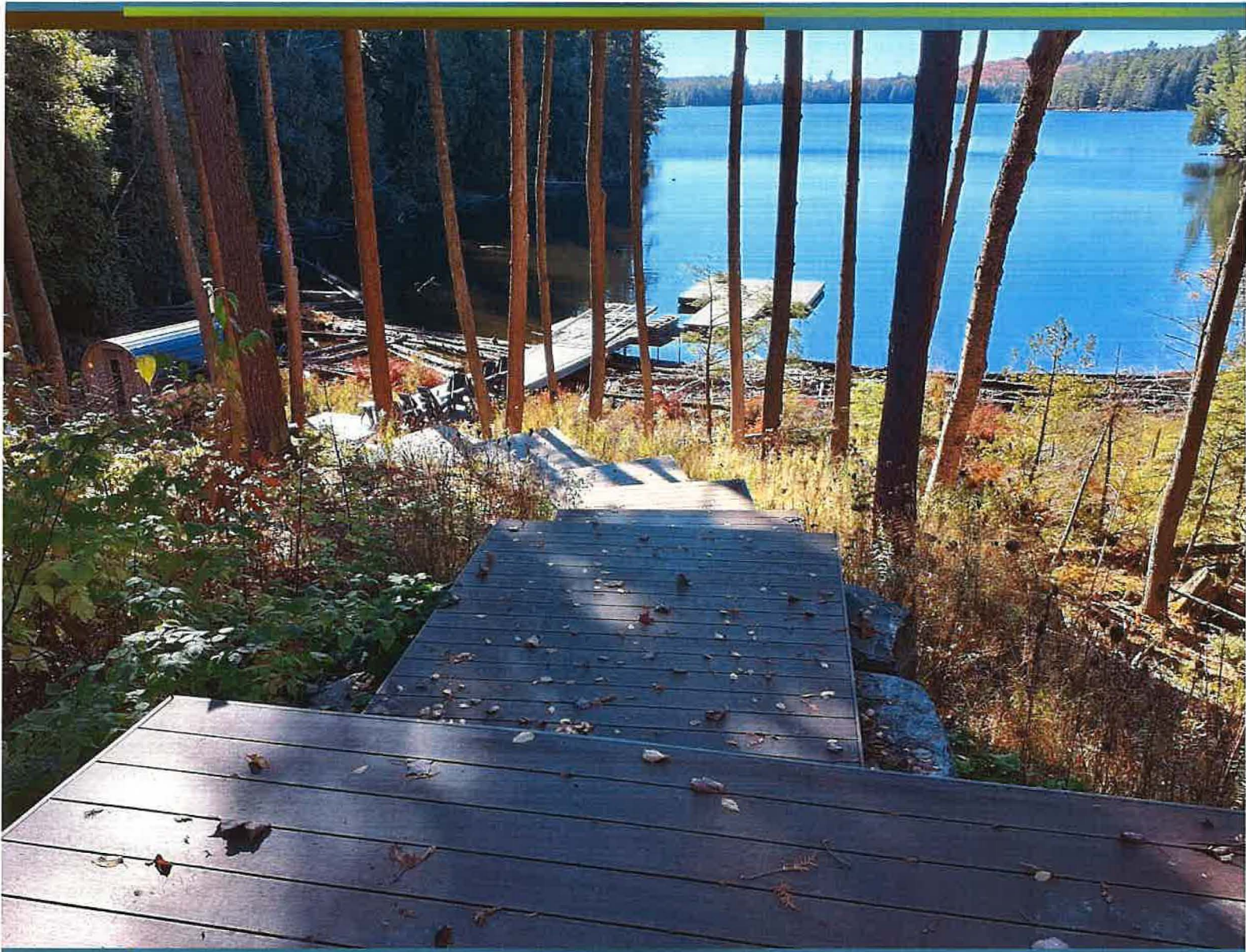




ENVIRONMENTAL IMPACT STUDY

2417 West Shore Road
Municipality of Dysart et al.
March 2026



RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.



RIVERSTONE

ENVIRONMENTAL SOLUTIONS INC.

March 18, 2026

RS# 2025-219

Yann Robard
c/o Paul Barber
Infinity Fine Homes

Via e-mail: pbarber@infinityfinehomes.com

**SUBJECT: Environmental Impact Study - 2417 West Shore Road,
Municipality of Dysart et al., County of Haliburton**

Paul,

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.

Al Shaw, M.Sc.
Principal / Senior Ecologist

REPORT SUMMARY

Type of Study Environmental Impact Study		Date March 18, 2026
Project Manager Al Shaw	Legal Description 2417 West Shore Road, Part Lot 1 Concession 13, Geographic Township of Guilford, Municipality of Dysart et al.	Development Additional development on existing lot of record
	Approval Authorities Municipality of Dysart et al.	Owner/Agent Yann Robard / Paul Barber, Infinity Fine Homes
<u>Report Summary</u> This Environmental Impact Study has been prepared to assess natural heritage features and potential impacts resulting from construction of an addition to an existing dwelling on a property located at Part Lot 1 Concession 13 Guilford in the Municipality of Dysart et al. The client is required to submit an EIS as part of a development application. During the onsite review of existing conditions, it was determined that the subject property contained: 1) Fish habitat; 2) Wetlands; and, 3) Potential Habitat of Endangered and Threatened species. Potential impacts of the application on the identified natural features and species of conservation interest were evaluated. The recommendations contained within Section 5 of this report (reiterated below) are intended to mitigate potential negative impacts on the identified features and species. Provided that mitigation measures are implemented appropriately; it is our opinion that the development can be accomplished without negative impacts to the natural heritage features and the associated ecological functions.		

RECOMMENDATIONS

- All development will be set back 30 m from the lake shoreline.
- Vegetation within shoreline and wetland setbacks is to be maintained in a natural state with no thinning or maintenance of trees, shrub or groundcover vegetation unless trees are deemed to be a hazard. Prior to hazard tree removal, trees are to be assessed by a certified arborist, a written assessment provided with dead wooding and maintenance considered prior to removal.
- Should development be contemplated adjacent to the setback, the edge of the setback will be delineated and marked with sediment fencing in the field prior to adjacent development, should development be proposed within 50 m.

- **Debris from site clearing or materials to be used in construction will not be placed within the 30 m setback.**
- **Sediment and erosion control measures, as described below, be implemented for development on the subject property:**
 - **When the native soil is exposed, sediment and erosion control work, in the form of heavy-duty sediment fencing (using solid posts and trenched in), be positioned along the downgradient edge of any construction envelopes adjacent to water bodies, wetlands, or watercourses.**
 - **Temporary storage locations of aggregate materials used in construction will be located outside the setback to any open water feature, wetland or watercourse as identified on Figure 3 and contained by heavy-duty sediment fencing.**
 - **Storage of any construction material or debris will be located outside the prescribed setback of the lake shoreline and wetlands.**
 - **Additional sediment fencing and appropriate control measures (e.g., straw bales) be stockpiled on site so that any breach can be immediately repaired and allow the installation of check dams where necessary.**
 - **Regular inspection and monitoring will be necessary to ensure that the structural integrity and continued functioning of the sediment control measures is maintained (i.e., proper installation is not the only action necessary to satisfy the mitigation requirements).**
 - **Sediment control measures be maintained in good working order until vegetation has been established on the exposed soils.**
 - **All machinery is to arrive on site in clean condition and be checked and maintained free of fluid leaks.**
 - **Machinery must be refueled, washed, and serviced within the area isolated by sediment fencing.**
 - **Locate all fuel and other potentially deleterious substances within the area isolated by sediment fencing, a minimum of 20 m from any open water feature, wetland or watercourse.**
 - **Best Management practices are to be utilized with all machinery and fill being imported to the subject property to ensure that material and tracks are free from invasive species (*Phragmites australis*, etc.).**
- **Fisheries and Oceans Canada (DFO) mitigation measures to minimize harm to fish and fish habitat (<https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html>) should be reviewed and applied to the construction. It should be noted that all measures are not suitable for all projects.**

- **DFO should be notified immediately if a situation occurs or if there is imminent danger of an occurrence that could cause harmful alteration disruption or destruction of fish habitat. If there is an occurrence, corrective measures must be implemented.**
- **All development and site alteration must be setback a minimum of 30 m from the wetlands as shown on Figure 3.**
- **Vegetation within 30 m of the lake shoreline and wetlands is to be left in a natural state and not manicured.**
- **Trees will not be cut within the setback unless they are a safety hazard, and debris from clearing or materials to be used in construction will not be placed within the setback.**
- **Tree removals required to accommodate development take place outside of the season in which Endangered bats may be active, i.e., April 1 – September 30.**
- **If tree clearing must occur within the above-noted timing window, additional studies can need to be completed to confirm the presence or absence of SAR bats. These studies can include snag tree surveys and acoustic monitoring of the area where trees will be removed, by a qualified professional. If SAR bats may be impacted by the development proposal, the MECP should be contacted to determine if a permit would be required to proceed.**

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1 **BACKGROUND**

RiverStone Environmental Solutions Inc. (hereafter “RiverStone”) was retained by Yann Robard (hereafter “Client”) through Infinity Fine Homes (Paul Barber) to prepare an Environmental Impact Study (EIS) for the property located at 2417 West Shore Road and legally described as Part Lot 1 Concession 13 Guilford, Municipality of Dysart et al., County of Haliburton (hereafter subject property,) **Figure 1**). The subject property is approximately 55 ha (135.9 ac) in area and has approximately 175 m of frontage on Cat Lake. The lot currently contains a dwelling and accessory structures, dock, and a partially overgrown cleared area south of the dwelling and adjacent to West Shore Road, away from the developed area. Existing access is via a driveway from West Shore Road. This report is based on the information provided by the client to our office through email, our knowledge of the EIS requirements for the Municipality, background data and our site assessments completed on the property.

It is our understanding this EIS is required as part of a building application to construct the new garage with accommodations, and extend the current dwelling. This will also require expansion of the existing septic system to support the additional development. The subject property is primarily forested and mostly undeveloped, with the exception of the area surrounding the dwelling. The property is zoned Rural (RU1-6) and Environmental Protection (EP). The Zoning Bylaw notes several exceptions for the RU1-6 zone, including a minimum setback distance of 120 m for all uses from an EP Zone. In this case, the existing development and proposed are both within 120 m of a wetland feature adjacent to the road.

For reference, **Appendix 1** provides the various schedules/maps displaying identified designations/zoning within the Municipality of Dysart et al. and the County of Haliburton.

The purpose of this EIS is to delineate and characterize the current extent of natural heritage features and potential significant ecological functions on the subject property. We consider the background and site data collected and assessed the potential for the proposed severance to result in negative impacts to natural heritage features, as defined in the Provincial Planning Statement (2024). Based on the results of this assessment, we identify recommendations and/or requirements for avoidance, mitigation, offsetting, and/or additional authorizations as relevant to meet the intent of applicable planning policies and environmental legislation and/or regulations. Considering the scope outlined above, RiverStone submits this report in fulfillment of the requirements of an EIS under the Municipality’s Official Plan (Office Consolidation 2024).

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 (generally the subject property and the surrounding area extending 120 m).
2. Assemble and review background biophysical information for the subject property and adjacent lands, to become familiar with any identified natural heritage features (NHF) 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 NHFs, 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 which NHFs would be considered significant natural heritage features (SNHFs), the potential for negative impacts associated with implementation of the proposed development and provide recommendations on how identified negative impacts can be mitigated via avoidance, minimization, and/or compensation measures (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 primary focus of this assessment is the subject property (**Figure 1**). The study area also incorporates a 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 Planning Statement (PPS), as well as the County of Haliburton Official Plan. The study area also includes consideration for adjacent privately-owned lands; however, assessment of such areas is informal and limited to a desktop review.

Natural heritage features on adjacent lands were delineated/classified based on provincial and municipal mapping, current and historic aerial photography, and/or assessment from the subject property boundary or public lands.

2.2 Information Sources Used to Assess Site Conditions

Background biophysical information pertaining to the subject property and adjacent lands (i.e., lands up to 500 m around the subject property, or other as relevant) was collected from a variety of sources. These include:

- **Official Plan Municipality of Dysart et al.** (Office Consolidation April 2024) for natural features mapping including:
 - Municipality of Dysart et al. Schedule “A” Map 3
 - Municipality of Dysart et al. Schedule “B” – Natural Heritage Features and Areas
- **Municipality of Dysart et al. Interactive Zoning Map** for applicable zoning and environmental protection areas mapping
- **Ministry of Natural Resources and Forestry (MNR) 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 (data squares: 17PL8204, 17PL8205, 17PL8206, 17PL8304, 17PL8305 and 17PL8306) accessed December 16, 2025, at: https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html?viewer=Natural_Heritage.Natural_Heritage&locale=en-CA
- **Ontario Reptile and Amphibian Atlas, Ontario Nature** database regarding records of reptiles and amphibians that have been observed within the vicinity of the subject property (squares: 17PL80, accessed December 16, 2025, at: <https://www.ontarioinsects.org/herp/>)

- **Ontario Butterfly Atlas, Toronto Entomologists' Association** database regarding records of butterflies that have been observed within the vicinity of the subject property (squares: 17PL80, accessed December 16, 2025, at: <https://www.ontarioinsects.org/atlas/>)
- **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 subject property between 2001-2005 (squares: 17TPL80, at: <https://www.birdscanada.org/birdmon/onatlas/findsquare.jsp>)
- **iNaturalist Mapping and Online Database** regarding citizen scientist observations documented in the vicinity of the subject lands accessed December 16, 2025, at: <https://inaturalist.ca/projects/nhic-rare-species-of-ontario>
- **Species at Risk Ontario List** as provided by the Ministry of the Environment, Conservation and Parks: <https://www.ontario.ca/page/species-risk-ontario> (accessed December 2025)
- **Atlas of the Mammals of Ontario** (Dobbyn 1994) regarding mammals recorded near the subject property.
- **Fisheries and Oceans Canada Aquatic Species at Risk Map**: <https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html>
- **Ontario Fish ON-Line** database regarding fish species assemblages in Ontario lakes: <https://www.lioapplications.lrc.gov.on.ca/fishonline/Index.html?viewer=FishONLine.FishONLine&locale=en-CA>
- **On-site investigations** by RiverStone staff (see **Section 2.3**)

2.3 Site Investigation

2.3.1 General Approach

The results of background information gathering outlined above in **Section 2.2** helped direct on-site data collection activities associated with a site investigation carried out on October 27, 2025, by A. Shaw (Senior Ecologist/Principal). Data collection was focused on identifying natural features that exist on the property (woodlands, wildlife habitat) as well as site physical features (topography, slope). 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.

Evidence for the presence of a species or use of an area was determined from visual and/or auditory observation (e.g., song, call) and observation of nests, tracks, burrows, browse, skins, and scats. General vegetation mapping was completed to provide information regarding the likelihood that plant species of conservation interest may be present (for example, most rare plants have strong affinities for specific ecological communities).

Natural features of interest (e.g., SAR habitat, vegetation community boundaries) were delineated in the field with a tablet with highly accurate built in GPS. Features of interest were photographed, and all information collected was catalogued for future reference. Photographs representative of onsite conditions are provided in **Appendix 2**.

2.3.1.1 Habitat-based Approach

RiverStone's primary approach to site assessment is habitat-based. We first focus on evaluating the potential for significant 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 as indicators of its potential to function as habitat for a species include structural characteristics (e.g., physical dimensions of rock fragments or trees, water depth), ecological community (e.g., meadow marsh, rock barren, coldwater stream), and structural connectivity to other habitat features required by the 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. (2007b), published and unpublished documents, and direct experience.

2.3.2 Terrain, Drainage, and Soils

Geology is a significant factor in the formation of soil, the physical characteristics of a watershed, and ultimately surface water quality. The bedrock and overlying soil deposits influence surface runoff and infiltration, directly influencing the nutrient balance of receiving water bodies. Knowledge of the existing terrain in a study area is important in understanding how a property and its associated natural environment will respond to development pressures. The geophysical setting of the property was reviewed using OBMs, soils mapping, and aerial photography, and subsequently verified on-site visually.

2.3.3 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 Planning 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 Dysart et al.) that were reviewed as potentially being present on the subject property include the following:

- Fish Habitat
- Watercourses
- Wetlands (including significant wetlands and coastal wetlands)
- 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:

- *Municipality of Dysart et al. Official Plan (2023)*
- *Natural Heritage Reference Manual (NHRM) for the Natural Heritage Policies of the Provincial Policy Statement (MNRF 2010)*

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 2.2** and the habitat-based and targeted approach outlined in **Section 2.3.1.1**.

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.

Plant nomenclature is generally consistent with the Southern Ontario Vascular Plant Species List compiled by D. Bradley of the NHIC (revised edition 2010); based on the Ontario Plant List by Newmaster *et al.* (1998).

2.3.5 Wetlands

Wetlands can be prominent natural heritage features on the landscape as they can provide critical habitat functions to wildlife, including Species at Risk, as well as the ability to attenuate water and slowly release flows following large rain events. The initial review of aerial photography and provincial data informed the field assessment of wetlands on the subject property and on adjacent lands. No provincially significant wetlands have previously been identified on or adjacent to the subject property.

2.3.6 Fish Habitat

Potential fish habitat along the lake shoreline was assessed in the field using a habitat-based approach, based on guidance protocols and established criteria provided by both the MNRF and DFO. 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. Provincial 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 to allow assessment of potential impacts.

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).

2.3.7 Species at Risk – Endangered and Threatened Species

For the purposes of identifying species that warrant consideration during design and implementation of the proposed development plan, Endangered and Threatened species include those designated as “Endangered” or “Threatened” under O. Reg. 230/08 pursuant to the provincial *Endangered Species Act, 2007*. These species are considered within the local Official Plan and Provincial Planning Statement as SAR. RiverStone’s approach to site assessment is primarily habitat-based. The assessment included a thorough review of the available information, site visit, and assessment of findings. The results of these assessments are provided below in **Section 4.4** and in **Appendix 3**.

Recently the Provincial government has made several amendments to the ESA through Bill 5, which has resulted in considerable changes to how species and their habitats are defined, evaluated and protected. Key amendments that effect how habitat protection is considered in an EIS are as follows;

- Amendments to several definitions in subsection 2 (1), including a new definition of “habitat”. The amended definition of “habitat” is as follows, directly from the amendment:
 - (a) in respect of an animal species,
 - (i) a dwelling-place, such as a den, nest or other similar place, that is occupied or habitually occupied by one or more members of a species for the purposes of breeding, rearing, staging, wintering or hibernating, and
 - the area immediately around a dwelling place described in subclause (i) that is essential for the purposes set out in that subclause.
 - (b) in respect of a vascular plant species, the critical root zone surrounding a member of the species, and

- (c) in respect of all other species, an area on which any member of a species directly depends in order to carry on its life processes; (“habitat”)
- The following changes are made to section 7 so that making a regulation under that section is no longer mandatory but at the discretion of the Lieutenant Governor in Council:
 - The Lieutenant Governor in Council would be authorized to make a regulation listing species that are classified by COSSARO as extirpated species, Endangered species, Threatened species or Special Concern species.
 - Such a regulation would not be required to list all of the species classified by COSSARO but, if a species is listed, the classification of the species must be the same as COSSARO’s classification.
 - Requirements under the Act relating to a species that has been removed from the list cease to have effect.
- The temporary suspension of protections upon initial listing of a species is removed.
- Provisions regarding government response statements, management plans and agreements are repealed and transitional amendments are made throughout to refer to requirements that continue in respect of instruments that existed before the date of repeal.
- Section 17 is re-enacted to remove the need for conditions to be satisfied before certain permits could be issued, remove reference to species conservation charges and make other changes.
- Section 18, which authorizes persons to engage in prohibited activities set out in a regulation if the activity is regulated under another Act, is repealed.

Of particular importance in the short term, prior to formalization of the new *Species Conservation Act* to replace the *Endangered Species Act*, is the changing of the definition of what constitutes “habitat” and how that relates to the general habitat descriptions for various species. Historically, certain habitats and their functions may have been protected, while the new definition may not protect that function.

RiverStone historically contacted the Natural Heritage Information Centre (MNRF) through email correspondence for the subject property, to ensure that our review of SAR included all available provincial information. Recently, we were informed by NHIC that their review now utilizes the same database that we would search in making the review request, through the MNRF Ontario Natural Heritage Make-a-Map online mapping tool. We were informed that additional data can be provided by NHIC where the online search determines that there are “Restricted Species” in the search area, but otherwise they would not be able to provide novel information. As a result, we now only correspond with NHIC to request information where Restricted Species have been identified, at which time we request the species name and any additional data that they can provide, including more precise observation locations.

2.4 Impact Assessment and Mitigation

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**.

2.5 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 *Migratory Birds Convention Act*, S.C. 1994, c. 22, including:
 - Migratory Birds Regulations.
- *Provincial Planning Statement*, 2024, 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)
- Provincial *Endangered Species Act*, 2007, S.O. 2007, c. 6, as amended (2025) including:
 - Ontario Regulation 230/08: Species at Risk in Ontario List
 - Ontario Regulation 242/08: "Exemption Regulation"
- County of Haliburton Official Plan (Updated to January 30, 2019)
- Official Plan Municipality of Dysart et al. (Office Consolidation December 2024)
- Comprehensive Zoning By-law Municipality of Dysart et al. (Office Consolidation July 18, 2025)

3 NATURAL HERITAGE FEATURES AND FUNCTIONS

3.1 General Site Conditions

The subject property is approximately 55 ha (135.9 ac) and can be accessed via West Shore Road. At the time of RiverStone's October 27, 2025 site investigation, the property contained a dwelling,

accessory structures, septic system, dock and an old overgrown cleared area. Topography in the area of the dwelling is level, sloping moderately toward the lake and along the shoreline area. Outside of the developed area and area of proposed development, the subject property is entirely forested.

Existing vegetation communities and natural features are identified on **Figure 2**. Representative photographs taken during the site investigation are provided in **Appendix 2**.

3.2 Terrain, Drainage, and Soils

The subject property is situated within Ecodistrict 5E-9 (Algonquin Park). This area is characterized by deciduous and mixed forest cover underlain by Precambrian bedrock covered by a variable layer of acidic morainal deposits. Areas of bare bedrock and very shallow mineral substrates are common in the southern portion of the Ecodistrict, where the subject property is located. Settlement areas and related infrastructure comprise less than 1% of the land, and approximately 51% of the land is designated as protected areas (Wester et al. 2018).

The topography across the property was noted to be varied, with changing elevations and slopes.

3.3 Watercourses

No watercourses were identified within the subject property during the site investigation.

One watercourse was identified on adjacent lands near the northwest corner of the subject property. This watercourse drains from a wetland feature in the northwest corner, flows south into another wetland feature and drains into Cat Lake. No further information is available.

3.4 Fish Habitat

The subject property has frontage on Cat Lake, which has a surface area of 57.9 ha, maximum depth of 16 m, and mean depth of 6.9 m. The lake has a coldwater thermal regime. Documented fish species include Brook Trout (*Salvelinus fontinalis*), Common Carp (*Cyprinus carpio*), Splake (*Salvelinus namaycush* × *Salvelinus fontinalis*), White Perch (*Morone americana*), White Sucker (*Catostomus commersonii*) and Yellow Perch (*Perca flavescens*). Review of background data identified records of stocking of Brook Trout between 1993 and 1999, between 2015 and 2023, and stocking of Splake in 2025. Schedule L of the County of Haliburton Official Plan does not identify Cat Lake as a Lake Trout Lake.

During the site assessment, the shoreline of the property was reviewed to determine the type of nearshore fish habitat present. Habitat characteristics varied across the frontage, primarily due to the presence of dense large woody debris. Through the central portion of the frontage where the dock is located, the nearshore habitat was dominated by fallen logs (woody debris) that had washed up along the shoreline. Given the lack of development surrounding the lake, fallen logs remain in the lake and are carried by the prevailing winds to the eastern shore of the lake, fronting the subject lands. Given the dense debris entirely covers the central shoreline area including the lake bottom, it is not conducive to habitat that is suitable to fish as there is little area to move and oxygen becomes depleted through the decomposition process. The density of the wood is highest in the central portion of the property, diminishing to the north and south. This central area is most appropriately identified as Type 2 fish habitat. In the area of the dock, the nearshore area was observed to be shallow, with water depth less than 1 m noted approximately 10 m of the shoreline edge. To the north and south, the density of wood is reduced, providing more space and allowing the growth of dense shoreline vegetation. Species

identified included Pickerelweed (*Pontederia cordata*), Leatherleaf (*Chamaedaphne calyculata*) and Woolgrass (*Scirpus cyperinus*). Substrates observed in the nearshore area included organic material with some gravel and bedrock immediately adjacent to the shoreline. Vegetation along the shoreline included Leatherleaf, Eastern Hemlock (*Tsuga canadensis*), Eastern White Cedar (*Thuja occidentalis*), White Birch (*Betula papyrifera*) and Royal Fern (*Osmunda regalis*). Based on the above, the northern and southern areas of the shoreline are classified as Type 1 Fish Habitat (**Figure 2**), providing nursery and potential spawning habitat for a variety of fish species.

3.5 Vegetation Communities

As stated above, existing development on the subject property includes a dwelling and associated structures, as well as a fill site. The rest of the property remains undeveloped, consisting primarily of coniferous forest and wetlands.

Ecological communities were characterized and delineated through a combination of aerial photo analysis and field investigations; 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.

3.5.1 Terrestrial Vegetation Communities

3.5.1.1 G051Tt – Dry to Fresh, Coarse: Cedar-Hemlock Conifer

Coniferous forest cover was identified across the subject property, and was associated with steep slopes in the central portion of the property. Tree cover in this community was dominated by Eastern Hemlock, with an Eastern White Pine (*Pinus strobus*) supercanopy; other species observed included Eastern White Cedar, Red Maple (*Acer rubrum*), Yellow Birch (*Betula allegheniensis*), White Birch, Striped Maple (*Acer pensylvanicum*) and American Beech (*Fagus grandifolia*). The shrub layer was observed to be sparse, consisting of tree saplings and Hobblebush (*Viburnum lantanoides*). The groundcover was sparse, and comprised of wood fern species (*Dryopteris* spp.).

3.5.1.2 G058Tl - Dry to Fresh, Coarse: Maple Hardwood

A patch of young deciduous forest dominated by Maple species was identified adjacent to West Shore Road. Tree species observed included Sugar Maple (*Acer saccharum*), Red Maple, Northern Red Oak (*Quercus rubra*), American Beech, Yellow Birch and Eastern Hemlock. Shrub and ground cover was sparse, consisting of Lady Fern (*Athyrium filix-femina*) and Hobblebush.

3.5.1.3 G066Tt – Moist, Coarse: Hemlock-Cedar Conifer

This community was observed adjacent to the deciduous forest community, comprised of Eastern Hemlock, Eastern White Cedar, Yellow Birch and Mountain Ash (*Sorbus* sp.). The ground cover was noted to be dense with moss; sparse fern cover was also noted. Soils in this area were noted to be moist and deep.

3.5.1.4 Fill Area

An overgrown fill area was observed adjacent to West Shore Road. Young vegetation growth was noted in some areas, which included Staghorn Sumac (*Rhus hirta*), Red Raspberry (*Rubus idaeus*), Goldenrod (*Solidago* sp.) and White Birch.

3.5.2 Wetland Vegetation Communities

3.5.2.1 G142N – Mineral Meadow Marsh

Meadow marsh communities were identified in the central and northern portions of the subject property. These wetlands were dominated by graminoid species, included sedges and grasses, including Woolgrass and sparse cattails (*Typha* sp.).

3.5.2.2 G148N – Mineral Shallow Marsh

Shallow marsh communities were identified in the southern portion of the subject property and on adjacent lands. These wetlands were dominated by graminoids, included grasses, rushes and sparse cattails; Woolgrass was noted.

3.5.2.3 G127Tt – Poor Conifer Swamp

Coniferous swamp communities were identified in the northern and southern portions of the subject property, and on adjacent lands through aerial photo interpretation.

3.6 Wildlife Habitat Overview

Based on our observations, we expect that the subject property has the potential to support habitat for various species of wildlife that are typical to the Canadian Shield. Incidental observations of wildlife included White-tailed Deer (*Odocoileus virginianus*; scat observed) and Moose (*Alces alces*; tracks).

In addition to the above species, we would expect common wildlife species to be present, including Coyote (*Canis latrans*), Eastern Cottontail (*Silvilagus floridanus*), Raccoon (*Procyon lotor lotor*), Grey Squirrel (*Sciurus carolinensis*), etc.

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 3**).

3.7 Endangered and Threatened Species

Based on the initial steps of our desktop analysis (NHIC database, range maps etc.), nineteen (19) Endangered or Threatened species had the potential to occur within the subject property or on adjacent lands. Following review of the aerial photography and our on-site assessment, that list was reduced to nine (9) Endangered or Threatened species that would have suitable habitat on the property, and therefore the potential to use features in the location of the subject property: American Ginseng (*Panax quinquefolius*), Blanding's Turtle (*Emydoidea blandingii*), Eastern Red Bat (*Lasiurus borealis*), Hoary Bat (*Lasiurus cinereus*), Little Brown Myotis (*Myotis lucifugus*), Northern Long-eared Myotis (*Myotis septentrionalis*), Silver-haired Bat (*Lasionycteris noctivagans*), Tri-colored Bat (*Perimyotis subflavus*), and Spotted Turtle (*Clemmys guttata*). See **Appendix 3** for a detailed technical description of RiverStone's assessment and to review the boundary of these habitat features and potential habitat for each SAR species.

In the absence of targeted studies for each species at the appropriate time of year, it is not possible to conclusively determine whether the habitat features are absolutely used by any of the potential SAR

that may occur on the property. As such, these habitats are being treated as if the species are present, with mitigation measures implemented to ensure no impacts to the habitat of Endangered or Threatened species occurs according to the applicable legislation and policy.

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. RiverStone's rationale for identifying such features is provided in the sections that follow.

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

Natural Heritage Features	Presence/Absence within the Study Area
Fish Habitat	<i>Present. See Section 4.1</i>
Watercourses	<i>Present on Adjacent Lands. See Section 4.2</i>
Wetlands	<i>Present. See Section 4.2</i>
Habitat of Endangered and Threatened Species	<i>Potentially Present. See Section 4.4</i>

4.1 Fish Habitat

Cat Lake provides habitat for several fishes, including coldwater dependent species, such as Brook Trout. Cat Lake does not contain Lake Trout. The shoreline frontage of the subject property is classified as a combination of both Type 1 in the central portion of the frontage and Type 2 fish habitat to the north and south.

An assessment of potential impacts to fish habitat that may result from implementation of the development plan is provided below in **Section 5.3**.

4.2 Watercourses

A watercourse was noted on the adjacent lands to the northwest through provincial mapping, draining a wetland feature that does occur on the northern portion of the subject property. As a result, the watercourse was not directly assessed but is assumed to be present and permanently flowing. The impacts are assessed below in **Section 5.3**.

4.3 Wetlands

No PSWs were identified within the subject property or adjacent lands. Unevaluated wetlands were documented within the property. Meadow marsh, shallow marsh and coniferous swamp communities were identified across the property. The potential habitat function is anticipated to fluctuate depending on seasonal fluctuations in water levels. Further assessment provided in **Section 5.4**.

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 17PL8204, 17PL8205, 17PL8206, 17PL8304, 17PL8305 and 17PL8306). Databases of iNaturalist, OBBA, and ORAA were also reviewed as of December 2025.
- On-site investigation undertaken in October 2025, 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 3**. The screening is based on a list of terrestrial or wetland species that are known to occur within the regional jurisdiction (*i.e.*, County of Haliburton). Through this screening, the species discussed below were identified as having the potential to be present within the subject property or directly adjacent lands. Where relevant, potential impacts to these species are discussed further in **Section 5.5**.

4.4.1 American Ginseng

American Ginseng is a perennial herbaceous plant that requires shade and grows in mature deciduous forests dominated by Sugar Maple, White Ash, Bitternut Hickory (*Carya cordiformis*), American Basswood (*Tilia americana*), Northern Red Oak and Butternut (*Juglans nigra*), or in forests/swamps containing Eastern White Cedar and Eastern Hemlock (ECCC, 2018). This plant typically grows in moderately moist, well-drained sandy loam soils over limestone or marble bedrock (MECP, 2019). American Ginseng is also found growing with understory companion species. In RiverStone's experience with other locations in Haliburton, this includes Blue Cohosh (*Caulophyllum thalictroides*) and Maidenhair Fern (*Adiantum pedatum*).

American Ginseng and its companion species were not observed during the site investigation, however the investigation was completed in late October, and this species is not likely to be detected at this time. Extensive coniferous forest dominated by Eastern Hemlock is present on the subject property and adjacent lands, and there is potential for this species to occur. Further discussion, including an assessment of potential impacts to American Ginseng resulting from implementation of the development plan, is provided in **Section 5.5**.

4.4.2 Blanding's Turtle and Spotted Turtle

The Blanding's Turtle is a mid-sized turtle that typically inhabits wetlands with dense aquatic vegetation, but will also travel long distance over land between summer and winter habitats, and nesting sites (MECP 2019a). The Spotted Turtle is a small turtle that also inhabits wetlands, as well as ponds, vernal pools, creeks, ditches and stormwater ponds. Spotted Turtles have also been observed to travel over land in search of nesting sites (MECP 2019b).

The shallow marsh (G148N) communities may provide summer habitat for these species. The depth of the wetlands are unknown and these features could provide overwintering habitat as well.

Further discussion, including an assessment of potential impacts to these species resulting from implementation of the proposed development, is provided in **Section 5.5**.

4.4.3 Endangered Bat Species (*Lasiurus borealis*, *L. cinereus*, *Lasionycteris noctivagans*, *Myotis lucifugus*, *M. septentrionalis*, *Perimyotis subflavus*)

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 and adjacent lands is extensive, and while no formal quantitative evaluation of bat habitat was conducted to support this assessment, 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). This approach assumes that other appropriate mitigation measures (*i.e.*, timing windows) are employed to avoid impacts to individuals of Endangered bat species. Within the subject property, 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 5.5**.

5 IMPACT ASSESSMENT AND RECOMMENDATIONS

5.1 Proposed Development

The proposed development plan includes construction of a new garage with accommodations, several cabins, an extension to the existing dwelling and a septic system for the extension. Access to the property is from West Shore Road. The area of study considered in this report is composed of the subject property and adjacent lands (lands within 120 m).

According to the Municipality of Dysart et al. Comprehensive Zoning By-law (2005-120) the subject property is includes both the Rural (RU1-6) and Environmental Protection (EP) zones (the latter being associated with wetlands on the property) (**Appendix 1**). Section 9.4.1.6 of the By-law states that within the RU1-6 zone, the minimum setback from an EP zone to any structure is 120 m. Several wetlands within the subject property are mapped as EP zones, including a wetland adjacent to the road. The development proposal has the dwelling addition partially within the 120 m setback and the septic and garage both fully within the setback. The minimum distance to the wetland feature for the proposed structures are as follows:

Garage – 30 m

Septic System – 98 m

Dwelling Addition – 107 m

It is noted that runoff from the proposed garage would drain toward the wetland feature adjacent to West Shore Road, while the proposed dwelling addition and septic system would both eventually drain toward the lake before entering any wetlands zoned EP.

In our review of existing information related to the wetland features on the property as well as our field assessment, we were not able to determine the reasoning behind having an extended setback from the wetland features, in particular, the wetland adjacent to West Shore Road. This shallow marsh feature is similar to other wetlands on the property and adjacent lands, is smaller in area and is fragmented from an adjacent wetland feature on the east side of West Shore Road. In general, wetland setbacks range from 15 m to 30 m as a means of protecting the feature and its functions. The Township Zoning Bylaw notes wetland specific setbacks two other zones, with the setback being 30 m in both cases. Where critical functions in wetlands are identified, such as habitat for species at risk, setbacks can be increased to match regulations under the Endangered Species Act for each species. In the case of this wetland feature, habitat for species at risk was not found. As such, RiverStone would support a reduction in the EP zone setback, for this particular wetland feature, to 30 m from the 120 m required by the zoning bylaw. Recommendations are provided below to avoid and minimize any potential impacts.

We note that the lot plan depicted on **Figure 3** should not be considered survey grade but conceptual at this time. Formal site plan drawings should be cited for specific details.

5.2 Impact Assessment

RiverStone's impact assessment below is intended to inform a review of the development by the Municipality. Our assessment is based on a review of existing conditions at the time of site investigations, as illustrated on **Figure 2** and in the photographic record contained in **Appendix 2**. The primary purpose of this report is to assess impacts and support impact mitigation for all features that receive protections under applicable environmental planning policies and regulations that were to be included in this scope of work. The potential for negative impacts on identified NHF is discussed in the sections below, and several recommendations are listed to support a scenario that minimizes the potential for impacts. In assessing and identifying potential negative impacts through a development process, it is important to highlight how the PPS defines negative impacts, *i.e.*:

“...degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities.”

Importantly, as stated in Section 13.2 of the Natural Heritage Reference Manual (for Natural Heritage Policies of the PPS):

The PPS definition for “negative impacts” does not state that all impacts are negative, nor does it preclude the use of mitigation to prevent, modify or alleviate the impacts to the significant natural heritage feature or area”.

RiverStone's impact assessment is intended to be reflective of the above guidance, with consideration for the integrity and function of each feature, and in acknowledgement that not all development and site alteration represents a negative impact. RiverStone's property boundaries provided on figures are

based on information provided by the proponent and should not be considered survey grade (*i.e.*, for reference purpose only).

5.3 Fish Habitat and Watercourses

The policies and laws that govern the protection of fish habitat in Ontario include those at the municipal, provincial, and federal level. The Municipality of Dysart et al. has policies within the Official Plan that address how development will occur in relation to fish habitat in streams, rivers, and lakes, as well as through the Provincial Planning Statement and the federal *Fisheries Act*, which is the ultimate authority.

The *Fisheries Act*, prohibits causing the harmful alteration, disruption or destruction of fish habitat. Through DFO, the fish and fish habitat protection provisions of the *Fisheries Act* are the authorities for the regulation of works, undertakings or activities that risk harming fish and fish habitat. Specifically, they include the two core prohibitions against persons carrying on works, undertakings or activities that result in the “death of fish by means other than fishing” (subsection 34.4(1)), and the “harmful alteration, disruption or destruction of fish habitat” (subsection 35(1)). The fish and fish habitat protection provisions are applied in conjunction with other applicable federal laws and regulations related to aquatic ecosystems, including the *Species at Risk Act*.

With respect to the harmful alteration, disruption or destruction (HADD) of fish habitat, DFO notes that proponents are responsible for planning and implementing works, undertakings or activities in a manner that avoids harmful impacts, specifically the death of fish and the harmful alteration, disruption or destruction of fish habitat. Proponents and their consultants are directed to review and implement DFO’s measures to protect fish and fish habitat, summarized as follows;

- Prevent the death of fish
- Maintain riparian vegetation
- Carry out works, undertakings and activities on land
- Maintain fish passage
- Ensure proper sediment control
- Prevent entry of deleterious substances in water.

Based on our on-site assessment, fish habitat is present along the lake frontage (Type 1 and Type 2). With that understanding, RiverStone recommends the following mitigation measures for the protection of surface water features and fish habitat on the subject property:

- **All development will be set back 30 m from the lake shoreline.**
- **Vegetation within shoreline and wetland setbacks is to be maintained in a natural state with no thinning or maintenance of trees, shrub or groundcover vegetation unless trees are deemed to be a hazard. Prior to hazard tree removal, trees are to be assessed by a certified arborist, a written assessment provided with dead wooding and maintenance considered prior to removal.**
- **Should development be contemplated adjacent to the setback, the edge of the setback will be delineated and marked with sediment fencing in the field prior to adjacent development, should development be proposed within 50 m.**

- **Debris from site clearing or materials to be used in construction will not be placed within the 30 m setback.**

As part of the impact analysis, potential impacts on water quality were assessed. In general, negative impacts on water quality can result via the following processes:

- stormwater runoff during construction activities
- modification of drainage patterns or flow rates
- inappropriately located sewage treatment systems that increase nutrient (phosphorous) loading to water bodies
- increased runoff due to an increase in the extent of hard surfaces (e.g., rooftops, driveways, patios)
- 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 proposed development has the potential to have negative impacts on water quality, it is RiverStone's opinion that the mitigation measures recommended below can reduce the risk of negative impacts to a minor and acceptable level. Several of the mitigation measures relate to maintaining vegetated shoreline setbacks. Within vegetated setbacks, trees, shrubs, ground cover, and associated leaves and twigs slow rainfall and surface-water flows to water bodies and thus allow additional time for water to soak into the ground. This facilitates nutrient uptake and provides less opportunity for erosion by stabilizing shoreline soils. The retention of vegetation allows for a continual source of woody debris and leaves, while increasing the uptake of phosphorus from overland run off prior to it entering a water body. Because primary productivity in most waterbodies depend on phosphorus input (Schindler 1977), which also leads to oxygen use during decomposition, limiting the amount of nutrients that reach the water body reduces the occurrence of algae growth in the nearshore areas.

To ensure that water quality and fish habitat within the lake shoreline is not negatively impacted by stormwater runoff during construction activities (e.g., land clearing and grubbing, dwelling and septic system construction, driveway construction), RiverStone recommends the following measures:

- **Sediment and erosion control measures, as described below, be implemented for development on the subject property:**
 - **When the native soil is exposed, sediment and erosion control work, in the form of heavy-duty sediment fencing (using solid posts and trenched in), be positioned along the downgradient edge of any construction envelopes adjacent to water bodies, wetlands, or watercourses.**
 - **Temporary storage locations of aggregate materials used in construction will be located outside the setback to any open water feature, wetland or watercourse as identified on Figure 3 and contained by heavy-duty sediment fencing.**
 - **Storage of any construction material or debris will be located outside the prescribed setback of the lake shoreline and wetlands.**
 - **Additional sediment fencing and appropriate control measures (e.g., straw bales) be stockpiled on site so that any breach can be immediately repaired and allow the installation of check dams where necessary.**

- **Regular inspection and monitoring will be necessary to ensure that the structural integrity and continued functioning of the sediment control measures is maintained (i.e., proper installation is not the only action necessary to satisfy the mitigation requirements).**
- **Sediment control measures be maintained in good working order until vegetation has been established on the exposed soils.**
- **All machinery is to arrive on site in clean condition and be checked and maintained free of fluid leaks.**
- **Machinery must be refueled, washed, and serviced within the area isolated by sediment fencing.**
- **Locate all fuel and other potentially deleterious substances within the area isolated by sediment fencing, a minimum of 20 m from any open water feature, wetland or watercourse.**
- **Best Management practices are to be utilized with all machinery and fill being imported to the subject property to ensure that material and tracks are free from invasive species (*Phragmites australis*, etc.).**
- **Fisheries and Oceans Canada (DFO) mitigation measures to minimize harm to fish and fish habitat (<https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html>) should be reviewed and applied to the construction. It should be noted that all measures are not suitable for all projects.**
- **DFO should be notified immediately if a situation occurs or if there is imminent danger of an occurrence that could cause harmful alteration disruption or destruction of fish habitat. If there is an occurrence, corrective measures must be implemented.**

The single watercourse included as part of the assessment was noted on the adjacent lands to the northeast. Although we did not assess the feature, we have assumed that the tributary is there and permanently flowing. Based on our mapping, the watercourse origin at the outlet of the wetland is greater than 70 m from the property boundary and over 300 m from the proposed addition to the dwelling and septic system. The locations are also separated by a height of land between the valleys. There is no expectation of any impacts to the watercourse based on the proposed development.

5.4 Wetlands

Meadow marsh, shallow marsh and coniferous swamp communities were identified within the subject property and on adjacent lands. In general, development and/or site alteration activities that occur in proximity to wetlands have the potential to cause negative impacts via the following pathways:

- Alterations of surface water and/or groundwater contributions that may result from;
 - Construction staging (*e.g.*, dewatering, etc.);
 - Increased post-construction coverage of impervious surfaces (*e.g.*, roads, roofs, etc.); and,
 - Permanent modifications to existing topography or drainage.

- Increased sediment and/or nutrient loadings to features via runoff exiting the development area from construction to post-completion of the project. This may adversely affect water quality via increased turbidity, nutrient enrichment, contamination by toxic substances, changes in pH, etc.;
- Direct loss of habitat through feature encroachment or other alterations; and
- Increased human activity/encroachment post construction, which may result in increased soil compaction, dumping, vandalism, or other disturbances.

Any future construction-related impacts to the wetlands can be avoided through construction mitigation practices and avoidance measures. The following recommendations are provided with respect to the on-site wetland features:

- **All development and site alteration must be setback a minimum of 30 m from the wetlands as shown on Figure 3.**
- **Vegetation within 30 m of the lake shoreline and wetlands is to be left in a natural state and not manicured.**
- **Trees will not be cut within the setback unless they are a safety hazard, and debris from clearing or materials to be used in construction will not be placed within the setback.**

The recommendations for fish habitat and watercourses are also suitable for mitigating potential impacts to wetlands.

5.5 Habitat of Endangered and Threatened Species

As per Section 10 of the ESA, areas of identified habitat (now defined as dens, nests, roosts etc. as outlined in **Section 2.3.7**) for any Endangered or Threatened species are protected from destruction, unless otherwise authorized. Additionally, Section 9 of the ESA protects individuals of Endangered or Threatened species, prohibiting individuals from being killed or harmed without appropriate authorizations. As discussed in **Section 2.3.7**, harassment of a species is no longer prohibited under the *Endangered Species Act*, as amended by Bill 5. In many (but not all) cases, mitigation planning is sufficient to ensure that development can occur in a manner that is consistent with the above provisions. The following section(s) provide an assessment of potential impacts to any Endangered or Threatened species considered relevant to the development application, as determined through our screening exercise (**Appendix 3**) and subsequent assessment in **Section 4.4**.

5.5.1 American Ginseng

American Ginseng occurs across Southern Ontario, including in Haliburton County (Leslie, 2018). As stated in Section 4.3.1., this species may be found in coniferous forest with an Eastern Hemlock component, which is abundant on the subject property and adjacent lands. In particular ginseng is physiologically adapted to low light levels and depressed growth occurs if exposed to too much sunlight (Gagnon 1999). In Ontario, suitable habitat for American Ginseng is found in relatively undisturbed, mature Sugar Maple-dominated deciduous forests under low light conditions (Nault et White 1999).

Although this species blooms in early summer (Leslie, 2018) and may not have been identifiable at the time of our site investigation, the proposed location of the dwelling and garage are currently disturbed and certainly would not provide habitat for this species.

5.5.2 Blanding's Turtle and Spotted Turtle

The G148N communities within the subject property were identified as candidate habitat for Blanding's Turtle and Spotted Turtle. Following changes to the ESA (discussed above in **Section 2.3.7**), it is RiverStone's understanding that habitat for these two species is now considered to be any wetland feature they are observed in, as well as the immediate area surrounding such features. Targeted surveys were not completed, and the wetland feature on the subject property remains candidate habitat. The recommendations for watercourses and wetlands listed above, particularly the development setbacks and vegetation maintenance, are sufficient for mitigating potential impacts to these turtles, and their habitat. It is RiverStone's opinion that the proposed development can be completed as described with the avoidance and mitigation measures presented, and not result in a contravention of the ESA with respect to these two species.

5.5.3 Endangered Bat Species

All *Myotis* species in Ontario, as well as the Eastern Red Bat, Hoary Bat, Silver-Haired Bat and the Tricolored Bat, are designated Endangered per O. Reg. 230/08 under the ESA. Little Brown *Myotis*, and Northern *Myotis* utilize dark, sheltered tree cavities within snag trees as roosting sites to shelter from inclement weather and gestate their young. Tricolored Bat utilize clumps of dead vegetation and peeling tree bark for the same purposes. Individuals (i.e., non-reproductive females and males) of bat species may roost in smaller diameter trees and other spaces (e.g., beneath house siding, etc.) that are not typically occupied by maternity colonies (Humphrey et al. 2019).

Forest cover within the subject property contains suitable and habitat for these bat species. For such scenarios, common direction from MECP regarding impact avoidance for individuals of Endangered bats includes strict adherence to vegetation removal timing windows. By limiting the timing window in which trees can be removed to outside of the active season for bats, development activities can avoid incidental harm to individuals of Endangered bat species. Assuming implementation of appropriate tree removal timing windows, and limiting tree removal to the minimum required, there is no expectation that the proposal will result in any negative impacts to individuals of Endangered bat species. Recommendations are clarified as follows:

- **Tree removals required to accommodate development take place outside of the season in which Endangered bats may be active, i.e., April 1 – September 30.**
- **If tree clearing must occur within the above-noted timing window, additional studies can need to be completed to confirm the presence or absence of SAR bats. These studies can include snag tree surveys and acoustic monitoring of the area where trees will be removed, by a qualified professional. If SAR bats may be impacted by the development proposal, the MECP should be contacted to determine if a permit would be required to proceed.**

6 CONFORMANCE WITH APPLICABLE ENVIRONMENTAL POLICIES

The following summarizes the 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 development and 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 recommendations included in this report are intended to protect fish habitat identified on the subject property and provides mitigation measures that address the potential for impacts.

As such, it is the opinion of RiverStone that if the recommendations are followed, the development will not contravene the *Fisheries Act*, and that an Authorization under the Section 35(2) is not required. Should however, during this project, 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 Provincial Endangered Species Act, S.O. 2007, c.6

The ESA protects designated Endangered and Threatened species in Ontario from being killed or harmed (s. 9) or having their habitat damaged or destroyed (s. 10). **Section 4.4** identified one or more species or its habitat having the potential to occur within or adjacent to the study area. **Section 5.5** provided a subsequent discussion of potential impacts to such species and/or associated habitat features, should those species be present within or adjacent to the study area. Based on this assessment, and assuming full implementation of mitigation measures (where recommended), it is RiverStone’s opinion that no Endangered or Threatened species or their habitat are expected to be negatively impacted by implementation of the development. On this basis, there is no expectation that the development will result in a contravention of the ESA. It is noted that this assessment does not represent ‘clearance’ with respect to ESA compliance. It remains a proponent’s continued and sole responsibility to ensure that a project does not result in a contravention to the ESA.

6.3 Provincial Planning Statement (2024), pursuant to the Planning Act, R.S.O. 1990, c. P.13.

The Provincial Planning Statement (PPS) is promulgated under the *Planning Act* and provides direction to municipalities on matters of provincial interest related to land-use planning. The PPS was

updated in 2024. Municipal Official Plans must be consistent with the PPS. Key natural heritage-related provisions of the PPS, as assessed in this report, are listed below:

4.1.4 Development and site alteration shall not be permitted in:

a) significant wetlands in Ecoregions 5E, 6E, and 7E¹

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

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

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

Based on the results of RiverStone's impact assessment, and contingent on the implementation of the recommendations outlined in **Section 5** of this report, it is RiverStone's opinion that the development as proposed, with no development occurring within significant natural heritage features, is consistent with Sections 4.1.1 to 4.1.8 of the PPS.

6.4 County of Haliburton Official Plan (Updated to 2019)

The preceding sections discuss how the development would comply with federal and provincial legislation and policy. The County of Haliburton has policies that guide municipalities' development that includes direction related to key natural heritage and biophysical features.

5.3.1 Policies

5.3.1.3 Development and Site alteration shall not occur in the habitat of endangered and threatened species unless in accordance with provincial or federal regulations.

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

5.3.2 Natural Heritage

5.3.2.2 Development and site alteration shall not be permitted on lands adjacent to natural heritage features identified in section 5.3.2.3 unless in accordance with policies of the Provincial Policy Statement 2014 and local official plans, provided that there will be no negative impacts on the natural heritage features or on their ecological functions. Through an EIS the ecological function of the adjacent land must be evaluated, and it must be demonstrated that there will be no negative impacts. Existing known provincially significant natural features are shown on the schedules to this Official Plan. Locally significant features may be identified in local official plans.

5.3.2.3 Lands that are contiguous to a specific natural heritage feature or area are adjacent lands for the purposes of this plan. Adjacent lands include lands where it is likely that development or site alteration would have a negative impact on the feature or area. The extent of adjacent lands within the County are as follow:

Natural Heritage Feature and Area Adjacent Lands Width

(distance from the feature for considering potential negative impacts)

- a) significant wetlands 120 m;
- e) fish habitat inland lake trout lake (at capacity) on the Canadian Shield 300 m; and
- f) all other fish habitat 120 m.

The above adjacent land distances shall be included in local official plans unless the municipality creates and implements an approach which achieves the same objectives.

Interpretation: RiverStone has identified Type 2 fish habitat and potential habitat of Endangered and Threatened species on the property. The recommendations within **Section 5** are intended to mitigate potential negative impacts to significant natural heritage features on the property and within adjacent lands. RiverStone's definition of adjacent lands is consistent with Section 5.3.2.3.

5.3.2.4 Not all potentially significant natural heritage features have been identified within the County. A site-specific evaluation (Site Evaluation Report) should be undertaken prior to planning approvals to determine the location of natural heritage areas and features and their ecological functions under any of the following circumstances:

- c) adjacent to watercourses, rivers, and lakes unless recent information exists at the County or local municipality;
- d) Adjacent to or in wetlands;
- e) Within adjacent lands as identified in the local official plans;
- f) As identified by the County or local municipality during pre-consultation;

The Site Evaluation Report may lead to the requirement for an Environmental Impact Statement or other assessments or studies (Wetland Evaluation).

Interpretation: As part of this EIS, RiverStone has identified and delineated natural heritage features on and adjacent to the subject property.

5.3.2.5 Where a natural heritage feature or area exists a more detailed assessment will be required to determine the location and nature of the feature and to determine if it is significant.

Interpretation: RiverStone has assessed existing natural heritage features to delineate their boundaries and assess their significance. This assessment is provided above in **Section 4**.

5.3.5 Environmental Impact Study

5.3.5.2 The Natural Heritage Reference Manual shall be the minimum guidance document for policy section 5.3.4.

5.3.5.3 An Environmental Impact study for proposed development adjacent to a significant natural heritage feature will include, as a minimum study area, the natural heritage feature as well as the

adjacent lands surrounding that feature. The distance of the adjacent lands will be in accordance with policy section 5.3.2.3 and as established in local official plans.

5.3.6 Shorelines

5.3.6.2 The County requires, the retention of natural vegetation, including trees, in the full 30 m setback from the high watermark of a 'body of water', including rivers and streams on all existing and new lots. Local official plans shall identify the minimum requirement for development and site alteration setback from the high water mark. Development and site alteration, including septic system tile beds, shall be set back a minimum of 30 m from the high water mark of lakes, rivers and streams, with no disturbance of native soils and very limited removal of shoreline vegetation. Local municipalities may use planning tools and by-laws to limit encroachment of development on the respective surface water feature(s).

5.3.6.6 Development and site alterations shall be set back a minimum of 30 metres from the high water mark of lakes, rivers and streams. The Shoreline Tree Preservation By-law, as amended, does provide for exemptions in very specific circumstances. Consultation with the County of Haliburton is required prior to development and site alteration along the shoreline of any waterbody.

5.3.10 Natural Hazards

5.3.10.6 New development and site alteration will not be permitted near or on erosion hazards unless it has been demonstrated by a qualified professional that the site and its access would be safe using the 100-year erosion rate.

Interpretation: RiverStone submits this EIS in consideration of the above requirements.

6.5 Official Plan Municipality of Dysart et al. Office Consolidation 2024

The Municipality of Dysart et al. has policies that address how development will occur in relation to significant and general natural heritage and biophysical features.

5.3.4 Significant Natural Heritage Features

5.3.4.1 Definition

Significant natural heritage features consist of the following.

- Significant habitat of endangered and threatened species, identified by the Ministry of Natural Resources and Forestry (NHIC). These areas are listed in the municipal resource register described in Section 5.5. Where significant habitat of endangered and threatened species has not been comprehensively mapped or where no data is available, an EIS should be completed that also identifies appropriate measures to be undertaken to ensure that there will be no negative impacts on the natural features or the ecological functions of the habitat they support.
- Critical fish habitat, which are fish spawning and nursery areas identified by the Ministry of Natural Resources and Forestry (NRVIS) or critical fish habitat identified in site evaluation reports on file with the Municipality. These areas are designated on Schedule "B". Where

fish habitat has not been comprehensively mapped, all water features, including permanent and intermittent streams, head waters, seasonally flooded areas, municipal or agricultural drains, lakes and ponds will be screened by the approval authority for the presence of fish habitat. Where such fish habitat is identified or where no data is available, an EIS should be completed that also identifies appropriate measures to be undertaken to ensure that there will be no negative impacts on the natural features or the ecological functions of the habitat they support.

- wetlands as identified on the County of Haliburton wetland mapping.

Interpretation: The subject property contains Type 1 and 2 fish habitat and potential habitat of Endangered and Threatened Species.

5.3.4.2 Where Development Not Permitted

Development and site alteration is not permitted in significant habitat of endangered and threatened species, and provincially significant wetlands.

All major development proposals in the *Waterfront Area* or *Rural Area* must be accompanied by an Environmental Impact Study (EIS) to determine the potential habitat of endangered and threatened species. If in the course of the development application and approval process, the applicant becomes aware that the subject lands include actual or potential habitat of endangered species, the applicant will advise the Municipality and the Ministry of Natural Resources and Forestry at the earliest opportunity.

Interpretation: The proposed development is not anticipated to impact potential habitat of Endangered and Threatened Species, or contravene the ESA.

5.3.4.3 Where Development May Be Permitted

Council will only consider an application for development or site alteration within critical fish habitat in accordance with Provincial and Federal legislation.

Interpretation: Riverstone identified Type 1 fish habitat within the subject property. No development is proposed within critical fish habitat and no impacts to fish habitat are anticipated if the recommendations in **Section 5** are followed.

Council will only consider an application for development or site alteration on adjacent lands to significant natural heritage features (as defined in Section 5.3.4.4.), where it has been demonstrated through an Environmental Impact Study (EIS) that there will be no negative impacts on the natural features or their ecological functions.

Interpretation: RiverStone has considered potential impacts to adjacent lands during our assessment. RiverStone does not anticipate negative impacts to adjacent natural features or their ecological functions as long as the recommendations in **Section 5** are adhered to.

5.3.4.4 Adjacent Lands

Adjacent lands contiguous to significant natural heritage features are lands within the following distances from the features:

- Provincially Significant Wetlands and Wetlands shown on the County of Haliburton mapping – 120 metres (394 feet);
- Critical Fish Habitat – 30 metres (98 feet);
- Lake trout lakes – 300 metres (985 feet); and
- All other features – 50 metres (164 feet).

However, for the purposes of a specific development application, the adjacent lands contiguous to a specific feature may be varied from these standards, where documented and justified to Council's satisfaction by an Environmental Impact Study (EIS).

Interpretation: RiverStone's definitions of adjacent lands are consistent with the above.

17.5.2 Environmental Impact Study

An Environmental Impact Study will demonstrate to Council's satisfaction that the proposed development will have no negative impacts on the significant natural heritage feature, as identified in Section 5.3.4, or on the ecological functions for which the feature has been identified.

An Environmental Impact Study for proposed development adjacent to a significant natural heritage feature will include as a minimum study area, the natural heritage feature, as well as the area surrounding that feature, in accordance with the adjacent lands described in Section 5.3.4.4.

Interpretation: RiverStone submits this EIS in consideration of the above requirements.

This report has been submitted to address the various applicable natural heritage protection policies of the Municipality's Official Plan. While not considered comprehensive/exhaustive, the list of policies above and associated interpretation is provided to support the approval authority in their review of the application for development.

6.6 Municipality of Dysart et al. Comprehensive Zoning By-law (2005-120)

Section 9 Rural Zones

Section 9.4.1.6 of the Municipality's Comprehensive Zoning By-law identifies provisions that apply in the Rural RU1-6 Exception Zone. This section states that the minimum setback from an EP zone to any structure is 120 m, and that the minimum setback distance from the centre line of a portage trail to any structure is 15.5 m.

All uses permitted in the RU1 zone are permitted in the RU1-6 zone, which includes residential dwellings and accessory dwellings.

Interpretation: The development proposed includes the expansion of the existing dwelling, and construction of the garage and septic system. The development plan does include a setback greater than 15.5 m from the portage trail. The development setback from the wetland (EP zone) for the garage is proposed to be 30 m, the septic 98 m and the dwelling extension 107 m. Our assessment notes that these setbacks are biologically appropriate to avoid impacts to the wetland feature. It is assumed that the township will require a variance or rezoning to accommodate the change should it be supported.

Section 10 Environmental Protection

Section 10.1 identifies permitted uses within Environmental Protection (EP) zones, which does not include year-round or seasonal dwellings.

Interpretation: The subject property contains areas zoned as EP. Any future development of a dwelling must be located outside of the EP zone.

7 CONCLUSIONS

This EIS provides characterization of the natural heritage features occurring within and adjacent to the subject property and provides the details of the proposed development plan. Potential negative impacts were assessed with recommendations for prevention, avoidance, and mitigation measures where appropriate.

Based upon the findings presented in this report, RiverStone has determined that the proposed application is consistent with the applicable policies and legislation as discussed in **Section 6**, provided that the recommendations contained in **Section 5** are implemented in full. We note that a variance or other similar planning tool will be needed to permit the development plan. We advise that the recommendations in this report be incorporated into the development agreements for the subject property.

8 REFERENCES

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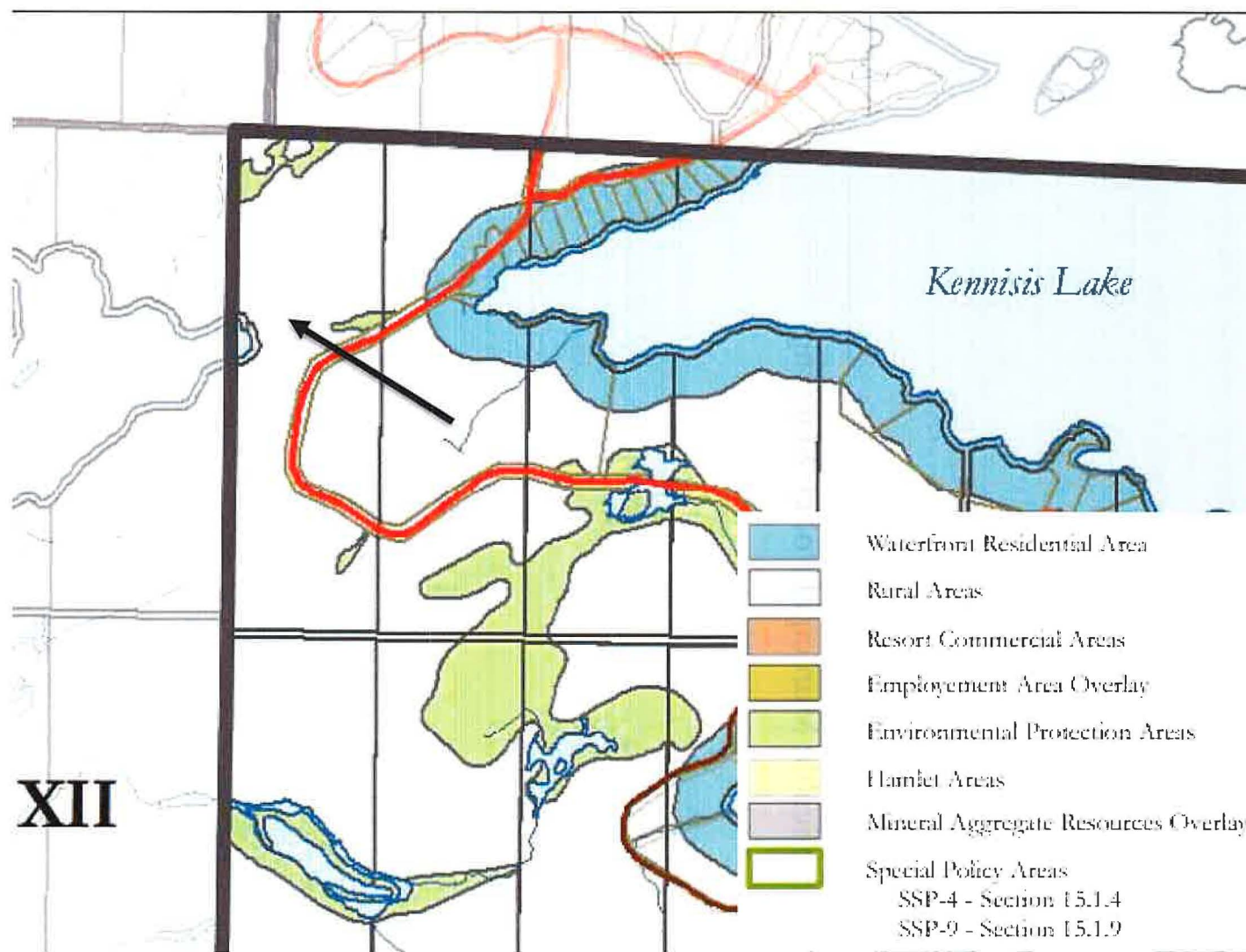
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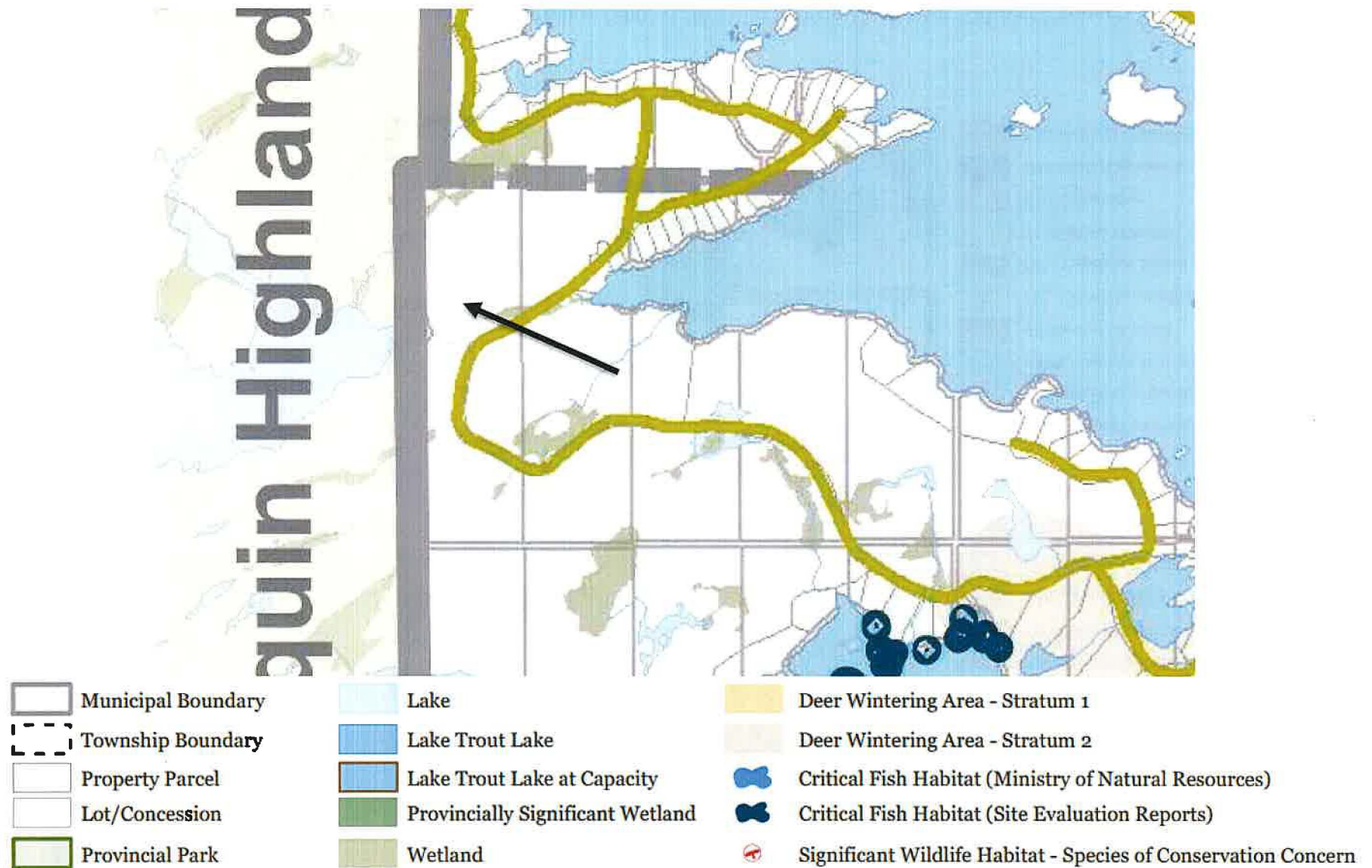
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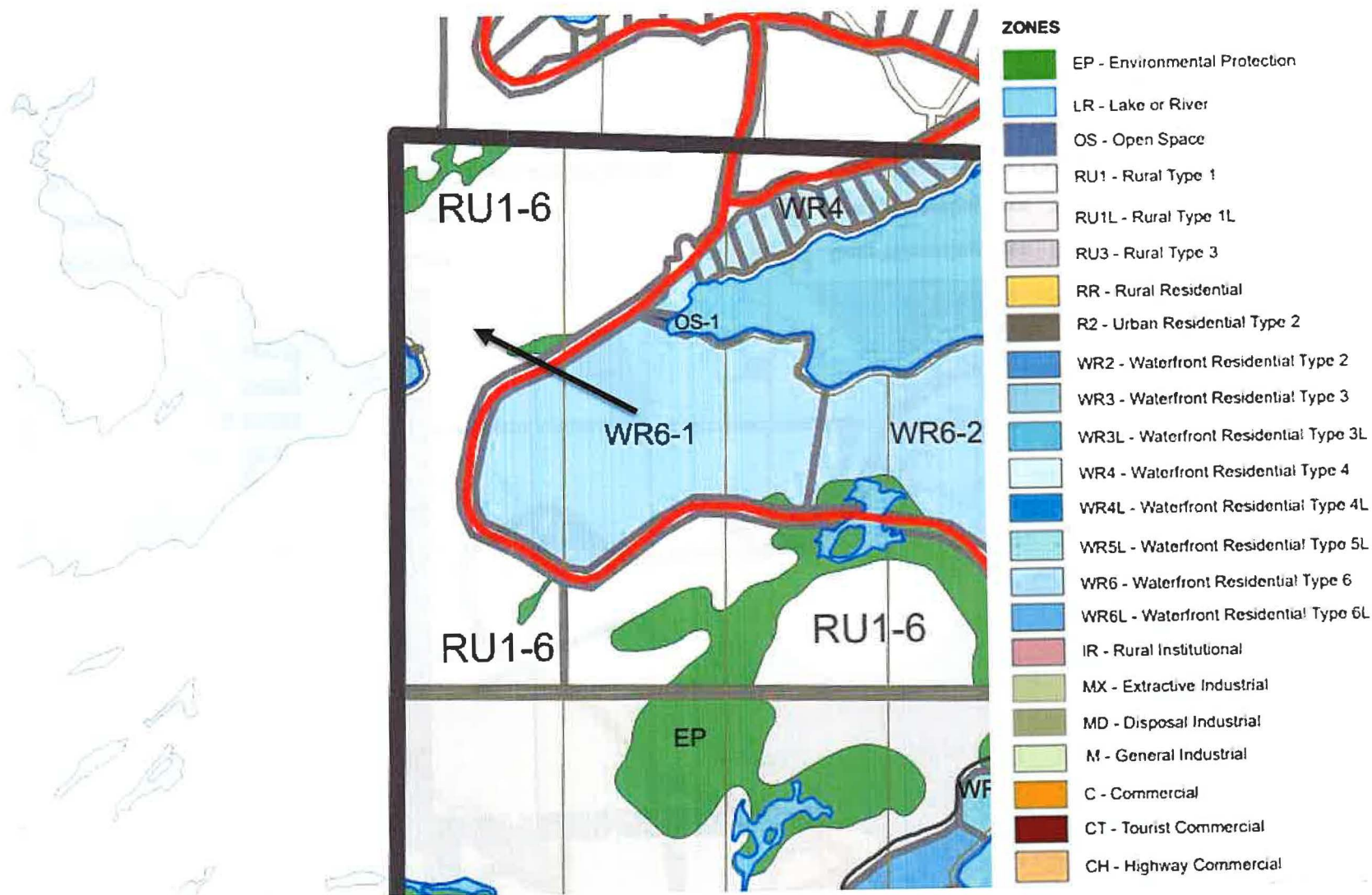
Appendix 1. Applicable Municipal Policy Mapping



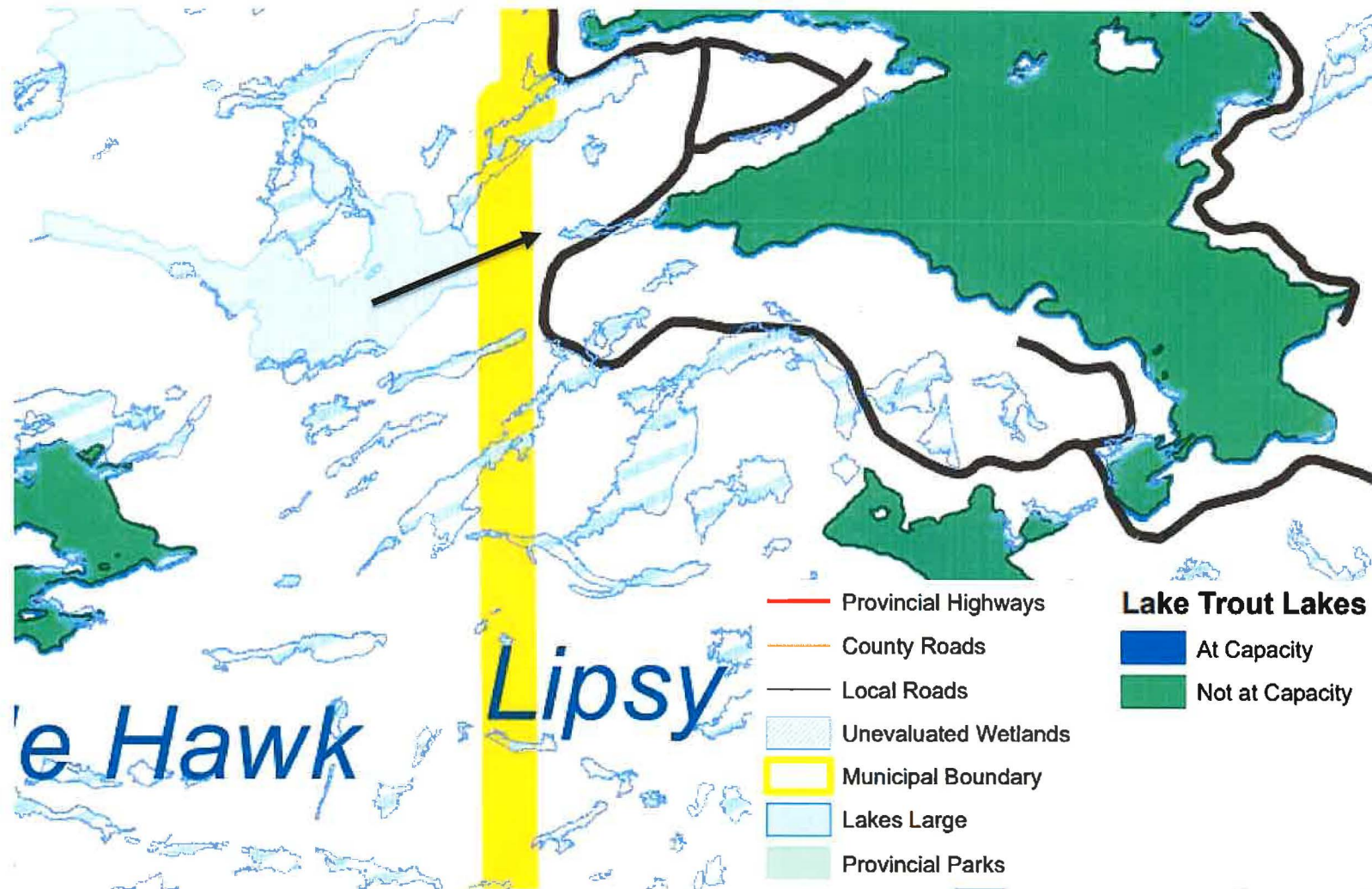
Schedule A, Map 3. Municipality of Dysart et al Official Plan (Consolidated 2024). Guilford Township (Black arrow indicates Subject Property).



Schedule B. Municipality of Dysart et al Official Plan (Consolidated 2024). Natural Heritage Features and Areas (Black arrow indicates Subject Property).

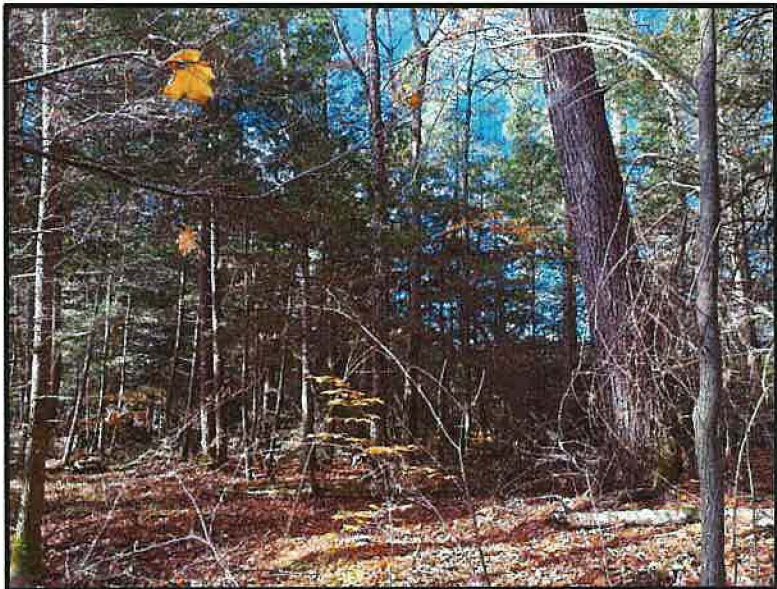


Municipality of Dysart et al Comprehensive Zoning Bylaw (2005-120) (Black arrow indicates Subject Property).



Schedule L. County of Haliburton Official Plan (Consolidated 2024). Natural Heritage - Lakes (Black arrow indicates Subject Property).

Appendix 2. Select Photographs from Site Visit



Photograph 1. G051Tt Dry to Fresh, Coarse: Cedar-Hemlock Conifer (October 27, 2025)



Photograph 2. G148N Mineral Shallow Marsh east of existing dwelling at West Shore Road (October 27, 2025)



Photograph 3. G142N Mineral Meadow Marsh east of West Shore Road (October 27, 2025)



Photograph 4. G148N Mineral Shallow Marsh at south area of property and south of West Shore Road (October 27, 2025)



Photograph 5. G148N Mineral Shallow Marsh at south area of property and west of the property (October 27, 2025)



Photograph 6. G066Tt Moist, Coarse: Hemlock-Cedar Conifer (October 27, 2025)



Photograph 7. Shoreline of Cat Lake and Type 1 fish habitat (October 27, 2025)



Photograph 8. View of existing dwelling from shoreline (October 27, 2025)



Photograph 9. Edge of Environmental Protection zone and G148N wetland near location of proposed garage (October 27, 2025)

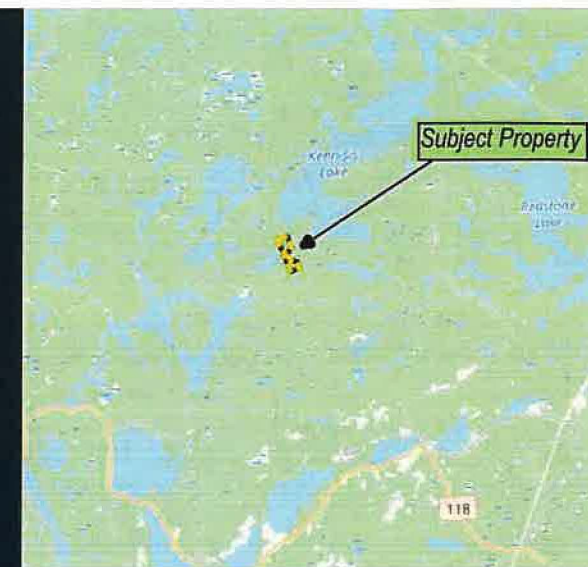


Photograph 10. Edge of location of proposed garage, looking east (October 27, 2025)



Photograph 9. Location of proposed septic system (October 27, 2025)

Appendix 3. Assessment of Habitat of Endangered and Threatened Species



Legend



Planning Boundaries

- Property Boundary
- Study Area (120m)

Provincial (Crown) Lands

- Conservation Reserve

Land Information Ontario (Ontario Geohub)

- Roads

Natural Heritage Features - Identified by Province (Geohub)

- Watercourses

Wetlands

- Unevaluated

Natural heritage features on adjacent lands were delineated/characterized based on provincial and municipal mapping, current and historic aerial photography, drone imagery, and/or assessment from roadside locations or the subject property boundary.

Orthorectified Aerial Photograph 2023

RS Project No. 2025-219 Feb 23, 2026 By: ET

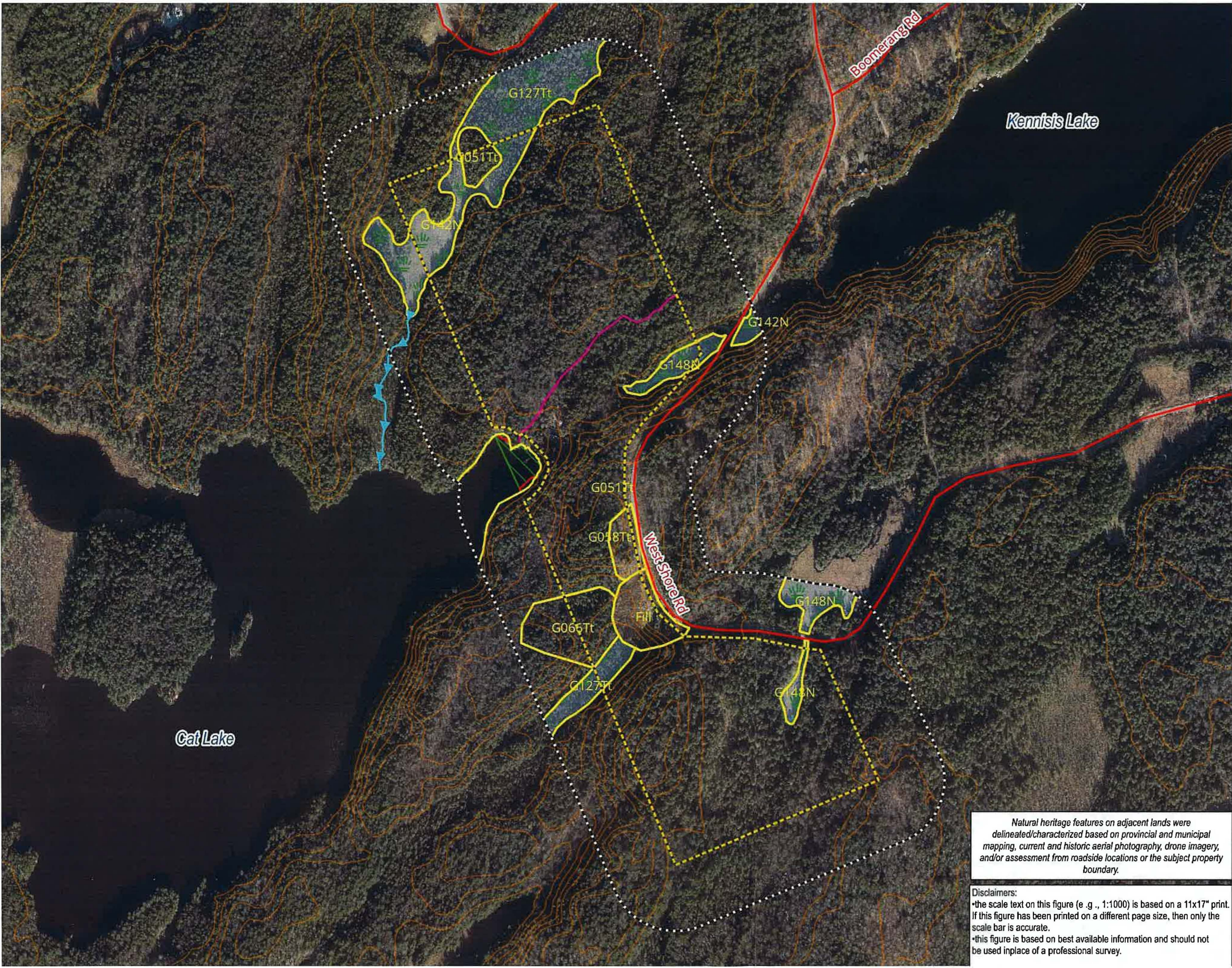
0 150 300 450 600 m
Scale 1:10,000

Figure 1. Location of Subject Property

Part Lot 1, Concession 13, Guilford

Inset: Generalized Location of Subject Property

Disclaimers:
•the scale text on this figure (e.g., 1:1000) is based on a 11x17" print.
If this figure has been printed on a different page size, then only the scale bar is accurate.
•this figure is based on best available information and should not be used in place of a professional survey.





Legend

Planning Boundaries

-  Property Boundary
-  Study Area (120m)

Land Information Ontario (Ontario Geohub)

-  5m Contours
-  Roads

Natural Heritage Features - Identified by RiverStone

-  Wetlands
-  Watercourse
-  Portage Trail

Ecological Land Classification (ELC)

-  Fill Area
-  G051Tt - Dry to Fresh, Coarse: Cedar-Hemlock Conifer
-  G058Tt - Dry to Fresh, Coarse: Maple Hardwood
-  G066Tt - Moist, Coarse: Hemlock-Cedar Conifer

Wetlands

-  G142N - Mineral Meadow Marsh
-  G148N - Mineral Shallow Marsh
-  G127Tt - Poor Conifer Swamp

Fish Habitat Classification

-  Type 1
-  Type 2

Orthorectified Aerial Photograph 2023

RS Project No. 2025-219	Feb 23, 2026	By: ET
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0100200300400 m

Scale: 1:6,500

Natural heritage features on adjacent lands were delineated/characterized based on provincial and municipal mapping, current and historic aerial photography, drone imagery, and/or assessment from roadside locations or the subject property boundary.

Disclaimers:
•the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
•this figure is based on best available information and should not be used in place of a professional survey.

Figure 2. Natural Heritage Features

Part Lot 1, Concession 13, Guilford



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Legend

Planning Boundaries

Property Boundary

Bishop Geyer Topographic Map

Shoreline

Significant Natural Heritage Features - Identified by RiverStone

Wetlands

Portage Trail

Fish Habitat Classification

Type 1

Type 2

Existing Development

Existing Dwelling

Existing Septic

Driveway

Proposed Development

Proposed Dwelling Extension

Proposed Septic

Proposed Garage

Avoidance and Mitigation Measures

Required by Municipality of Dysart et al.

30m Shoreline Setback

120m EP Zoning Setback (Municipality of Dysart et al.)

Recommended by RiverStone

30m Wetland Setback

15.5m Portage Trail Setback

Orthorectified Aerial Photograph 2023

RS Project No. 2025-219 Feb 23, 2026 By: ET

0 10 20 30 40 50 m

Scale: 1:800

Figure 3. Proposed Development and Recommendations

Part Lot 1, Concession 13, Guilford

Natural heritage features on adjacent lands were delineated/characterized based on provincial and municipal mapping, current and historic aerial photography, drone imagery, and/or assessment from roadside locations or the subject property boundary.

Disclaimers:

- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- this figure is based on best available information and should not be used in place of a professional survey.

Cat Lake

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 (<i>Panax quinquefolius</i>)	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	POSSIBLE	POSSIBLE	The subject property and adjacent lands are comprised of extensive coniferous forest dominated by Eastern Hemlock. This species has known to occasionally occur in areas with a substantial Eastern Hemlock component. American Ginseng was not observed during the site investigation, however there is potential for this species to occur within the study area. American Ginseng typically grows in mature forests in low-light conditions; the location of the proposed development is currently disturbed, and would not be expected to support the species. No impacts to American Ginseng are anticipated.
Bank Swallow (<i>Riparia riparia</i>)	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	UNKNOWN	No vertical surfaces composed of sandy substrate were observed within the subject property. No such features are known to occur on adjacent lands. This species is not anticipated to occur.
Black Ash (<i>Fraxinus nigra</i>)	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	NO	YES	POSSIBLE	Black Ash was not observed during the site investigation. This species is not anticipated to occur.
Blanding's Turtle (<i>Emydoidea blandingii</i>)	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	NO	YES	YES	The shallow marsh communities (G148N) identified and the shoreline of Cat Lake may provide suitable habitat for this species. No impacts to Blanding's Turtle are anticipated if the recommended mitigation measures are followed.
Bobolink (<i>Dolichonyx oryzivorus</i>)	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	No grasslands were identified within the subject property or on adjacent lands. This species is not anticipated to occur.
Chimney Swift (<i>Chaetura pelagica</i>)	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	UNKNOWN	No chimneys or similar structures with features that would facilitate nesting were identified within the subject property. It is unknown if buildings on adjacent lands have such features. This species is not anticipated to occur.

¹Highlighted 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
Eastern Hog-nosed Snake (<i>Heterodon platirhinos</i>)	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	POSSIBLE	POSSIBLE	This species is a habitat generalist, however no records of this species were identified within the subject property or on adjacent lands. No specific habitat features associated with a dwelling or nest to be protected were identified. No impacts to this species are anticipated.
Eastern Meadowlark (<i>Sturnella magna</i>)	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	No grasslands were identified within the subject property or on adjacent lands. This species is not anticipated to occur.
Eastern Red Bat (<i>Lasiurus borealis</i>)	END	The range of the Eastern Red Bat extends from east of the Western Cordillera to the Gulf of Mexico. They are long-distance migrants that travel to the southern United States to overwinter. Their summer habitat is deciduous and coniferous forests. Roost habitat is within the foliage of supercanopy trees.	YES	NO	YES	YES	The subject property and adjacent lands are comprised of extensive coniferous forest with some areas of deciduous forest; suitable roosting habitat is present within the subject property and on adjacent lands. Additional surveys targeting this species may be required in the future if extensive tree removal is proposed.
Eastern Small-footed Myotis (<i>Myotis leibii</i>)	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	NO	NO	NO	No rocky features that would facilitate roosting were identified within the subject property or on adjacent lands. This species is not anticipated to occur.
Hoary Bat (<i>Lasiurus cinereus</i>)	END	The Hoary Bat is a long-distance migrant with a range that extends from British Columbia to the Atlantic provinces. Hoary Bats roost alone or with their pups on tree branches in deciduous and coniferous forests of any age class. Maternity roost trees tend to be large and as tall or taller than the surrounding canopy. Foraging habitat includes wetlands, open areas, and forest edges and gaps.	YES	NO	YES	YES	The subject property and adjacent lands are comprised of extensive coniferous forest with some areas of deciduous forest; suitable roosting habitat is present within the subject property and on adjacent lands. Additional surveys targeting this species may be required in the future if extensive tree removal is proposed.
Least Bittern (<i>Ixobrychus exilis</i>)	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	NO	NO	NO	No wetlands with extensive cattail cover were identified within the subject property or on adjacent lands. This species is not anticipated to occur.

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Lesser Yellowlegs <i>(Tringa flavipes)</i>	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	YES, OBBA	NO	NO	The shoreline of Cat Lake in the vicinity of the subject property is not anticipated to provide sufficient marsh vegetation to support congregations of migrating shorebirds. Wetlands identified that contain open water are likely too small to support congregations of migrating shorebirds. This species is not anticipated to occur.
Little Brown Myotis <i>(Myotis lucifugus)</i>	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	NO	YES	YES	The subject property and adjacent lands are comprised of extensive coniferous forest with some areas of deciduous forest; suitable roosting habitat is present within the subject property and on adjacent lands. Additional surveys targeting this species may be required in the future if extensive tree removal is proposed.
Northern Myotis/Northern Long-eared Bat <i>(Myotis septentrionalis)</i>	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	NO	YES	YES	The subject property and adjacent lands are comprised of extensive coniferous forest with some areas of deciduous forest; suitable roosting habitat is present within the subject property and on adjacent lands. Additional surveys targeting this species may be required in the future if extensive tree removal is proposed.
Pale-bellied Frost Lichen <i>(Physconia subpallida)</i>	END	Pale-bellied Frost Lichen are known to occur in Lanark, Renfrew, Hastings, and Frontenac counties. They require high humidity, frequent fog, and moderate to high shade. They grow on American Elm, Ash species, Ironwood, and old rails. They are sensitive to edge effects and prefer mature and old growth forests.	YES	NO	NO	UNKNOWN	Pale-bellied Frost Lichen is not known to occur in Central Haliburton. The tree species that this lichen typically grows on were not identified within the subject property. It is unknown if these tree species occur on adjacent lands. This species is not anticipated to occur.
Silver-haired Bat <i>(Lasionycteris noctivagans)</i>	END	Silver-haired Bats are found throughout all of Ontario but are uncommon near Hudson Bay. They migrate to the United States and southeastern British Columbia to overwinter. They roost under bark and within cavities in coniferous and deciduous trees, and may also roost in anthropogenic structures. Foraging habitat is within forests and forest edges.	YES	NO	YES	YES	The subject property and adjacent lands are comprised of extensive coniferous forest with some areas of deciduous forest; suitable roosting habitat is present within the subject property and on adjacent lands. Additional surveys targeting this species may be required in the future if extensive tree removal is proposed.
Spotted Turtle <i>(Clemmys guttata)</i>	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	YES	YES	The shallow marsh communities (G148N) identified and the shoreline of Cat Lake may provide suitable habitat for this species. No impacts to Spotted Turtle are anticipated if the recommended mitigation measures are followed.

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Tricolored Bat (<i>Perimyotis subflavus</i>)	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	NO	YES	YES	The subject property and adjacent lands are comprised of extensive coniferous forest with some areas of deciduous forest; suitable roosting habitat is present within the subject property and on adjacent lands. Additional surveys targeting this species may be required in the future if extensive tree removal is proposed.

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