upland areas.	YES	YES, Herp Atlas	NO	POSSIBLE	The Herp Atlas contains records of Blanding's Turtle within the 10 km2 data square; however, suitable wetland habitat with appropriate water depths and water plants was not present to support this species. No further assessment provided.
Bobolink (*Dolichonyx oryzivorus*)	THR	Nests and forages in meadows, grasslands, hayfields, and pastureland. Fields must have 25% or less woody plant cover. They typically require large fields (>4ha) and avoid small, fragmented habitats. They also avoid habitat within 75 m of a forest edge.	YES	YES, OBBA	NO	NO	The OBBA contains a possible breeding record for the associated 10 km2 data square and suitable habitat may be present on the local and regional landscape. No local records are present in NHIC or iNaturalist and the subject property does not contain hayfield or pastureland that would provide suitable breeding habitat. No further assessment provided.
Butternut (*Juglans cinerea*)	END	Butternut is shade intolerant and grows in rich, moist, well-drained loams often along streambanks. Butternut is also found in well-drained gravel sites. It is often found at forest edges where it can access abundant sunlight.	YES	NO	NO	POSSIBLE	While suitable habitat may be present where soil depths are deeper, this species was not observed during the site investigation. No further development is proposed for the property and adjacent lands will not be impacted. No further assessment provided.
Cerulean Warbler (*Setophaga cerulea*)	THR	Found in two small breeding clusters in the Carolinian Forest and the Frontenac Axis. They breed in hilly, mature deciduous forests with a preference for oak and/or maple dominated forests with swampy bottomlands. They are area and edge-sensitive and require large continuous tracts of forest.	YES	YES, OBBA	NO	NO	The OBBA contain a possible breeding record for the associated species with their 10km2 data square and suitable habitat may be present on the local and regional landscape. While deciduous species are present on the subject property, the property does not contain the large continuous tract of forest habitat required to support Cerulean Warbler.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Chimney Swift (*Chaetura pelagica*)	THR	The Chimney Swift historically nested and roosted in large hollow trees, rock walls, and other vertical surfaces. They now use human-made structures like uncapped chimneys and have high site fidelity to nesting chimneys. 95% of nests are within 1 km of a waterbody.	YES	YES, OBBA	NO	NO	The OBBA contains a possible breeding record for the associated 10km2 data square and suitable habitat may be present on the local and regional landscape. No local records are present in NHIC or iNaturalist and the subject property does not contain vertical structures or surfaces that would provide suitable habitat. No further assessment provided.
Eastern Hog-nosed Snake (*Heterodon platirhinos*)	THR	Eastern Hog-nosed snakes require a mosaic of habitats with sandy, well-drained soil and open vegetation close to water with a supply of American Toads. Their Ontario distribution is limited by climate and soil to the French River/Lake Nipissing and Carolinian areas.	YES	NO	NO	POSSIBLE	Suitable habitat is present on the local and regional landscape; however, the forest community present does not provide the potential to provide habitat. No species were observed during site assessments. No further assessment undertaken.
Eastern Meadowlark (*Sturnella magna*)	THR	Nests and forages in meadows, grasslands, shrubby fields, hayfields and pastureland. Prefers habitat with >80% grass cover. Needs a minimum of 5 ha of continuous habitat.	YES	YES, OBBA	NO	NO	While there may be potential habitat for this species on the regional landscape. No local records are present in the OBBA, NHIC or iNaturalist databases and the subject property or adjacent lands do not contain meadows or grasslands that would provide suitable breeding habitat. No further assessment provided.
Eastern Prairie White-fringed Orchid (*Platanthera leucophaea*)	END	The Eastern Prairie Fringed Orchid grows in open fens and wet prairies within southern Ontario. They require high sun exposure as well as high moisture. Populations are sparse, with most locations well documented.	YES	NO	NO	NO	Suitable habitat is present on the local and regional landscape; however, the forest community present does not provide the potential to provide habitat. No species were observed during site assessments. No further assessment undertaken.
Eastern Small-footed Myotis (*Myotis leibii*)	END	Eastern Small-footed Myotis overwinter in caves and mines in Ontario and do not disperse far from their hibernacula during the summer. They can be found roosting in rocky habitats singly or in groups but will also use human structures as day roosts. They are aerial insectivores and forage in forests, rocky habitats, and ponds.	YES	YES	NO	NO	The assessment area and adjacent lands lack rocky habitat with table rocks or talus and anthropogenic structures that would support this species. This species is not anticipated to use the subject property or adjacent lands. No further assessemnt provided.
Eastern Whip-poor-will (*Antrostomus vociferus*)	THR	The Eastern Whip-poor-will forages in open natural and anthropogenic habitats and nests in semi open forests and forest edges with well-drained soils and moderate vegetation cover. Habitat immediately at the nest will be a short herbaceous plant, shrub, or sapling providing cover and shade with nearby perches for adults.	YES	YES, OBBA	NO	POSSIBLE	The OBBA contains a possible breeding record for the associated species with their 10km2 data square and suitable habitat may be present on the local and regional landscape. The assessment area does not contains rock barren habitat. This species is not anticipated to use the assessment area. No further assessemnt provided.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Lake Sturgeon (*Acipenser fulvescens*)	END/THR	Lake Sturgeon need large continuous habitats in river and lake systems to provide for spawning, larval, juvenile, sub-adult, and adult habitat. Spawning takes place in shallow fast flowing headwaters where a natural or man-made barrier occurs. Spawning substrates are gravel, rock, hardpan, or sand. Larval and juvenile fish use clayey substrate habitats and older fish inhabit deep pools.	YES	NO	NO	NO	The subject property does not contain river or lake habitat suitable for Lake Sturgeon.
Least Bittern (*Ixobrychus exilis*)	THR	Breeds in large marshes within Southern Ontario. Creates nest platforms from tall, dense emergent vegetation within 10m of water and prefers Typha spp. Will use other emergent vegetation. Needs 200 ha of wetland for nesting and foraging but does not need to be continuous wetland. Prefers complexes of smaller wetlands. Will avoid marshes surrounded by >30% forest cover or containing large trees.	YES	YES, OBBA	NO	NO	The OBBA contains a possible breeding record for the associated 10km2 data square and suitable habitat may be present on the local and regional landscape. No local records are present in NHIC or iNaturalist and the subject property does not contain wetland habitat with emergent vegetation that would be suitable for this species. No further assessment provided.
Lesser Yellowlegs (*Tringa flavipes*)	THR	Lesser Yellowlegs migrate through southern Ontario, stopping in wetlands, flooded fields, river and lake shorelines, and sewage lagoons. They prefer marshes dominated by Softstem Bulrush and Smooth Cordgrass. During migration they form flocks ranging from a few dozen to several thousand birds. They may form mixed flocks with Greater Yellowlegs and Solitary Sandpiper.	YES	NO	NO	NO	There are no OBBA, NHIC, or iNaturalist database records for this species within the respective data squares and the subject property does not contain wetland communities dominated by softstem bulrush and smooth cordgrass that would be suitable habitat for this species. No further assessment provided.
Little Brown Myotis (*Myotis lucifugus*)	END	Their hibernacula are within caves and abandoned mines, wells, and tunnels. Maternity colonies are within a few kilometers of hibernacula within snag trees, rock crevices, exfoliating tree bark, and anthropogenic structures. Roosts and swarming sites are in similar areas around the hibernacula.	YES	YES	YES	YES	The assessment area contains wooded habitat containing trees appropriate for roosting by this species. While no development is currently proposed for the subject property, future development in the assessment area is anticipated to require remove of potential habitat. Further assessment provided in report.
Loggerhead Shrike (*Lanius ludovicianus*)	END	The Loggerhead Shrike forages in open grasslands and edge habitats. They require scattered trees and bushes in their habitat for perches and nest sites, and vegetation with large thorns or barbed wire to impale prey. Breeding habitat is exceedingly rare in Ontario, and most extant habitat is well documented.	YES	YES, OBBA	NO	NO	The OBBA contains a possible breeding record for the associated 10km2 data square and suitable habitat may be present on the local and regional landscape. No local records are present in NHIC or iNaturalist and the subject property does not contain grassland or edge habitat that would be suitable for this species. No further assessment provided.
Northern Myotis/Northern Long-eared Bat (*Myotis septentrionalis*)	END	Northern Myotis are found below the tree line in Canada and are mostly absent from the prairies. They use live and dead trees near water in forest habitats when active and migrate to caves and abandoned mines for hibernation.	YES	YES	YES	YES	The assessment area contains wooded habitat containing trees appropriate for roosting by this species. While no development is currently proposed for the subject property, future development in the assessment area is anticipated to require remove of potential habitat. Further assessment provided in report.
Ogden's Pondweed (*Potamogeton ogdenii*)	END	Ogden's Pondweed is an annual, submerged aquatic plant with threadlike rigid stems and no rhizome. They are found only in Hastings County in Ontario. They grow in clear, slow moving water within streams, beaver ponds, and lakes. They prefer alkaline water.	YES	NO	NO	NO	The subject property is located within the range for this species; however, no NHIC or iNaturalist database records for this species within the respective data squares were noted. Additionally, the property is primarily forested upland habitat fronted by shoreline lake habitat that would not be suitable habitat for this species. No further assessment provided.

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Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Red-Headed Woodpecker (*Melanerpes erythrocephalus*)	END	The Red-headed Woodpecker lives in open woodland and woodland edges and is often found in parks, golf courses and cemeteries. These areas typically have many dead trees, that the bird uses for nesting and perching. The Red-headed Woodpecker is found across southern Ontario, where it is widespread but rare.	YES	YES, OBBA	NO	NO	Records of occurrence for this species are within the 10km2 OBBA data square and this species can be found in many generic locations, the assessment area does not support any open areas with large numbers of dead-standing trees that would represent ideal habitat. In general, there is no expectation that the assessment area is supporting functional habitat for this species. No further assessment provided.
Short-eared Owl	THR	The Short-eared Owl breeds in northern Ontario and is found year-round in southern Ontario. They use open habitats (tundra, grassland, pasture) to nest on the ground and overwinter in open areas with nearby roosting trees. They shelter from inclement weather in conifers and emergent wetland vegetation.	YES	NO	NO	NO	There are no OBBA, NHIC, or iNaturalist database records for this species within the respective data squares and the subject property does not contain open habitats (tundra, grassland, pasture) that would be suitable for this species. No further assessment provided.
Shortnose Cisco (*Coregonus reighardi*)	END	The Shortnose Cisco is found in Lakes Ontario, Huron, and Michigan. Very little is known about their habitat requirements, but they are found at 22 to 92 m and spawn at depth in the spring. They feed on freshwater crustaceans in clear, cold water.	YES	NO	NO	NO	The subject property is not located within one of the Great Lakes where Shortnose Cisco has been found.
Small White Lady's-slipper (*Cypripedium candidum*)	END	Small White Lady's-slipper is found in Hastings County and on Walpole Island First Nation. They grow on moist, imperfectly drained, calcareous sandy loam to loam soils in remnant prairie or savannah, or in fens. They require periodic fire or grazing disturbance.	YES	NO	NO	POSSIBLE	There are no NHIC, or iNaturalist database records for this species within the respective data squares for the property. The subject property contains forested terrestrial habitat along the shoreline of Baptiste Lake which does not include calcareous sandy loam soil suitable for this species. No further assessment provided.
Spotted Turtle (*Clemmys guttata*)	END	The Spotted Turtle uses a mix of terrestrial and aquatic habitats. Aquatic habitats include wetlands, ponds, vernal pools, creeks, streams, sheltered bay edges, stormwater ponds, and man-made channels. Their terrestrial habitats are shorelines, rocky outcrops, upland forests, open fields, and meadows.	YES	NO	NO	NO	There are no NHIC, Herp Atlas, or iNaturalist database records for this species within the respective data squares for the property. The subject property contains a mix of terrestrial and aquatic habitats including shoreline; however, the combination of suitable aquatic and terrestrial habitat was absent and the range for this species is typcially found around Georgian Bay and isolated spots in southern Ontario.
Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*)	END	Suckley's Cuckoo Bumble Bee is a nest parasite of the Western Bumble Bee and Yellow-banded Bumble Bee. It is mainly a western species but has occasional records throughout Ontario. They are habitat generalists found in most areas Ontario, and generalist nectar foragers. The bees they parasitize tend to build nests in abandoned rodent burrows.	YES	NO	POSSIBLE	POSSIBLE	Burrowing rodents and host Bumble Bee species may potentially be present on the subject property or adjacent lands. Further discussion is provided in the report.
Tricolored Bat (*Perimyotis subflavus*)	END	The Tri-colored Bat have a scattered distribution and are found as far north as Sudbury. They are found in a variety of forested habitats They overwinter alone in caves and mines and roost in dead vegetation clumps and lichen in forested habitats near water.	YES	YES	YES	YES	The assessment area contains wooded habitat containing trees appropriate for roosting by this species. While no development is currently proposed for the subject property, future development in the assessment area is anticipated to require remove of potential habitat. Further assessment provided in report.

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Appendix 3. Site Plan

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

PLAN OF SURVEY SHOWING BUILDING LOCATION ON PART OF LOT 12 REGISTRAR'S COMPILED PLAN 2272 AND PART OF THE SHORE ROAD ALLOWANCE AROUND BAPTISTE LAKE AKA LONG LAKE LYING IN FRONT OF LOT 30, CONCESSION 5 (CLOSED BY QR578343) GEOGRAPHIC TOWNSHIP OF HERSCHEL

MUNICIPALITY OF HASTINGS HIGHLANDS

COUNTY OF HASTINGS
SCALE 1 : 250
KEVIN R.D. SMITH, O. L. S.

5 0 5 10 15m

METRIC DISTANCES AND COORDINATES ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B, BY STATIC G.P.S. OBSERVATIONS, SHOWN HEREON, BEARING OF N26°21'40"E, REFERRED TO THE CENTRAL MERIDIAN OF UTM ZONE 18 (75° WEST LONGITUDE) NAD 83 (CSRS) (2010). G.P.S. BASELINE POST PROCESSED FROM LEICA REFERENCE STATION – MADOC.

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 1.00027.

BUILDING TIES ARE TAKEN TO FACE OF FRAME SIDING

BUILDING TIES ARE PERPENDICULAR TO PROPERTY LINES, UNLESS OTHERWISE NOTED

PROPERTY LINES ARE UNFENCED, UNLESS OTHERWISE NOTED.

FENCES ARE LOCATED ON PROPERTY LINES, UNLESS OTHERWISE NOTED.

TIES SHOWN TO THE MAXIMUM CONTROLLED WATER'S EDGE OF BAPTISTE LAKE ARE AT RIGHT ANGLES TO THE TRAVERSE LINE, UNLESS OTHERWISE NOTED.

THE WATER LEVEL OF BAPTISTE LAKE IS CONTROLLED TO CONTOUR ELEVATION OF 351.7 CGVD28 BY A DAM AT ITS' OUTLET. THE MINISTRY OF NATURAL RESOURCES HAVE ESTABLISHED THE ELEVATION OF THE ORIGINAL WATER'S EDGE AS BEING 349.0 CGVD28. ELEVATIONS ARE DERIVED FROM AN M.N.R. BENCHMARK ON THE DAM AT THE OUTLET OF BAPTISTE LAKE HAVING AN ELEVATION OF 353.25 CGVD28.

LEGEND

SYMBOL	:	DENOTES
□		SURVEY MONUMENT PLANTED
■		SURVEY MONUMENT FOUND
SSIB		SHORT STANDARD IRON BAR 25mm x 25mm x 60cm
SIB		STANDARD IRON BAR 25mm x 25mm x 120cm
IB		IRON BAR 15mm x 15mm x 60cm
RPL		ROCK PLUG 15mm x 15mm x 15cm
Wit.		WITNESS
INST. NO.		INSTRUMENT NUMBER
MEAS.		MEASURED
R.C.P.		REGISTRAR'S COMPILED PLAN
CGVD28		CANADIAN GEODETIC VERTICAL DATUM 1928

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THIS SURVEY WAS COMPLETED ON THE 20th DAY OF JANUARY, 2015.

DATE : FEBRUARY 15, 2024

KEVIN R.D. SMITH
ONTARIO LAND SURVEYOR

P. A. MILLER SURVEYING LTD.
ONTARIO LAND SURVEYOR
P. O. BOX 520
STIRLING
(613) 395-3070

15-8334_rev1

OBSERVED REFERENCE POINTS (ORPs) DERIVED FROM GPS OBSERVATIONS USING THE PRECISE POINT POSITIONING (PPP) SERVICE, UTM ZONE 17, NAD83 (CSRS) (1997.0). COORDINATES TO RURAL ACCURACY PER SEC. 14 (2) OF O.REG. 216/10

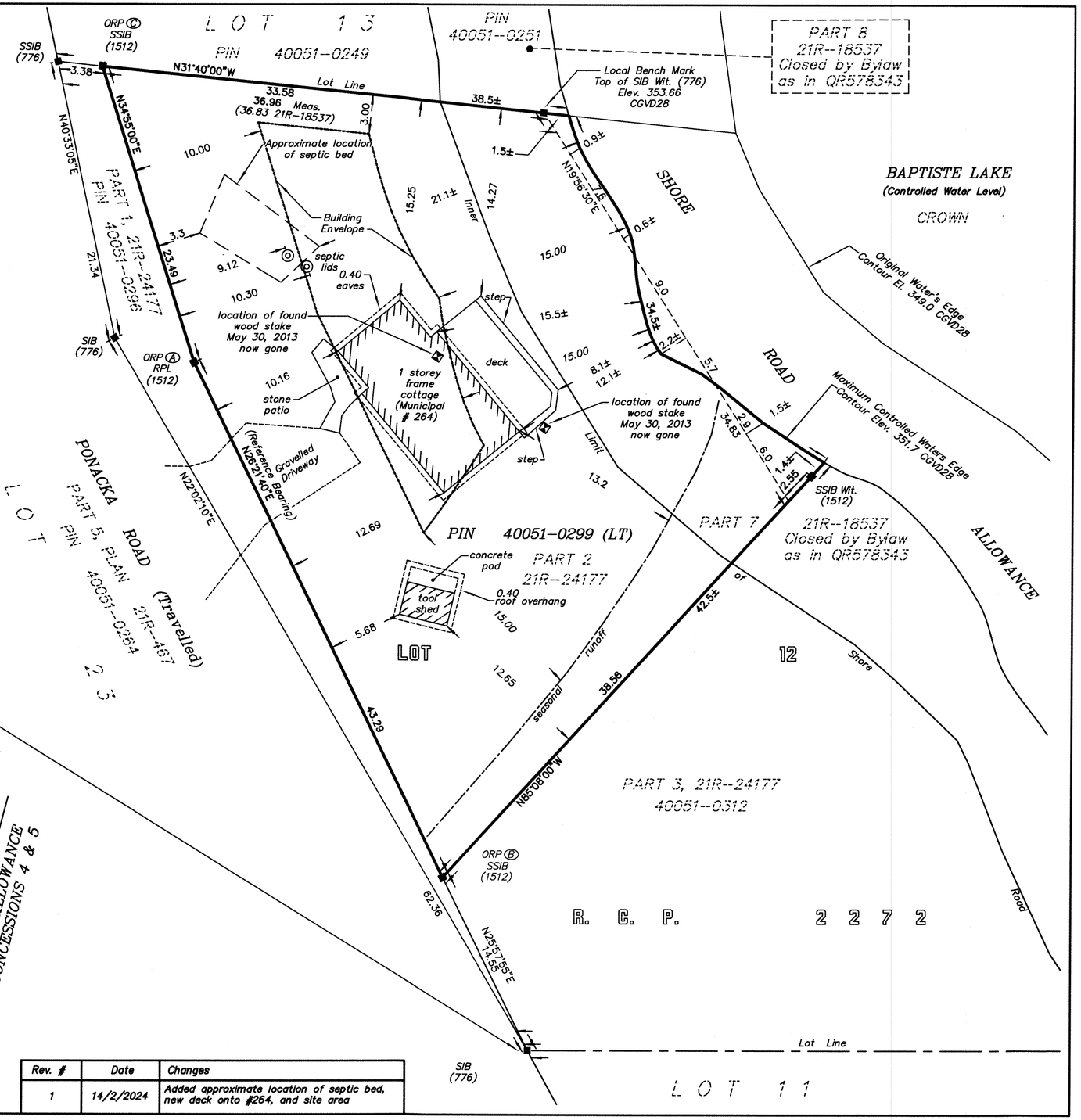
POINT ID	NORTHING	EASTING
ORP A	4998211.05	733510.63
ORP B	4998172.26	733491.42
ORP C	4998230.32	733524.09

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

OVERALL SITE AREA = 0.172 Ha. (0.43 Ac.) +/-

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-73298

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
In accordance with Regulation 1026, Section 29(3).



Rev. #	Date	Changes
1	14/2/2024	Added approximate location of septic bed, new deck onto #264, and site area

RIVERSTONE

ENVIRONMENTAL SOLUTIONS INC.