



Scoped Environmental Impact Study – 1 Rabbit Point Island, Hastings Highlands, Ontario

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Prepared for:
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1.0 Introduction

Cambium Inc. (Cambium) was retained by Brent Lockridge to conduct a Scoped Environmental Impact Study at 1 Rabbit Point Island (Roll # 12902780100550000000), within the Municipality of Hastings Highlands, County of Hastings, Ontario (Figure 1). The proposed development includes an addition to an existing dwelling as well as the replacement of the existing septic tank requiring a Permission Application and a potential Minor Variance.

Given the location and scale of the proposed development, the entire property will be considered the Site for this report.

The following Scoped Environmental Impact Study (EIS; the Study) confirms and characterizes natural heritage and hydrologic features identified through the preliminary review process, evaluates their ecological significance and function, and assesses potential impacts associated with the proposed development. A constraints-based analysis was completed to identify appropriate development limits, including minimum setbacks, and to evaluate conformity with applicable policy and regulatory requirements. Mitigation measures, compensation (where required), and best management practices are provided to support approvals.

Based on a preliminary desktop review, the Site contains and/or is located within 120 m of the following mapped natural heritage and/or hydrologic features:

- Waterbody (Baptiste Lake)

The Site is located within Ecoregion 5E of Ontario (Crins, Gray, Uhlig, & Wester, 2009), and outside of settlement area boundaries.

This Study has been prepared to support development applications for the Site and includes a review of background information sources, a description of methods used to collect site-specific natural heritage data, a summary of field investigations, and an evaluation of the form, function, and significance of natural heritage features. The results were used to assess feature sensitivity, evaluate potential impacts, and identify development constraints in accordance with applicable policy and approval requirements.



1.1 Terms of Reference

The Terms of Reference (TOR) were circulated to the Municipality of Hastings Highlands (John Jardine), for review and comment. A response was received from the Municipality dated June 24, 2026, confirming the TOR. Relevant correspondence and documentation are included in Appendix A.

1.2 Summary of Proposed Development

The Site is an island property on Baptiste Lake. The Site is approximately 0.87 hectares (ha) in size with an existing dwelling, and associated shed, bunkie and dock structures generally located in the southern area of the Site. The remaining Site including the eastern half is entirely treed and vacant.

The proposed development includes an addition to the existing dwelling as well as the replacement of the existing septic tank. A Conceptual Site Plan is provided in Appendix B. This Site Plan is preliminary and was used for the purpose of scoping the Study. Note that future Site Plans submitted in support future permit applications should include the recommendations provided herein.



2.0 Natural Heritage Policy Context

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

- Provincial Planning Statement, 2024 (PPS)
- County of Hastings Official Plan (2017)
- Municipality of Hastings Highlands Zoning By-law, 2004 (consolidated December 2023)
- *Species Conservation Act, 2025* (SCA)
- *Species at Risk Act* (SARA)
- *Fisheries Act*
- *Migratory Birds Convention Act, 1994* (MBCA)

This Study includes an assessment of conformity of the proposed development with relevant natural heritage policies. A summary of policy conformity is included in Section 7.0.

2.1 Municipal Official Plans and Zoning By-Law

The land use designations and zoning of the Site are summarized in Table 1.

Table 1 Summary of Municipal Official Plan Designations and Zoning

Source	Designation / Zoning
Official Plan – County of Hastings	WR – Waterfront Residential
Zoning By-law – Municipality of Hastings Highlands	WR – Waterfront Residential



3.0 Technical Approach and Data Collection Methods

3.1 Background Information Review

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

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

- Land Information Ontario (LIO) database via the online Natural Heritage Areas: Make-a-Map tool (Ministry of Natural Resources and Forestry, 2022)
- Natural Heritage Information Center (NHIC) database: species at risk (SAR) occurrence records
- Online Atlas Data:
 - Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature, 2020)
 - Ontario Breeding Birds Atlas (OBBA) (2001-2005) (Bird Studies Canada, 2005)
- Aquatic Species at Risk distribution maps (Fisheries and Oceans Canada, 2022)
- Aquatic Resource Area Summary Data (Government of Ontario, 2022)
- Fish ON-Line (Ministry of Natural Resources and Forestry, 2022)

Mapped natural heritage features present in the general area of the Site are shown on Figure 1. A summary of background review results is provided in Table 2.



Table 2 Background Review Summary

Source	Location Reference	Relevant Records
LIO Geographic Database	Site and 120 m adjacent lands	Waterbody (Baptiste Lake)
NHIC Database	Grid Square: 18TQ6799	No relevant records available.
Ontario Breeding Bird Atlas (OBBA)	Grid Square: 18TTQ69	Incorporated into list of species within Appendix C
Ontario Reptile and Amphibian Atlas (ORAA) (ORAA, 2023)	Grid Square: 18TQ69	Incorporated into list of species within Appendix C
Aquatic SAR distribution maps	Site and 120 m adjacent lands	None

Note: THR = Threatened species; END = Endangered species. Status designations (THR/END) reflect listings under Ontario Regulation 60/26 made under the Species Conservation Act, 2025, and Schedule 1 of the federal Species at Risk Act (SARA), as applicable. The Species of Conservation Concern Screening provided in Appendix C includes a list of all species within the overlapping OBBA and ORAA squares with potential policy implications.

3.2 Field Investigations

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

All surveys were conducted by appropriately trained Cambium staff. Data were documented manually, reviewed upon return to the office, and transposed to digital format for secure data management.

A summary of the field investigations completed on the Site is presented in Table 3. Representative Site photos are included within the Photo Log in Appendix E.



Table 3 Summary of Field Investigations

Date	Time On Site	Atmospheric Conditions	Observer	Activities
2026-07-02	0945-1245	Air Temp: 26.0 – 30.0°C Wind: 1 Noise: 1 Sky: 0	M. Horn	Ecological Land Classification Aquatic Habitat Assessment Habitat-based Encounter Survey

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

3.2.1 Plant Communities and Flora

3.2.1.1 Ecological Land Classification and Vegetation Surveys

The Ecological Land Classification (ELC) System for Northern Ontario (Banton. E., 2009) was used to classify vegetation communities on the Site. ELC units were initially delineated and classified by orthoimagery interpretation. Field investigations served to confirm the type and extent of ELC communities on the Site through vegetation surveys and soil assessments with a hand auger, where vegetation types could not be classified based on vegetation alone. Where vegetation communities extended off the Site, classification was completed through observation from property boundaries and publicly accessible lands.

Vegetation data reported herein includes the provincial status of plant species and vegetation communities, where such information exists. Sensitivity of individual vegetation species was evaluated based on the coefficient of conservatism (CC) which is a measure of the tolerance of a species to disturbance and fidelity to a specific habitat type; species with CC of 9-10 exhibit a high degree of fidelity to a narrow range of habitat parameters. The sensitivity of vegetation communities was evaluated through an assessment of various community attributes including age, habitat quality, degree of disturbance, presence of non-native/invasive species, and presence of sensitive plant species (plants with CC of 9-10). A description of CC values is provided in Table 4.

**Table 4 Coefficient of Conservatism (Adapted from Oldham et al. 1995)**

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

3.2.2 Aquatic Habitat and Fish

3.2.2.1 Aquatic Habitat Assessment

Aquatic habitat surveys identified and mapped all on-site aquatic features, including waterbodies, watercourses (permanent and intermittent), seeps, springs, and overland drainage paths. Orthoimagery and topographic mapping were used to identify connected features on adjacent inaccessible lands.

On-site features were characterized based on in-stream and riparian cover, channel structure/morphology, substrates, flow, and hydrologic characteristics, as well as indicators of instability, erosion/sedimentation, groundwater, and flow permanency. Crossing structures were documented and georeferenced.

All features were assessed for fish habitat potential, including sensitive habitats (e.g., spawning, overwintering, migratory corridors). Fish observations, connectivity, and movement barriers were recorded to inform their function within the aquatic network and subwatershed.



3.2.3 Wildlife and Wildlife Habitat

3.2.3.1 Habitat-Based and Encounter Surveys

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

Encounter surveys included track and sign surveys, area searches, and incidental observations, concurrent with other field surveys. Any wildlife (including mammals, reptiles, amphibians, birds, butterflies, native bumble bees and dragonflies) seen and identified were recorded. When encountered, tracks and other signs (e.g., stick or cavity nests, scats, hair, tree scrapes, etc.) were identified to a species, if possible, and recorded.

3.2.4 Approach to Assessment of Significance and Impact Assessment

An assessment was conducted to determine the significance of natural features as well as significant species observed or determined to have the potential to exist on the Site or on adjacent lands. The assessment was completed by analysing natural environment data collected through the background material described in Section 3.1 and field surveys, using the methods and criteria outlined in the following reference materials:

- Natural Heritage Reference Manual [NHRM; (MNRF, 2010)]
- Significant Wildlife Habitat Technical Guide [SWHTG; (MNRF, 2000)]
- Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E [SWHCS; (MNRF, 2015)]

An assessment was then conducted to determine how the proposed project may negatively impact significant natural features or SAR. Preventative, mitigative, and remedial measures



were considered in assessing the net effects of the proposed project on the surrounding ecosystem. Where impacts to significant wildlife habitat were determined to be possible, mitigation was determined using the guidance provided in the Significant Wildlife Habitat Mitigation Support Tool [SWHMiST; (MNRF, 2014)].



4.0 Existing Conditions

Data acquired through the background information review and field investigations is summarized in the following sections.

4.1 Landscape Position and Topography

The Site is located within the Ontario Shield Ecozone: Georgian Bay Ecozone 5E, which is located in south-central Ontario, extending southeast from Lake Superior to the central portion of the Ottawa River valley in the east, including Parry Sound, Perth, North Bay, Sudbury, and Sault Ste. Marie. This Ecozone is characterized by frequently exposed bedrock, shallow soils, and mixed forests representative of the Great Lakes – St. Lawrence Forest Region (Lee, et al., 1998).

The Site is situated on relatively elevated terrain at approximately 357 masl (metres above sea level). Topography across the property was generally uniform and gently undulating, with a gradual slope toward the southeastern shoreline of Baptiste Lake. The terrain was characterized by some exposed bedrock, while relief within the Site was limited as no pronounced steep slopes or abrupt changes in elevation were observed.

4.2 Current and Historic Land Use

The Site is currently developed with a single detached dwelling, shed, bunkie, and dock, generally located within the southern portion of the property. The remainder of the Site, including the eastern half, is treed and undeveloped. The dwelling was constructed in 1958, prior to the enactment of any zoning bylaw in the former Township of Herschel. Since the Township of Herschel Zoning By-law was implemented in 1979, a minimum setback of 30 metres from the high-water mark of a lake has been required. As the dwelling predates the zoning bylaw and does not meet the current setback requirements, it is considered a legal non-conforming structure and use. The residential use of the property has continued since its original construction.



4.3 Surface Water, Hydrology, and Hydrogeology

The Site is located in the north-end of Baptiste Lake. Fish Habitat within Baptiste Lake is discussed in Section 4.5.

No watercourses are mapped on or adjacent to the Site and no watercourses or drainage features were observed by Cambium staff during the field investigations.

4.4 Plant Communities and Species

4.4.1 Ecological Land Classification

The plant communities on the Site are summarized in Table 5 and are mapped on Figure 2. A list of species identified within each community is provided in Appendix D and representative photos for each community are provided in Appendix E.

Table 5 Plant Communities

No.	ELC Code	Community Description
1	G0223	White Pine - Red Pine Mixed Forest Ecosite
2	G148N	Open Water Marsh

A total of two vegetation communities were identified on the Site, which are shown on Figure 2. The majority of the Site was characterized as a White Pine - Red Pine Mixed Forest Ecosite (Community 1). Community 1 was dominated by Eastern White Pine (*Pinus strobus*) with co-dominant Red Pine (*Pinus resinosa*) and Eastern Hemlock (*Tsuga canadensis*), and major associates included White Birch (*Betula papyrifera*) and Eastern White Cedar (*Thuja occidentalis*).

During field investigations it was observed that the island splits in the west with a thin, narrow open water marsh (Community 2) separating the east and west portions of the Site. This community was documented with sparse emergent vegetation consisting of Watershield (*Brasenia schreberi*) and Broad-leaved Arrowhead (*Sagittaria latifolia*).



4.5 Fish and Fish Habitat

Baptiste Lake is known to support a diverse fish community reliant on thermal habitat conditions varying from warmwater to coolwater. The shoreline and nearshore aquatic habitats surrounding the Site provide moderate overall fish habitat potential, supported by a diversity of riparian cover, shoreline shading, mixed substrate conditions, aquatic vegetation, and localized woody structure. Fish habitat quality is generally highest along the south shoreline and within the island split channel, where Watershield and Broad-leaved Arrowhead, woody debris, shallow-water areas, and organic substrates contribute to increased habitat complexity and provide potential refuge, foraging, and nursery habitat for juvenile fish although fish habitat is expected to be broadly distributed throughout nearshore areas of Baptiste Lake. The west and north shorelines also offer habitat value through extensive riparian vegetation, shoreline shading, and areas of cobble substrate, although the relative lack of aquatic vegetation and limited in-water structure reduce habitat complexity in these areas.

Overall, the Site supports a range of shoreline and nearshore habitat features that are expected to provide suitable seasonal habitat for common warmwater fish species, with the greatest habitat function associated with vegetated shallow-water areas and structurally diverse shoreline zones.

No aquatic species at risk are documented in the vicinity of the Site based on DFO's Aquatic SAR distribution maps (Fisheries and Oceans Canada, 2022).

A photographic log showing the extent of the shoreline habitat throughout the Site is provided in Appendix E.

4.6 Wildlife and Wildlife Habitat

As detailed in the above sections, the Site is primarily comprised of forested landscape with limited anthropogenic disturbance. The Site features a coniferous forest with potential for nesting birds, and mammal species are likely to inhabit the Site and the broader landscape surrounding the Site. No evidence of turtle or amphibian habitat potential for breeding or nesting purpose was observed on the Site; however, the surrounding Baptiste Lake may



provide potential for these species to use the Site as generally foraging or refuge purposes. Fish habitat potential features were prevalent as noted in Section 4.5, however this habitat is not a limiting feature given the broader landscape surrounding the Site. During field investigations one wildlife tree was observed to have a cavity which may be used by various bat species as a potential roost.

Indirect (i.e., bird songs, calls) wildlife species observations on the Site included: American Crow (*Corvus brachyrhynchos*), Black-capped Chickadee (*Poecile atricapillus*), Blue Jay (*Cyanocitta cristata*), Chipping Sparrow (*Spizella passerina*), Common Loon (*Gavia immer*), Common Raven (*Corvus corax*), Mallard (*Anas platyrhynchos*), Red-breasted Nuthatch (*Sitta canadensis*), Red-eyed Vireo (*Vireo olivaceus*), and Song Sparrow (*Melospiza melodia*).



5.0 Assessment of Significance and Impact Assessment

This section assesses the significance of natural features and functions (as outlined in Section 3.2.4) observed on the Site or on adjacent lands, as well as the potential impacts to those features that may result from the proposed project, in consideration of the recommended mitigation measures. No significant wetlands, coastal wetlands, significant woodlands, significant valleylands, or Areas of Natural and Scientific Interest (ANSIs) were identified on or adjacent to the Site and are therefore not discussed further herein.

5.1 Significant Wildlife Habitat

The NHRM includes high level guidance for identifying SWH, which is further refined in the Significant Wildlife Habitat Technical Guide (SWHTG) and the Significant Wildlife Habitat Criteria Schedules (SWHCS) (MNRF, 2000; MNRF, 2015). These documents are the basis for identifying areas and features that are considered SWH by the province, and were used in this study to determine SWH at the Site and on adjacent lands.

In accordance with the criteria outlined in the SWHCS, wildlife species of conservation concern are typically identified based on provincial conservation status, including special concern and provincially rare (S1–S3) rankings. However, pursuant to recent regulatory updates under the *Species Conservation Act, 2025* and associated Ontario Regulation 60/26, species designated as special concern are no longer afforded habitat protection under the Act. As such, within the context of this EIS, the identification and assessment of SWH associated with wildlife species of conservation concern is restricted to provincially rare species ranked S1–S3.

The table provided in Appendix F outlines all the types of SWH that are to be considered in ecoregion 5E according to the SWHCS, and includes an assessment of whether or not the criteria for ‘candidate’ SWH is present at the Site for each type (i.e., presence/absence of listed ELC ecosite codes and/or habitat criteria). Where ‘candidate’ SWH is present at the Site, the table goes on to compare the habitats and results of field surveys at the Site to the defining criteria as listed in the SWHCS to determine presence/absence of ‘confirmed’ SWH. Where ‘confirmed’ SWH is identified through the analysis presented in Appendix F, those types of



SWH are discussed below in the context of the proposed development. Where presence of 'confirmed' SWH can not be ruled out, a conservative approach has been implemented by identifying 'candidate' SWH.

5.1.1 Confirmed Significant Wildlife Habitat

The following sections provide discussion of confirmed SWH types identified on Site

5.1.1.1 Deer Yarding Areas

According to the Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E, Deer Wintering Habitat is identified as SWH and includes core wintering areas (Stratum I) and surrounding winter staging areas (Stratum II). Stratum I habitat represents the core of a deer yard and generally consists of conifer-dominated forest that provides thermal cover, reduced snow depths, and protection from wind during severe winter conditions. These areas function as part of a broader wintering complex that supports deer survival throughout the winter season.

Provincial mapping identifies the subject property as occurring within a Deer Wintering Habitat (Stratum I). While the island is entirely encompassed by the mapped SWH, the property is a small island of approximately 0.87 ha and represents a minor component of a substantially larger deer wintering habitat complex extending throughout the surrounding landscape. The ecological function of deer wintering habitat is dependent on the broader network of winter cover, feeding areas, and movement opportunities available across the landscape rather than the island in isolation.

The proposed development consists of a modest addition to an existing cottage. The addition will be located directly adjacent to the existing residential footprint and will not require the creation of new access routes, shoreline alterations, or extensive vegetation clearing. No barriers to wildlife movement will be introduced, and the proposed works will not isolate portions of the mapped habitat or interfere with access to adjacent habitat areas. The development therefore represents a negligible reduction in the amount of available habitat within the broader mapped deer wintering area.



The Significant Wildlife Habitat Mitigation Support Tool identifies avoidance as the preferred mitigation measure for deer wintering habitat and notes that where complete avoidance is not possible, impacts can be mitigated by minimizing the amount of habitat affected and directing development to locations where deer activity is expected to be lowest, such as previously disturbed habitat edges. The proposed cottage addition is consistent with this approach, as it is situated within an existing developed area and will result in only a minor encroachment into the mapped habitat (Ontario Ministry of Natural Resources and Forestry, 2014).

Given the limited scale of the proposed works, and the negligible contribution of the affected area to the overall extent and function of the broader mapped Deer Wintering Habitat, the proposed cottage addition is not expected to adversely affect the ecological function of the Deer Wintering Habitat (Stratum I) SWH. Therefore, no negative impacts to the identified SWH are anticipated.

5.1.2 Significant Wildlife Habitat – Adjacent Lands

The following sections provide discussion of SWH types identified on adjacent lands.

Candidate SWH associated with turtle wintering areas and habitat for special concern and rare wildlife species, including Northern Map Turtle, was identified due to the presence of Baptiste Lake adjacent to the Site. The proposed cottage addition and septic system relocation will be situated farther from the shoreline than the existing cottage and septic system. While minor vegetation removal is required, no shoreline alteration, in-water works, or impacts to aquatic habitat are proposed. Given the increased setback from the lake and the limited scale of vegetation removal, no negative impacts to candidate SWH functions or potential Northern Map Turtle habitat are anticipated.

5.2 Fish Habitat

Fish habitat is present within Baptiste Lake adjacent to the subject property. The proposed development consists of a modest addition to the existing cottage and replacement of the existing septic system associated with the long-established residential use of the property. The



proposed works will occur within the existing developed area of the Site and do not include shoreline alteration, in-water works, dredging, filling, or removal of aquatic habitat.

The replacement septic system is proposed in a location that increases separation from Baptiste Lake relative to the existing system, thereby reducing the potential for effects on water quality. Existing shoreline vegetation will be retained to the greatest extent possible and existing drainage patterns will be maintained. Potential construction-related effects will be mitigated through implementation of appropriate erosion and sediment control measures and other best management practices outlined in Section 6.0.

Although the cottage addition will extend toward the interior portion of the island, the proposed development does not increase the shoreline development footprint, affect shoreline habitat, or alter aquatic features associated with Baptiste Lake. Given the limited scale of the proposal and the absence of direct disturbance to fish habitat, negative impacts to fish habitat or its ecological functions are not anticipated.

5.3 Habitat of Endangered and Threatened Species

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

Bats (Endangered; SCA)

Suitable habitat features for species at risk bats were assessed within the proposed development area and adjacent lands. The assessment focused on identifying potential roosting habitat, including large trees containing cavities, loose bark, cracks, crevices, or other features that could support bat maternity or day roosts.



One potential wildlife tree with characteristics that may provide bat roosting habitat was identified on the northern shoreline of the property, as shown on Figure 3. This tree is located well outside of the proposed development footprint and will not be affected by the proposed cottage addition, septic system relocation, or associated vegetation removal activities.

The proposed works are limited to an area associated with the existing cottage development and do not require the removal of the identified potential wildlife tree or other trees containing suitable bat habitat features. As such, no loss or alteration of potential bat roosting habitat is anticipated. Given the location and limited extent of the proposed development, no adverse effects on bats or their habitat are expected.



6.0 Recommended Mitigation, Best Practices, and Monitoring

The mitigation measures and best management practices outlined below should be implemented on the Site, to minimize the potential for adverse impacts to natural heritage features and functions on and adjacent to the Site.

6.1 Mitigation for Significant Natural Features

The proposed development has been designed to avoid or minimize impacts to natural heritage features by locating the addition adjacent to the existing developed area, limiting vegetation removal, retaining shoreline and wildlife habitat features, and avoiding in-water works, shoreline alterations, and impediments to wildlife movement. Appropriate construction mitigation measures, including erosion and sediment controls, wildlife protection measures, and retention of identified habitat features, will be implemented. Overall, the development is expected to maintain the ecological functions and connectivity of the surrounding natural heritage system while reducing potential risks to water quality through the relocation of the septic system farther from Baptiste Lake.

6.2 Best Management Practices

The mitigation measures and best management practices outlined in Table 6 should be implemented on the Site, to minimize the potential for adverse impacts to natural heritage features and functions on and adjacent to the Site.

Table 6 Best Management Practice Recommendations

Potential Impact	Recommended Best Practice
Erosion and Sedimentation	Prior to any construction activities taking place, it is essential that perimeter sediment fencing be installed around construction areas, where feasible. Fencing should be properly keyed into the ground and securely fastened to vertical supports spaced ≤ 2 m apart. This key control measure will help prevent sediment from entering surface water features in the surrounding landscape. All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated. Any observed overland drainage channels originating from Site, that



Potential Impact	Recommended Best Practice
	may or may not have arisen as a result of erosion, should be directed to a check dam structure, prior to discharging to off-site areas. Construction activities that require earthworks (e.g., grading, excavation, etc.) should be scheduled to avoid dates of heavy rainfall events and times of high runoff volumes.
Wildlife: Birds (Disturbance and Harm)	Nesting birds and their nests, eggs, and young are protected under the <i>Migratory Birds Convention Act, 1994</i>. Vegetation clearing on the Site should occur outside the breeding bird season, which extends from April 1 to August 31 in the local area (as per Environment and Climate Change Canada Guidelines). If vegetation clearing or construction is to occur between April 1 to August 31, the vegetation should be investigated by a qualified biologist to confirm if any active nests are present, prior to site alteration. Vegetation clearing can proceed provided there are no active nests. If active nests are confirmed, the nests should be left undisturbed until young have fledged or the nest is determined to be inactive. Note that some birds nest on the ground and in low-lying vegetation and shrubs; therefore, all habitat types should be inspected prior to ground disturbance if removals are to occur during the breeding season.
Wildlife: Reptiles (Disturbance and Harm)	Turtles and snakes are particularly vulnerable to construction-related impacts on sites adjacent to wetlands, watercourses, and waterbodies. Sediment fencing can function as wildlife exclusion fencing. To exclude wildlife from the Site, sediment fencing should be installed around the entire perimeter of the construction area prior to the earlier of May 1 or commencement of Site preparation to keep turtles and snakes from entering the construction area. This fencing should be made of heavy-duty sediment fence, staked at regular intervals, trenched-in at least 10-20 cm below surface of the ground, with an above-ground height of at least 60 cm. The sediment fence should be inspected regularly to ensure that it remains in good condition: and any downed areas, rips, or holes should be repaired or replaced immediately. A designated point of ingress/egress should be identified, and a moveable barrier be constructed, to allow for the Site to fully remain enclosed while allowing vehicular access to the Site as needed. The construction area should also be actively inspected for turtles and snakes each day prior to the start of work throughout the duration of construction.



Potential Impact	Recommended Best Practice
	As the Site is located adjacent to potential habitat for turtles, workers should be aware of the nesting season for turtles, which extends from May 15 to August 15. All stockpiled materials should be kept inside the exclusion fencing area and ideally should be covered and well secured around the base, to prevent turtles from nesting in loose substrates. Should any nesting turtles be encountered, work should stop immediately, and the turtle should be left to finish nesting undisturbed. The turtle should be photographed, and the nest marked to ensure it is not disturbed during construction, or until eggs have hatched (late August – September). If a nest is laid in a stockpile or other area that requires disturbance, Cambium should be contacted to determine if the nest can be relocated. If any individuals are encountered, they should be photographed and allowed time to move out of harm's way.
Species at Risk (SAR; Threatened and Endangered)	SAR observations, including most species of snakes and turtles, should be reported to the Natural Heritage Information Centre (NHIC). If any individuals are encountered, they should be photographed and allowed time to move out of harm's way. SAR should not be handled by unauthorized individuals.
Spread of Invasive Species	Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands, woodlands, and watercourses. Best management practices to reduce the spread of invasive species include: 1. Revegetate with species native to the local area. 2. Request fill and compost from reputable sources that are conscious of the potential for the spread of invasive species via these media. 3. Get to know the most common invasive species in the area. 4. Brush off or clean any shoes, boots and equipment that have encountered invasive species before returning to the property. Equipment and vehicles coming into the work area should be free of soil and seeds that could introduce non-native and invasive species following the Clean Equipment Protocol for Industry: Inspecting and Cleaning Equipment for the Purposes of Invasive Species Prevention (Halloran, 2013) 5. Immediately eradicate invasive species if they are observed on the property. 6. Do not compost invasive species; put them in plastic bags and dispose of them in the garbage.



Potential Impact	Recommended Best Practice
	7. Do not dispose of lawn or garden clippings in the forest or wetlands to avoid species introductions. An excellent resource for identifying and controlling invasive species can be found through the Ontario Invasive Plant Council: Home - Ontario Invasive Plant Council (ontarioinvasiveplants.ca) (OIPC, 2022)



7.0 Policy Conformity and Regulatory Compliance

7.1 Provincial Policies and Regulations

Based on the natural heritage and/or hydrologic features identified on or adjacent to the Site and the findings of the field investigations detailed herein, the proposed development is in conformity with the PPS. Conformity with applicable natural heritage policy is further demonstrated in Table 7. Note that natural heritage and hydrologic feature types not relevant to the development application have been intentionally omitted from the tables below.

Table 7 PPS Policy Conformity Summary

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Significant Wildlife Habitat (including habitat of special concern species)	Yes	Yes	4.1.5 d); 4.1.8
	Explanation: The proposed cottage addition and septic replacement will maintain the ecological function of identified Deer Wintering Habitat and adjacent candidate turtle habitat through minimal vegetation removal, avoidance of shoreline impacts, and retention of wildlife movement opportunities. No negative impacts to Significant Wildlife Habitat are anticipated.		
Habitat of Threatened and Endangered Species	Potentially	Potentially	4.1.7
	Explanation: Habitat suitability assessments identified one wildlife tree with potential roosting features for endangered bat species; however, the tree occurs outside the proposed development area and will not be removed or altered. No habitat of endangered or threatened species will be impacted by the proposed development. Therefore, the proposal is consistent with PPS policy 4.1.7.		
Fish Habitat	No	Yes	4.1.6; 4.1.8
	Explanation: Fish habitat is present in Baptiste Lake adjacent to the Site. The proposed development does not include in-water works, shoreline alteration, dredging, filling, or removal of aquatic habitat. The replacement septic system will increase separation from the shoreline relative		



Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
	to existing conditions. As such, no negative impacts to fish habitat or its ecological functions are anticipated.		

7.1.1 Species Conservation Act, 2025

Based on available information, the proposed development is not expected to adversely affect species at risk bats or their habitat and is considered consistent with the intent of the *Species Conservation Act, 2025*, subject to implementation of recommended mitigation measures.

7.2 Municipal Policies and By-laws

7.2.1 Hastings County Official Plan

The subject property is designated Waterfront Residential in the County of Hastings Official Plan and is located adjacent to Baptiste Lake, which supports fish habitat and is identified as an At Capacity Lake Trout Lake. The property also occurs within a provincially mapped Deer Wintering Habitat (Stratum I), identified as Significant Wildlife Habitat. As such, the applicable natural heritage and waterfront development policies have been considered in this Study.

The proposed development consists of a modest addition to an existing cottage and replacement of an existing septic system associated with an established residential use. The existing dwelling predates current shoreline setback requirements and is considered a legal non-complying structure. The proposed addition will be attached to the existing cottage and located within the existing developed area of the property. No new shoreline development areas, access routes, or shoreline alterations are proposed.

Fish habitat is present within Baptiste Lake adjacent to the Site. However, no in-water works, dredging, filling, shoreline modifications, or removal of aquatic habitat are proposed. Existing shoreline vegetation will be retained to the greatest extent possible, erosion and sediment control measures will be implemented during construction, and the replacement septic system will be located farther from the lake than the existing system. Based on the findings of this



Study, the proposed development is not anticipated to result in adverse effects on fish habitat or its ecological functions.

Portions of the Site occur within mapped Deer Wintering Habitat (Stratum I). The proposed works are limited to a small area associated with the existing cottage development and will not result in habitat fragmentation, disruption of wildlife movement, or extensive vegetation removal. The area affected represents a negligible component of the broader deer wintering habitat complex that extends throughout the surrounding landscape. Consequently, the ecological function of the Significant Wildlife Habitat will be maintained.

Baptiste Lake is identified as an At Capacity Lake Trout Lake. The proposal does not create a new lot, dwelling, or shoreline development footprint and will not increase shoreline use intensity beyond the existing residential use of the property. The development is limited to an addition to an existing cottage and replacement of an existing septic system. Given the limited scale of the proposal, improved septic setback, and absence of shoreline or aquatic habitat disturbance, negative impacts to water quality, fish habitat, or the cold-water fishery of Baptiste Lake are not anticipated.

Based on the findings of this Study, the proposed development is consistent with the intent of the natural heritage and waterfront development policies of the County of Hastings Official Plan. Subject to implementation of the recommended mitigation measures, the proposal is not anticipated to result in negative impacts to fish habitat, Significant Wildlife Habitat, water quality, or the ecological functions associated with Baptiste Lake.

7.2.2 Municipality of Hastings Highlands Comprehensive Zoning By-law

The property is zoned Waterfront Residential (WR) and contains an existing legal non-complying dwelling with respect to shoreline setbacks. The proposed addition will be attached to the existing dwelling and does not introduce new shoreline development or increase disturbance within shoreline habitats. Subject to any required planning approvals, the proposal maintains the intent of the shoreline protection provisions of the Zoning By-law while recognizing the legal non-complying status of the existing development.



7.3 Federal Policies and Regulations

7.3.1 Species at Risk Act

The SARA applies to federal lands in Canada; however, at-risk aquatic and migratory bird species located on private property in Ontario also receive protection under the Act.

No federally listed SAR are expected to be impacted from the project.

7.3.2 Fisheries Act

Protection provisions in the federal *Fisheries Act* prohibit the harmful alteration, disruption or destruction (HADD) of fish habitat. Any work proposed within or near a watercourse must be assessed to determine the risk of causing HADD of fish habitat.

The proposed development does not involve any in-water work, the placement of fill, or excavation below the high-water mark. As such, HADD of fish habitat, or the “death of fish” by means other than fishing, will not occur based on the proposed development and the proposed work does not contravene protective provisions outlined in the Fisheries Act.

7.3.3 Migratory Birds Convention Act, 1994

Nesting birds and their nests, eggs, and young are protected under the *Migratory Birds Convention Act, 1994*. Vegetation clearing on the Site should occur outside the breeding bird season, which extends from April 1 to August 31 in the local area (as per Environment and Climate Change Canada Guidelines). Provided this timing window is respected, no impacts to breeding birds are anticipated.



8.0 Summary of Recommendations

The following recommendations are provided for the proposed development:

1. All required approvals and permits should be obtained prior to the commencement of site alteration or construction activities.
2. All setbacks, development limits, and environmental protection measures identified in this Study shall be incorporated into future Site Plans.
3. Vegetation clearing should occur outside the breeding bird season (April 1 to August 31), where feasible. Should any clearing be required during the breeding bird season, nest searches conducted by a qualified person must be completed within 48 hours prior to clearing activities. If nests are found, work within the area must cease until the nest has fledged, as per the federal Migratory Birds Convention Act.
4. Erosion and sediment control measures shall be installed prior to construction and maintained until disturbed areas are stabilized, where feasible.
5. Existing shoreline and riparian vegetation shall be retained to the greatest extent possible.
6. No shoreline alterations, in-water works, dredging, or filling shall occur without further review and applicable approvals.
7. The identified wildlife tree containing potential bat roosting habitat shall be retained.
8. Wildlife exclusion measures and construction monitoring practices identified in Section 6.2 should be implemented, as applicable.
9. Disturbed areas should be stabilized and revegetated with native species following construction.
10. Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands, woodlands, and watercourses. Best management practices to reduce the spread of invasive species detailed in Table 6 should be implemented.



9.0 Closing

In closing, potential negative impacts associated with the proposed development and site alteration can be appropriately minimized, provided that the recommendations outlined in Section 8.0 are followed. The information presented herein demonstrates that the proposed development can be carried out in a way that will not adversely impact natural heritage and hydrologic features and function identified on or adjacent to the subject Site. Furthermore, the proposed development complies with applicable provincial policy.

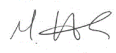
Respectfully submitted,

Cambium Inc.

DocuSigned by:

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Danielle Leal, B.Sc.
Project Manager / Ecologist

DocuSigned by:

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Mitchell Horn, B.Sc.
Technician

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11.0 Statement of Qualifications & Limitations

Limited Warranty

Cambium relies on its client to provide instructions on the scope of work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards, and with the degree of care and skill ordinarily exercised by professionals performing similar services for similar projects in the same region. Unless required under applicable laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

Reliance on Materials and Information

The findings, results, information and data prepared by Cambium are based on the materials, documents and information provided by the client to Cambium and on the facts, conditions and circumstances encountered by Cambium during the performance of the work. In formulating its findings, results, information and data, Cambium assumes that the information, documents and materials provided by the client to Cambium are factual, accurate and represent a true depiction of the circumstances that exist at the Project. Cambium relies on its client to inform Cambium if there are changes to any such information, documents and materials. Cambium does not review, analyze or attempt to verify the accuracy or completeness of the information, documents or materials provided by the client, other than in accordance with applicable accepted industry practice. Cambium will not be responsible for matters arising from incomplete, incorrect or misleading information or from facts or circumstances that are not fully disclosed to Cambium, are unknown by Cambium, or are otherwise concealed from Cambium during the provision of its services.

Facts, conditions, information and circumstances may vary with time and locations and Cambium's work is based on a review of such matters as they existed at the particular time and location indicated in the findings, results, information and data prepared by Cambium. No assurance is made by Cambium that the facts, conditions, information, circumstances or any underlying assumptions made by Cambium in connection with the work performed will not change after Cambium has completed its work. If any such changes occur or additional information is obtained, Cambium should be advised and requested to consider if the changes or additional information affect its work.

When preparing reports, Cambium considers applicable legislation, regulations, governmental guidelines and policies. Cambium is not qualified to advise with respect to legal matters. The presentation of information regarding applicable legislation, regulations, governmental guidelines and policies is for information purposes only and is not intended to and should not be interpreted as constituting a legal opinion concerning the work completed or conditions outlined in a report. All legal matters should be reviewed and considered by an appropriately qualified legal practitioner.

Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work considers any locations or times other than those from which information, sample results and data was specifically received, the work shall be based on a reasonable extrapolation from such information, sample results and data, but the actual conditions encountered may vary from those extrapolations.

Only conditions at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested and paid for by the client. Any physical or other aspects of the site chosen for study by the client, or any other matter not specifically addressed in findings, results, information and data prepared by Cambium, are beyond the scopes of the work performed by Cambium and such matters have not been investigated or addressed.

Intellectual Property Rights

Upon full payment of all fees properly owing to Cambium, the client shall have a perpetual, non-exclusive, non-transferable license (without sub-licensing rights) to use the work and reports prepared by Cambium solely for their intended purpose. For greater certainty, Cambium retains all right, title, and interest in and to the work and reports, and they may not be modified, used for other purposes, or relied upon for additional work without Cambium's prior written consent.

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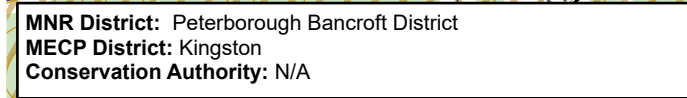
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Personal Liability

The client expressly agrees that Cambium employees shall have no personal liability to the client with respect to a claim, whether in contract, tort and/or other cause of action in law. Furthermore, the client agrees that it will bring no proceedings nor take any action in any court of law against Cambium employees in their personal capacity.

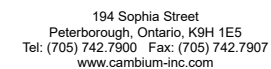


Appended Figures



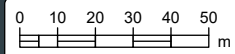
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SITE LOCATION AND POLICY AREAS

Project No.: 02632391.000		Date: August 2026	
Scale: 1:10,000		Projection: NAD 1983 UTM Zone 18N	
Created by: NLB	Checked by: DL	Figure: 1	



LEGEND

-  Potential Wildlife Tree
-  Contour (5m Interval)
-  Vegetation Communities
-  Site (approximate)
-  120m Adjacent Lands

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NATURAL HERITAGE FEATURES AND ECOLOGICAL SURVEY STATIONS

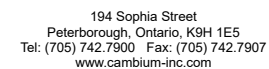
Project No.: 02632391.000		Date: August 2026	
Scale: 1:2,000		Projection: NAD 1983 UTM Zone 18N	
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- Potential Wildlife Tree
- Proposed Septic Tank Location
- Existing Septic
(For Removal / Replacement)
- Contour (5m Interval)
- Cottage
- Cottage Addition
- Vegetation to be Maintained
- Site (approximate)
- 120m Adjacent Lands

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NATURAL HERITAGE CONSTRAINTS

Project No.: 02632391.000		Date: August 2026	
Scale: 1:1,500		Projection: NAD 1983 UTM Zone 18N	
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Appendix A
Correspondence



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Laboratory

Peterborough



June 22, 2026

The Municipality of Hastings Highlands
33011 Hwy 62N
P.O. Box 130
Maynooth, ON, K0L 2S0

Attn: John Jardine, Municipal Planner
<jjardine@hastingshighlands.ca>

**Re: Proposed Terms of Reference for Scoped Environmental Impact
Study at 1 Rabbit Point Island
Cambium Reference: 02632391.000**

Dear John,

Cambium has been retained to conduct a Scoped Environmental Impact Study (EIS; the Study) at 1 Rabbit Point Island, Hastings Highlands, Ontario. (the Site). We understand that the Client is pursuing an addition to the existing dwelling as well as the replacement of the existing septic tank requiring a Permission Application and a potential Minor Variance.

A proposed Terms of Reference (ToR) has been outlined below for the forthcoming EIS in order to meet the requirements of the Municipality.

FIELD INVESTIGATIONS

To characterize the natural features on the Site and adjacent lands, and verify the accuracy of background information collected, Cambium will conduct a one-day site reconnaissance visit in July, to coincide with the active season for most of Ontario's flora and fauna.

The following activities will be completed as part of the site reconnaissance:

- Develop a high-level map of vegetation communities by applying the Ecological Land Classification (ELC) system (Lee et al. 1998);
- Delineate the boundaries of wetlands on the Site, if present;
- Gather aquatic habitat information for surface water features, if present;
- Document plant and wildlife species occurrences, and habitat features; and,



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June 22, 2026

- Collect a photographic inventory of the Site with a focus on natural features and areas, and wildlife habitats.

REPORTING

Cambium will also prepare a detailed report that includes:

- An overview of applicable natural heritage policy and regulation;
- A summary of the background information collected;
- A summary of field investigations carried out, and associated protocols;
- Descriptions of natural heritage and hydrologic features identified on and adjacent to the Site;
- A habitat-based screening for species of conservation concern (including species at risk), supplemented by targeted survey results, where applicable;
- An assessment of Significant Wildlife Habitat;
- A list of additional field investigations required to address regulatory requirements, where applicable (e.g., targeted surveys for species at risk where sensitive habitat is identified through the screening process);
- An overview of the proposed development and site alteration;
- Analysis of impacts, and discussion of mitigation, restoration, and/or compensation measures required to address study requirements. Additional best management practices and/or enhancement measures may be recommended, as appropriate;
- An evaluation and summary of conformity with applicable provincial, and municipal natural heritage policy;
- A comprehensive list of recommendations, for ease of transfer to Site Plan agreements;
- Detailed mapping of survey stations/areas, natural features, key species observations, and field-verified boundaries; and,



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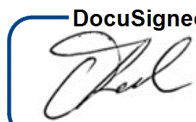
June 22, 2026

- Detailed mapping of constraint areas including development setbacks and buffers.

We trust that the proposed Terms of Reference meet your expectations. If you have any questions or require clarification of any aspect of this submission, please do not hesitate to contact the undersigned at (705) 719-0700.

Best regards,

Cambium Inc.

DocuSigned by:

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Danielle Leal, B.Sc.

Project Manager / Ecologist

Encl. *Statement of Qualifications & Limitations*

Copies: Brent Lockridge <bklockridge@sympatico.ca>

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June 22, 2026

STATEMENT OF QUALIFICATIONS & LIMITATIONS**Limited Warranty**

Cambium relies on its client to provide instructions on the scope of work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards, and with the degree of care and skill ordinarily exercised by professionals performing similar services for similar projects in the same region. Unless required under applicable laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

Reliance on Materials and Information

The findings, results, information and data prepared by Cambium are based on the materials, documents and information provided by the client to Cambium and on the facts, conditions and circumstances encountered by Cambium during the performance of the work. In formulating its findings, results, information and data, Cambium assumes that the information, documents and materials provided by the client to Cambium are factual, accurate and represent a true depiction of the circumstances that exist at the Project. Cambium relies on its client to inform Cambium if there are changes to any such information, documents and materials. Cambium does not review, analyze or attempt to verify the accuracy or completeness of the information, documents or materials provided by the client, other than in accordance with applicable accepted industry practice. Cambium will not be responsible for matters arising from incomplete, incorrect or misleading information or from facts or circumstances that are not fully disclosed to Cambium, are unknown by Cambium, or are otherwise concealed from Cambium during the provision of its services.

Facts, conditions, information and circumstances may vary with time and locations and Cambium's work is based on a review of such matters as they existed at the particular time and location indicated in the findings, results, information and data prepared by Cambium. No assurance is made by Cambium that the facts, conditions, information, circumstances or any underlying assumptions made by Cambium in connection with the work performed will not change after Cambium has completed its work. If any such changes occur or additional information is obtained, Cambium should be advised and requested to consider if the changes or additional information affect its work.

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Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work considers any locations or times other than those from which information, sample results and data was specifically received, the work shall be based on a reasonable extrapolation from such information, sample results and data, but the actual conditions encountered may vary from those extrapolations.

Only conditions at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested and paid for by the client. Any physical or other aspects of the site chosen for study by the client, or any other matter not specifically addressed in findings, results, information and data prepared by Cambium, are beyond the scopes of the work performed by Cambium and such matters have not been investigated or addressed.

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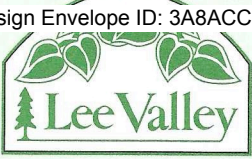




Scoped Environmental Impact Study – 1 Rabbit Point Island, Hastings Highlands, Ontario
Brent Lockridge
Cambium Reference: 02632391.000
August 11, 2026

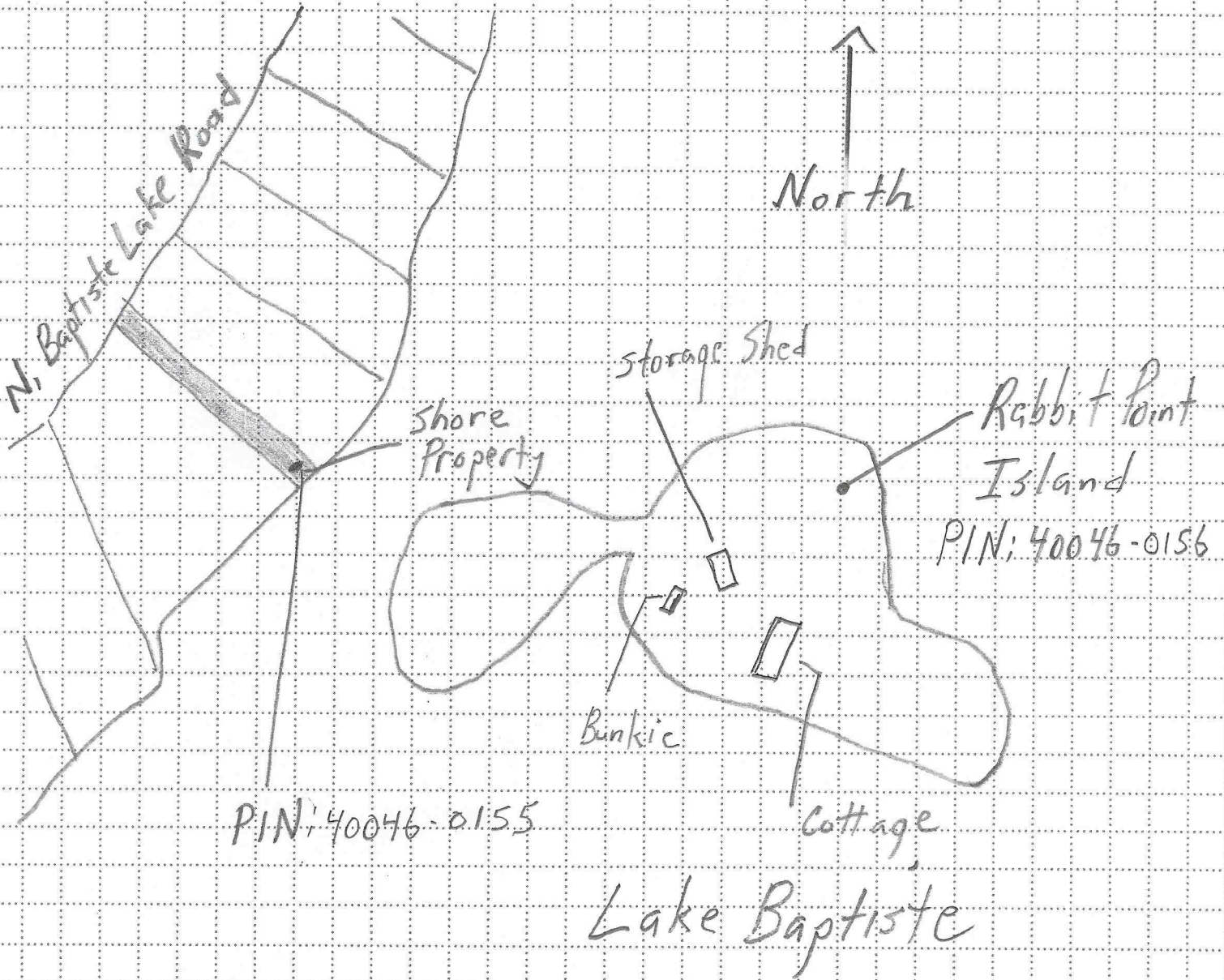
Appendix B

Conceptual Site Plans



From the garden of:
Date:

Submitted to H.H. Building
Dept. #1D 641660

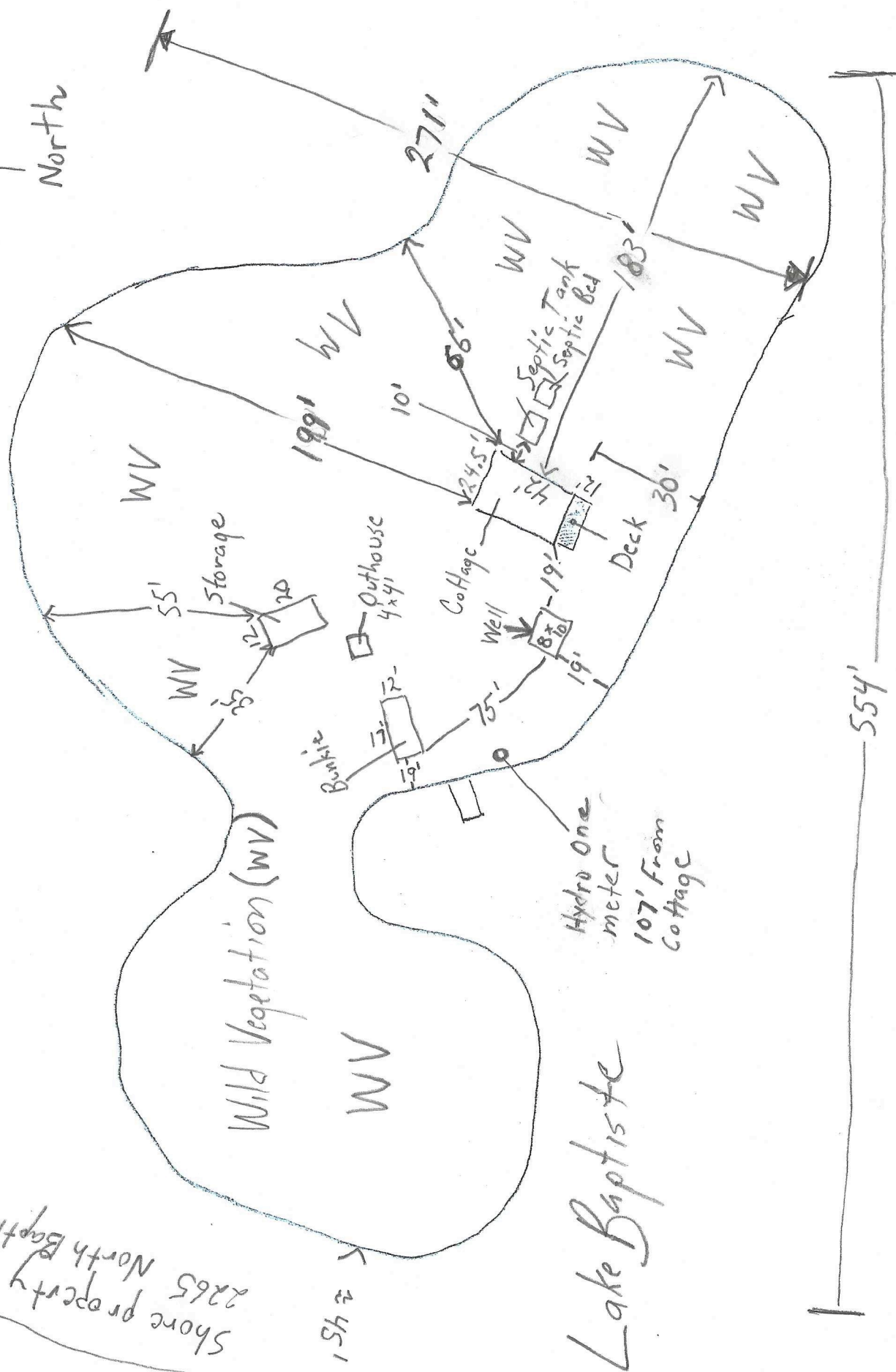


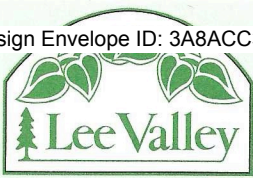
#1 Rabbit Point Island; PT LT 15 CON 5 Herschel
As in QR 451245 (Firstly)

2265B North Baptiste Rd; PT LT 15 CON 5 Herschel
AS IN QR 451245 (Secondly)

Owners:
Brent & Karen Lockridge

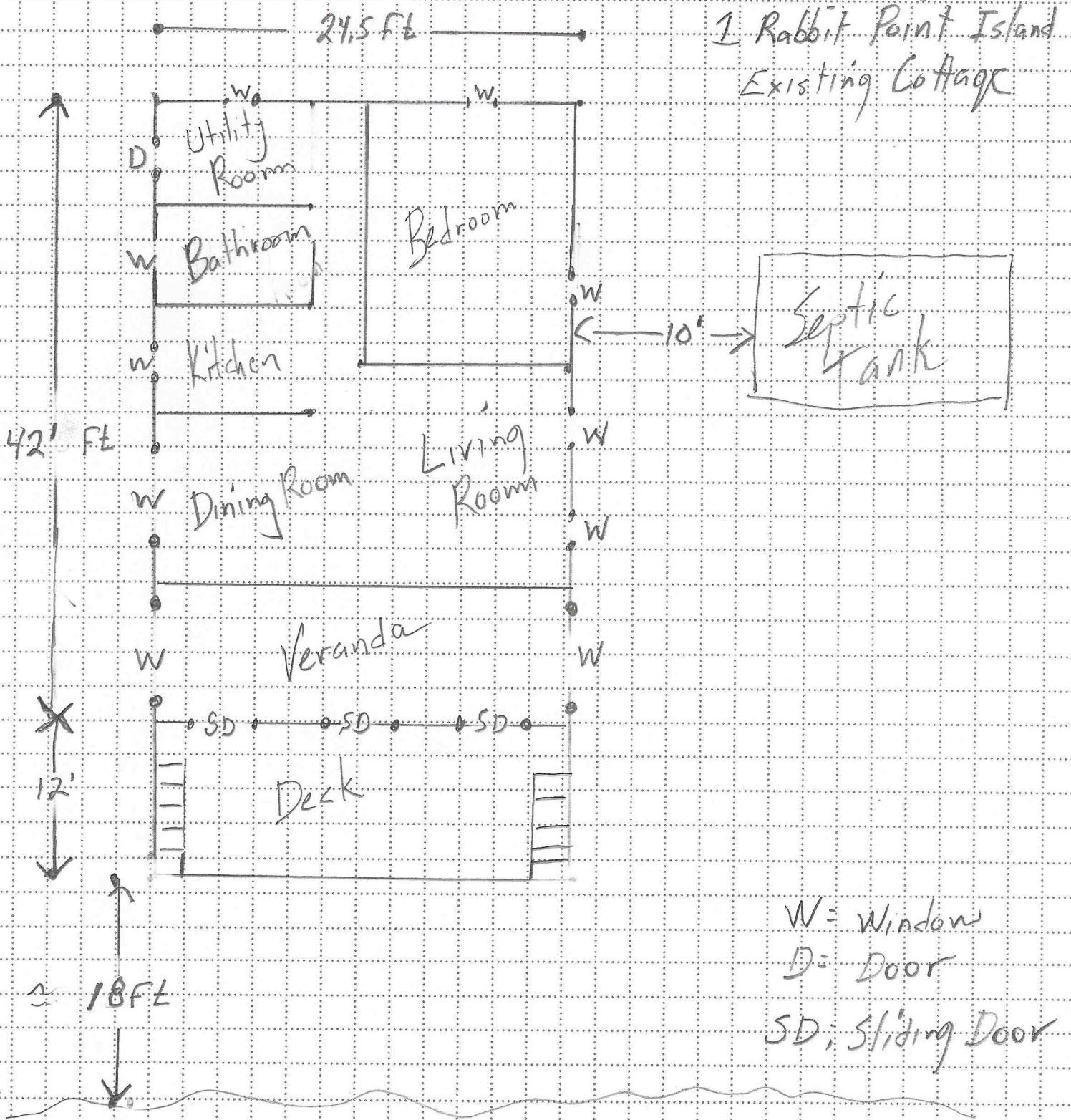
- all measurements in feet.

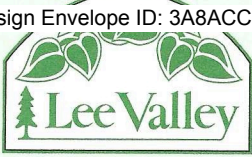




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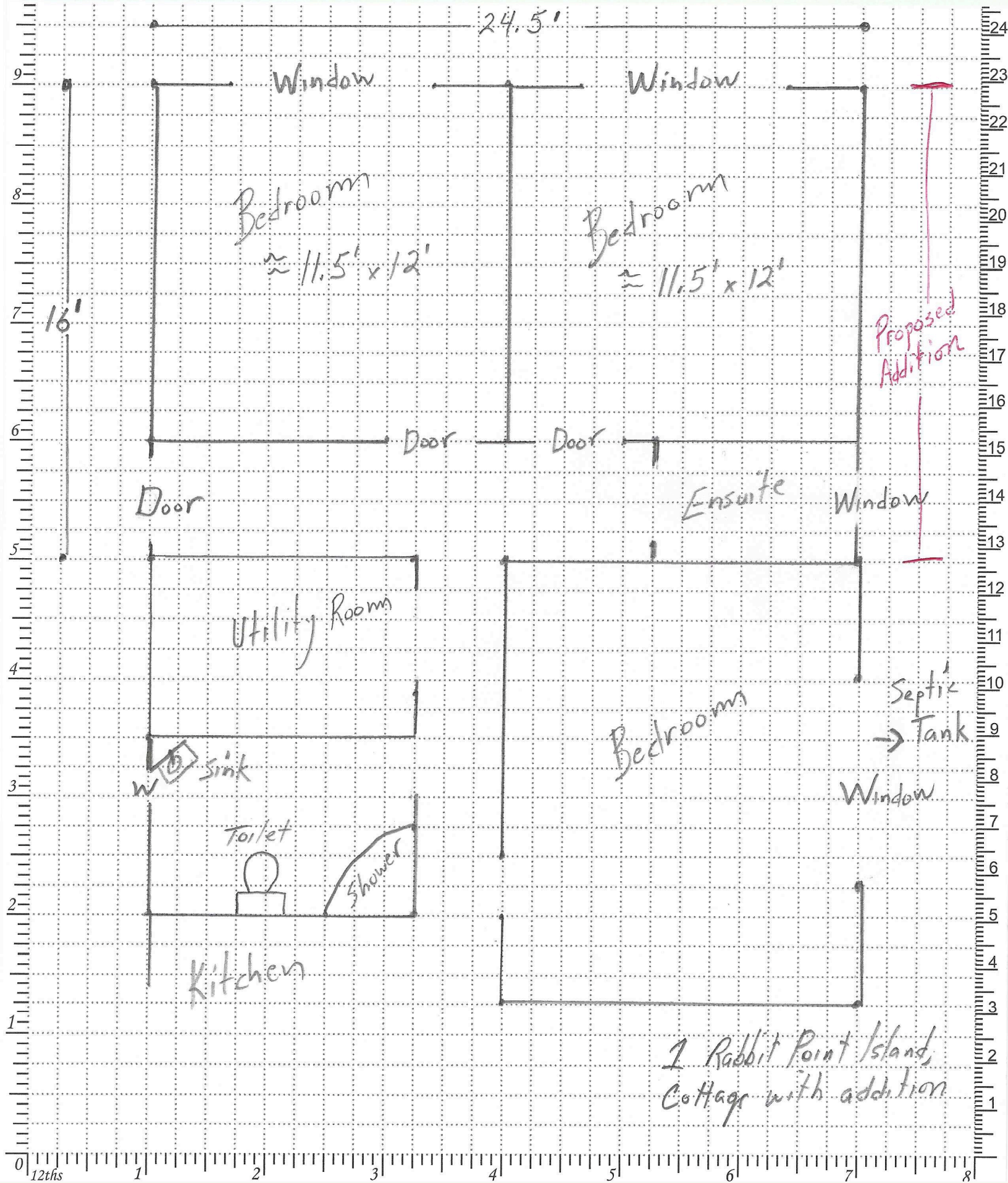
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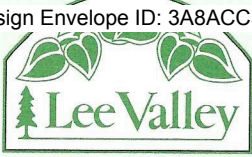




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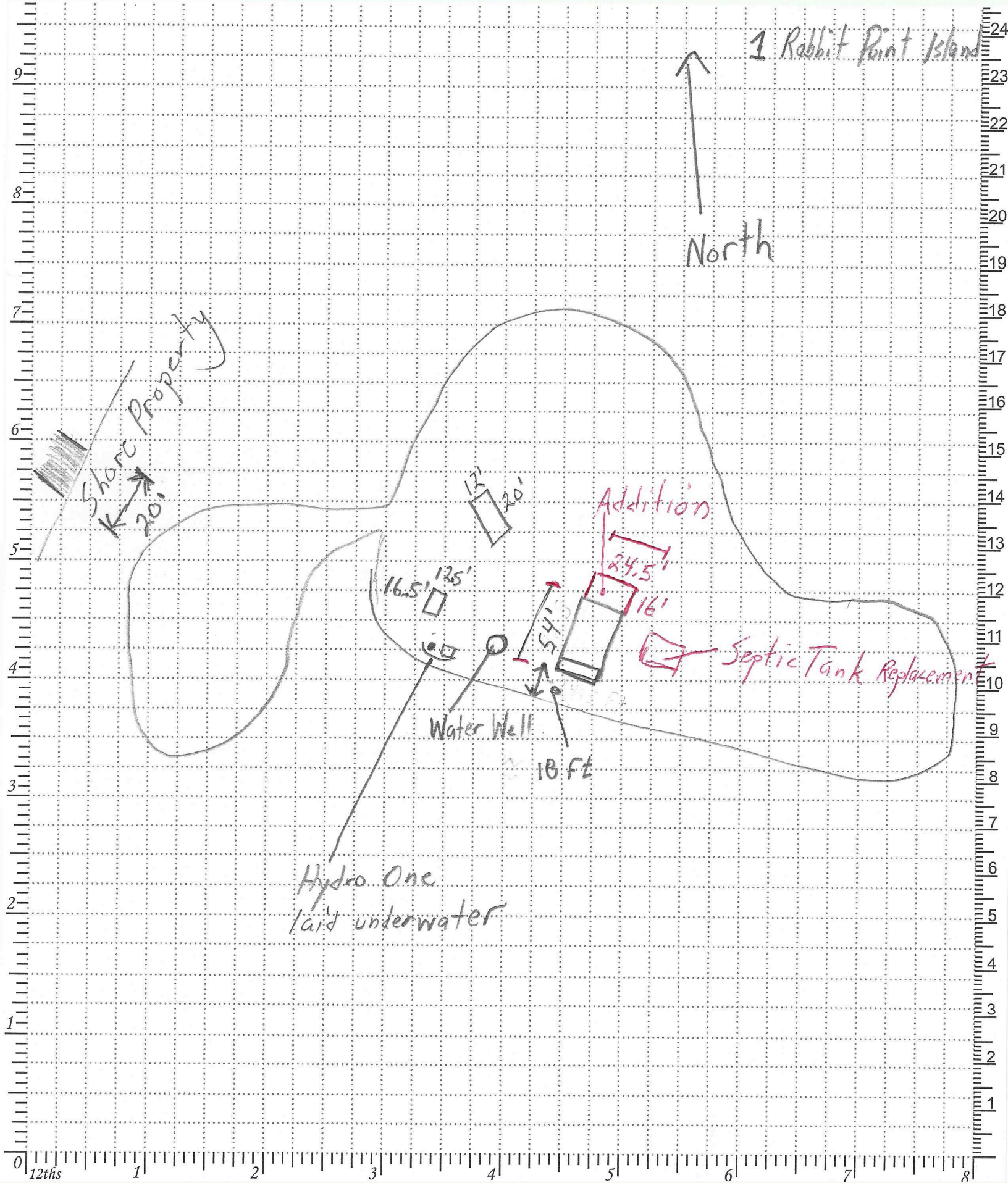
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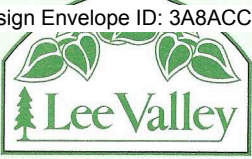




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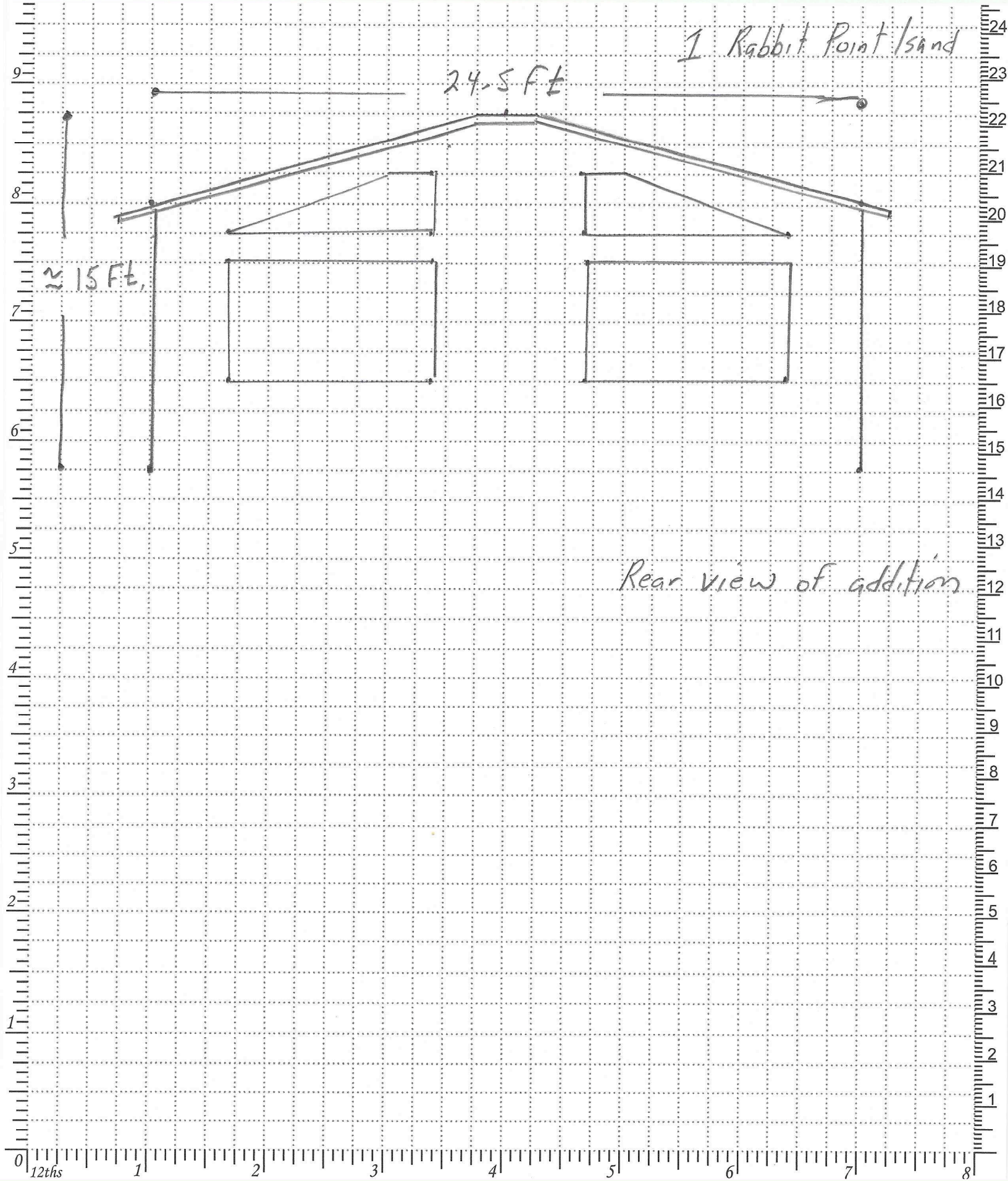
Date:





From the garden of:

Date:





Scoped Environmental Impact Study – 1 Rabbit Point Island, Hastings Highlands, Ontario
Brent Lockridge
Cambium Reference: 02632391.000
August 11, 2026

Appendix C

Species at Risk Screening



Appendix: Species of Conservation Concern

Hastings County 5E

TYPE	COMMON NAME	SCIENTIFIC NAME	Federal		Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
			SARA	COSEWIC	SCA	S-RANK				
Amphibian	Western Chorus Frog (Great Lakes / St. Lawrence - Canadian Shield population)	<i>Pseudacris maculata pop. 1</i>	THR	THR	No Status	S4	The Western Chorus Frog is small with a dark stripe running through its eye and a light stripe underneath (3). It is primarily a lowland terrestrial species that requires access to terrestrial and aquatic habitats in close proximity to one another. Relying on marshes and wooded wetlands adjacent to forested habitats, this species also requires isolated, predator free pools for breeding. Temporary pools, such as vernal pools in wooded areas, are preferred. This species hibernates terrestrially in a variety of environments, including leaf litter, wood debris, and vacant animal burrows (2).	No	Known to occur in the general area	No further consideration required
Bird	Bank Swallow	<i>Riparia riparia</i>	THR	THR	No Status	S4B	The Bank Swallow is a small songbird of around 12 cm long with a distinctive dark breast band, that flies with quick and erratic wingbeats (1). It nests in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. This can include banks of rivers and lakes, bluffs, active sand and gravel pits, road cuts and stockpiles of soils. However, they prefer sand-silt substrates for excavating their nest burrows. They often use large wetlands as communal nocturnal roosts post-breeding or during wintering periods (2).	No	Known to occur in the general area	No further consideration required
Bird	Barn Swallow	<i>Hirundo rustica</i>	THR	SC	No Status	S4B	The Barn Swallow is a mid-sized songbird with steel-blue backs and wings, glossy in males, and a line of white spots across its upper tail. It lives in a variety of open habitats for foraging, such as grassy fields, pastures, certain agricultural crops, shorelines, cottage areas, wetlands, or subarctic tundra (2). They prefer to nest within human made structures such as barns, bridges, and culverts. Barn Swallow nests are cup-shaped and made of mud, typically attached to horizontal beams or vertical walls underneath an overhang (1).	No	Known to occur in the general area	No further consideration required
Bird	Black Tern	<i>Chlidonias niger</i>	No Status	No Status	END	S3B,S4M	The Black Tern is a small waterbird with a forked tail, straight pointed bill, slender shape, and black head during breeding season. It builds floating nests in loose colonies in shallow marshes, with a preference for cattails. They breed primarily in the marshes along the edges of the Great Lakes, but may also use wetlands further north if suitable (1).	No	Known to occur in the general area	No further consideration required
Bird	Bobolink	<i>Dolichonyx oryzivorus</i>	THR	SC	No Status	S4B	The Bobolink is a mid-sized songbird of tan colour with black stripes, except for males during summer breeding season who are black with a white back and yellow collar. It prefers tall, grassy meadows, hayfields and some croplands, and feeds (largely on insects) on the ground in dense grasses (1). It tends to nest in forage crops: hayfields and pastures dominated by species including clover, bluegrass, and broadleaf plants (2).	No	Known to occur in the general area	No further consideration required
Bird	Canada Warbler	<i>Cardellina canadensis</i>	THR	SC	No Status	S5B	The Canada Warbler is a small songbird with bright yellow underparts and bluish-grey back and tail (1). It can be found in a variety of forest types, but is most abundant in moist, mixed forests with a well-developed, dense shrub layer. are on or near the ground and used only once. Nests are on or near the ground and used only once. They are well-concealed bydense, low vegetation (e.g., moss hummocks, upturned tree roots, small hillocks with deep leaf litter and dense saplings) (6).	No	Known to occur in the general area	No further consideration required
Bird	Cerulean Warbler	<i>Setophaga cerulea</i>	END	END	No Status	S2B	The Cerulean Warbler, a small songbird, is blue-green with white eyebrows and two prominent white wing bars (1). It requires relatively large tracts of mature deciduous forest (>100 ha), and nests in older, second-growth deciduous forests. During breeding season, it is found in relatively large tracts of mature deciduous forests that feature large, tall trees and an open understorey (5).	No	Known to occur in the general area	No further consideration required
Bird	Chimney Swift	<i>Chaetura pelagica</i>	THR	THR	No Status	S3B	The Chimney Swift is a small bird, between 12 and 14 cm, with a brown, cigar-shaped body, slender wings, and an erratic flight pattern. Prior to settlement, the Chimney Swift would mainly nest in cave walls and hollow trees. Now, it is found mostly near urban and suburban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. They also tend to stay in habitat close to the water (1).	No	Known to occur in the general area	No further consideration required
Bird	Eastern Meadowlark	<i>Sturnella magna</i>	THR	THR	No Status	S4B,S3N	The Eastern Meadowlark is a medium-sized migratory songbird with a bright yellow throat and belly, a black V shape on its chest, and a pointed bill. It prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields, human-use areas such as airports and roadsides, or other open areas. The Eastern Meadowlark can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses (1).	No	Known to occur in the general area	No further consideration required
Bird	Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	THR	SC	No Status	S4B	The Eastern Whip-poor-will is a medium-sized bird with mottled brown and grey feathers to blend in with its surroundings, a large flattened head, and small bill. They are usually found in areas with a mix of open and forested areas such as patchy forests with clearings, forests that are regenerating after major disturbances, savannahs, open woodlands or openings in more mature forests. Breeding habitat is dependent on forest structure rather than composition, although common tree associations are pine and oak, and it nests directly on the forest floor (2). The species prefers to nest in semi-open or patchy forests with clearings as it forages in open areas and uses forested areas for roosting (1).	No	Known to occur in the general area	No further consideration required
Bird	Golden Winged Warbler	<i>Vermivora chrysoptera</i>	THR	THR	No Status	S3B	The Golden-winged Warbler is a small songbird with distinctive yellow wing patches and patches behind their eyes. It inhabits early successional habitat of old fields and favour areas where trees are spread out or forest edges to use for perching, singing, and searching for food. They seem to prefer regeneration zones with young shrub growth, surrounded by mature forest, locations that have recently been disturbed, such as field edges, hydro or utility right-of-ways, or logged areas for their breeding sites; often frequenting clusters of herbaceous plants and low bushes (1).	No	Known to occur in the general area	No further consideration required



TYPE	COMMON NAME	SCIENTIFIC NAME	Federal		Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
			SARA	COSEWIC	SCA	S-RANK				
Bird	Least Bittern	<i>Ixobrychus exilis</i>	THR	SC	No Status	S4B	The Least Bittern is a small member of the heron family, reaching around 30 cm in length. It has brown and beige plumage with chestnut patches on its wings (1). The species nests in marshes (> 5 ha) and swamps dominated by emergent vegetation, preferably cattails, interspersed with patches of woody vegetation and open water. Although Least Bitterns usually nest in larger marshes territorial individuals have been found in marshes as small as 0.4 ha. They require dense vegetation and open water with stable levels within 10 m for nesting, and access to clear, open water for foraging (14).	No	Known to occur in the general area	No further consideration required
Bird	Rusty Blackbird	<i>Euphagus carolinus</i>	SC	SC	No Status	S4B,S3N	The Rusty Blackbird is a medium-sized songbird with pale, yellow eyes and a slender black bill. The species breeds in habitats dominated by coniferous forest with wetlands nearby including bogs, marshes, and beaver ponds. In Ontario, their breeding range is found in the Hudson Bay Lowlands and northern Boreal Shield ecozones. During the winter, it can be found in wet woodlands, swamps, and pond edges plus often foraging in agricultural lands (1).	No	Known to occur in the general area	No further consideration required
Bird	Wood Thrush	<i>Hylocichla mustelina</i>	THR	THR	No Status	S4B	The Wood Thrush is a medium-sized songbird of around 20 cm with rusty brown coloured upper parts and white underparts with large dark spots. It breeds in deciduous and mixed forests with moderate understories, shade and abundant leaf litter where it forages for food, including larval and adult insects as well as plant material. They prefer moist stands of trees with well-developed undergrowth and tall trees for perches (1).	No	Known to occur in the general area	No further consideration required
Bird	Yellow Rail	<i>Coturnicops noveboracensis</i>	SC	SC	No Status	S3B	The Yellow Rail is a small, quail-like marsh bird with a short yellow or black bill, short tail, with yellowish and black streaks on its back and white wing patches. This species is mainly found in the Hudson Bay Lowlands region, and is only found in localized marshes in southern Ontario. It is a secretive bird that lives deep within the reeds, sedges, and marshes of shallow wetlands which nest on the ground in areas that have an overlying mat of dry vegetation that can be used for nest building (1).	No	Known to occur in the general area	No further consideration required
Fish	Lake Sturgeon (Great Lakes / St. Lawrence population)	<i>Acipenser fulvescens</i>	No status	THR	END	S2	The Lake Sturgeon, a large freshwater fish, has an extended snout with four whisker-like organs hanging near the mouth and is dark to light brown or grey on its back and sides with a lighter belly. In Ontario, this fish is found in the rivers of the Hudson Bay Basin, the Great Lakes basin, and their connecting waterways. Lake Sturgeon's live almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel and are usually found at depths of 5 to 20 m. They spawn in relatively shallow, fast-flowing water or if available deeper water habitat as well (2).	No	Known to occur in the general area	No further consideration required
Insect	Monarch	<i>Danaus plexippus</i>	END	END	No Status	S4B,S2N	The Monarch is an orange and black butterfly with small white spots and a wingspan of around 10 cm. It relies on milkweed plants as a food source for growing caterpillars, but the adult butterflies forage in diverse habitats for nectar from wildflowers (1).	No	Known to occur in the general area	No further consideration required
Insect	Yellow-banded Bumble Bee	<i>Bombus terricola</i>	SC	SC	No Status	S3S5	The Yellow-banded Bumble Bee is a medium-sized bumble bee with a distinct yellow and black abdominal band pattern found on its queens, males, and workers. This species is a forage and habitat generalist, able to use a variety of nectaring plants and environmental conditions. It can be found in mixed and coniferous woodlands, particularly for nesting and overwintering, as well as a variety of open habitat such as native grasslands, farmlands and urban areas. The Yellow-banded Bumble Bee ranges from the Mixedwood Plains of southern Ontario to the Hudson Bay Lowlands in the north (1). Their nest sites are often found underground in abandoned burrows or decomposing logs.	No	Known to occur in the general area	No further consideration required
Lichen	Pale-bellied Frost Lichen	<i>Physconia subpallida</i>	END	END	END	S2S3	The Pale-bellied Frost Lichen resembles a light dusting of frost on a dark tree trunk. This species is found throughout eastern North America, growing in wooded areas rich in hardwood species, such as White Ash, Hop Hornbeam (Ironwood), Black Walnut, and American Elm. It is also common to find this species growing on fenceposts or boulders within or near these wooded areas. In Ontario, this species has been found in the following counties: Frontenac, Haliburton, Hastings, Peterborough, Lanark and Renfrew (1).	No	Known to occur in the general area	No further consideration required
Mammal	Algonquin (Eastern) Wolf	<i>Canis lycaon</i>	THR	THR	THR	S2	Formerly called the Eastern Wolf, this canine was recently renamed the Algonquin Wolf. In the southern portion of the province, this species prefers deciduous and mixed forest landscapes while their northern range include mixed and coniferous forests. It is most prevalent in areas with abundant prey species which include Beaver, White-tailed Deer and Moose. Dens sites are usually found in coniferous forests with easily excavated soil types like sand and close to a permanent water source (2).	No	Known to occur in the general area	No further consideration required
Mammal	Eastern Red Bat	<i>Lasiurus borealis</i>	No Status	END	END	S3	The Eastern Red Bat is distinguished by fur that is usually orange but varies from yellowish-red to yellowish-grey. White hairs or white-tipped hairs give a frosted appearance. Habitat preference for this species is highly generalized as they prefer either coniferous and deciduous forests of any age class. Roosting occurs among the foliage of trees and occasionally shrubs. Eastern Red Bat are long-distanced migrants, with some individuals moving hundreds or thousands of kilometres between summer and winter months. Little is known with respect to migration and hibernation (9).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under SCA
Mammal	Eastern Small-footed Myotis	<i>Myotis leibii</i>	No Status	No Status	END	S2S3	The Eastern Small-footed Myotis has fur with black roots and shiny brown tips as well as very small feet. In the spring and summer, the Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees (10). They change their roosting locations daily and hunt at night for insects. They hibernate in winter, often in caves and abandoned mines choosing colder and drier sites than other similar bats (2).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under SCA
Mammal	Hoary Bat	<i>Lasiurus cinereus</i>	No Status	END	END	S3	The Hoary Bat is a large-bodied bat and is the largest bodied bat in Canada. It is identified by light fur around its face and neck and white-tipped hairs over most of its body. Hoary Bat is a migratory bat species that migrates long distances between summer breeding habitat and winter range. Typically, Hoary Bat roosts in cavities of trees, which can be found in a broad range of forested habitat types across Ontario (11).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under SCA
Mammal	Little Brown Myotis	<i>Myotis lucifugus</i>	END	END	END	S3	The Little Brown Myotis has glossy brown fur and a fleshy projection covering the entrance to its ears. This species roosts in trees and buildings, often selecting attics, abandoned buildings and barns for summer colonies where they can raise their young. Little Brown Bats hibernate from October/November to March/April, most often in caves or abandoned mines that are humid and remain above freezing (12).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under SCA



TYPE	COMMON NAME	SCIENTIFIC NAME	Federal		Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
			SARA	COSEWIC	SCA	S-RANK				
Mammal	Northern Myotis	<i>Myotis septentrionalis</i>	END	END	END	S3	The Northern Myotis has dull yellow-brown fur with pale bellies and long, rounded ears. This species is found in boreal forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October/November to March/April, most often in caves or abandoned mines (2).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under SCA
Mammal	Silver-haired Bat	<i>Lasionycteris noctivagans</i>	No Status	END	END	S3	The Silver-haired bat is a dark colored bat, with black skin membranes and black to dark brown fur. The fur often has grey or silver-frosted tips, giving it the silvery appearance for which it is named. This species primarily roosts under loose bark and in cavities of trees, making them reliant on habitat with large decaying trees available. Silver-haired Bats migrate south during the winter months and they may occasionally roost in buildings especially during migration when natural roosting sites are scarce (13).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under SCA
Mammal	Tri-colored Bat	<i>Perimyotis subflavus</i>	END	END	END	S3?	The Tri-colored Bat is small, with pale brown with orange-red forearms, muzzle, and ears. It is named for the black, yellow, and brown hairs on its back. It is considered rare in this region of Ontario which is at the northernmost limit of the natural range (1). These bats prefer to nest in foliage, tree cavities and woodpecker holes, but are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Tri-colored Bats prefer an open forest habitat type in proximity to water (4).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under SCA
Plant	American Ginseng	<i>Panax quinquefolius</i>	END	END	THR	S2	American Ginseng is a perennial plant which grows up to 60 centimetres in height. The leaves typically have five leaflets arranged in a whorl at the end of the leaf stem. The root looks like a gnarly parsnip. The flowers are an inconspicuous green-white in colour, but the berries are bright red and arranged in a cluster. In Ontario, the American Ginseng typically grows in rich, moist, and mature deciduous woods dominated by Sugar Maple, White Ash, and American Basswood. It typically grows in deep, nutrient rich soil over limestone or marble bedrock (1).	No	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Plant	Black Ash	<i>Fraxinus nigra</i>	No Status	THR	END	S4	The Black Ash is a smaller-sized tree with a narrow crown, light grey and scaly bark, and green, oval leaflets on a central stalk. It grows everywhere in Ontario except for the far north, preferring moist climates and soils such as swampy woodlands or bogs (1).	No	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Plant	Four-leaved Milkweed	<i>Asclepias quadrifolia</i>	No status	END	END	S1	The Four-leaved Milkweed is a leafy perrenial growing 20 to 80 cm tall with clusters of small, pink-white flowers. Its leaves are arranged in opposite pairs. It grows in dry woodlands dominated by tallgrass prairie herbs, bur oaks, and hickories, or woodland alvars dominated by red cedar and pasture grasses (1).	No	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Plant	Small White Lady's-slipper	<i>Cypripedium candidum</i>	THR	THR	END	S1	In Ontario, Small White Lady's-slipper grows in moist prairies, savannahs, and rich calcareous (limestone) wetlands, known as fens. This plant does best in full sunlight conditions. In Canada, it is limited to isolated populations in southern Ontario and southern Manitoba; some plants are still found in Lambton and Hastings counties in Ontario.	No	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Reptile	Blanding's Turtle	<i>Emydoidea blandingii</i>	END	END	THR	S3	Blanding's Turtles are identifiable by their bright yellow throat and chin and domed shell. They spend the majority of their life cycle in the aquatic environment, usually in large wetlands or shallow lakes with high densities of water plants (1). These turtles prefer shallow, nutrient rich water with organic sediment and dense vegetation. They use terrestrial sites for travel between habitat patches and to lay clutches of eggs, often going hundreds of meters from their nearest water body. Blanding's Turtles nest in dry coniferous and mixed forest habitats, as well as fields and roadsides (2). From late October until the end of April, they hibernate in the mud at the bottom of permanent water bodies (1).	No	Known to occur in the general area	No further consideration required
Reptile	Common Five-lined Skink (Southern Shield population)	<i>Plestiodon fasciatus</i>	SC	SC	No Status	S3	The Common Five-lined Skink is a slender lizard growing to between 14 and 19 centimetres in total length. Young adults are glossy black with five cream-yellow stripes down the back that merge and become bright blue or blue-grey on the tail. Older individuals gradually fade to a uniform bronze along the back and sides, and their stripes often remain faintly visible. . Its Southern Shield population can be found underneath rocks on open bedrock in forests and like to bask on sunny rocks and logs. They hibernate in crevices among rocks or buried in the soil (1). They hibernate in groups under rocks and tree stumps or in rotting wood (3).	No	Known to occur in the general area	No further consideration required
Reptile	Eastern Hog-nosed Snake	<i>Heterodon platirhinos</i>	THR	THR	THR	S3	The Eastern Hog-nosed Snake can be a variety of colours and patterns so is most easily identified by its flattened, upturned nose. They prefer sandy well-drained habitats such as beaches and dry forests because they lay their eggs, hibernate and burrow in these areas. The main diet of this snake is toads and frogs, so they usually stay close to water including marshes and swamps, where they have an increased chance of finding their preferred prey (1).	No	Known to occur in the general area	No further consideration required
Reptile	Eastern Musk Turtle	<i>Sternotherus odoratus</i>	SC	SC	No Status	S3	The Eastern Musk Turtle is small with a narrow carapace, a dark brown body and two light stripes on each side of their head (3). It is a small freshwater turtle found primarily in slow moving water bodies with abundant emergent vegetation and mucky bottoms along the southern edge of the Canadian Shield within which they burrow into overwinter. Nesting sites vary, but must be close to the water and exposed to direct sunlight (1).	No	Known to occur in the general area	No further consideration required
Reptile	Northern Map Turtle	<i>Graptemys geographica</i>	SC	SC	No Status	S3	The Northern Map Turtle is a medium sized turtle identified by its carapace's map contour-like patterning. It lives in larger lakes and rivers, requiring high water quality to support their primary prey species: molluscs. This species can often be seen in large groups basking together on rocks and logs. In the winter, the Northern Map Turtle can be found hibernating on the bottom of slow-moving rivers (1).	Yes: adjacent lands only	Known to occur in the general area	Potential significant wildlife habitat on adjacent lands



Appendix D
Vegetation Species List



Appendix D - Plant Species List

Scientific Name	Common Name	Status/Rarity			CC	CW	Vegetation Community	
		Federal	Provincial				1	2
		SARA	SCA	S-Rank				
<i>Abies balsamea</i>	Balsam Fir			S5	5	-3	X	X
<i>Acer pensylvanicum</i>	Striped Maple			S4	7	3	X	X
<i>Acer rubrum</i>	Red Maple			S5	4	0	X	X
<i>Acer saccharum</i>	Sugar Maple			S5	4	3	X	
<i>Alnus incana ssp. rugosa</i>	Speckled Alder			S5	6	-3	X	X
<i>Aralia nudicaulis</i>	Wild Sarsaparilla			S5	4	3	X	X
<i>Betula papyrifera</i>	Paper Birch			S5	2	3	X	X
<i>Brasenia schreberi</i>	Watershield			S5	7	-5		X
<i>Calamagrostis canadensis var. canadensis</i>	Bluejoint Reedgrass			S5	4	-5	X	X
<i>Crepis capillaris</i>	Smooth Hawksbeard			SNA		5		X
<i>Diervilla lonicera</i>	Northern Bush-honeysuckle			S5	5	5	X	X
<i>Equisetum arvense</i>	Field Horsetail			S5	0	0		X
<i>Eurybia macrophylla</i>	Large-leaved Aster			S5	5	5	X	X
<i>Fagus grandifolia</i>	American Beech			S4	6	3	X	
<i>Fraxinus americana</i>	White Ash			S4	4	3		X
<i>Ilex verticillata</i>	Common Winterberry			S5	5	-3		X
<i>Lysimachia borealis</i>	Northern Starflower			S5	6	0	X	
<i>Maianthemum canadense ssp. interius</i>	Wild Lily-of-the-Valley			S4?	5	3	X	X
<i>Melampyrum lineare</i>	American Cow-wheat			S5	6	3		X
<i>Mitchella repens</i>	Partridgeberry			S5	6	3	X	
<i>Myrica gale</i>	Sweet Gale			S5	6	-5	X	X
<i>Nabalus altissimus</i>	Tall Rattlesnakeroot			S5	5	3		X
<i>Onoclea sensibilis</i>	Sensitive Fern			S5	4	-3	X	X
<i>Osmundastrum cinnamomeum</i>	Cinnamon Fern			S5	7	-3	X	X
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam			S5	4	3	X	
<i>Picea glauca</i>	White Spruce			S5	6	3	X	X
<i>Pinus resinosa</i>	Red Pine			S5	8	3	X	X
<i>Pinus strobus</i>	Eastern White Pine			S5	4	3	X	X
<i>Populus grandidentata</i>	Large-toothed Aspen			S5	5	5	X	
<i>Pteridium aquilinum</i>	Bracken Fern			S5	2	3	X	X
<i>Quercus rubra</i>	Northern Red Oak			S5	6	3	X	X



Scientific Name	Common Name	Status/Rarity			CC	CW	Vegetation Community	
		Federal	Provincial				1	2
		SARA	SCA	S-Rank				
<i>Rhus typhina</i>	Staghorn Sumac			S5	1	3		X
<i>Sagittaria latifolia</i>	Broad-leaved Arrowhead			S5	4	-5		X
<i>Solidago rugosa ssp. rugosa var. rugosa</i>	Northern Rough-stemmed Goldenrod			S5	4	0	X	X
<i>Spiraea alba</i>	White Meadowsweet			S5	3	-3	X	
<i>Thuja occidentalis</i>	Eastern White Cedar			S5	4	-3	X	X
<i>Tilia americana</i>	Basswood			S5	4	3	X	X
<i>Trillium grandiflorum</i>	White Trillium			S5	5	3	X	
<i>Tsuga canadensis</i>	Eastern Hemlock			S5	7	3	X	
<i>Vaccinium angustifolium</i>	Early Lowbush Blueberry			S5	6	3		X



Appendix E
Photographic Log



Photo 1 Proposed septic location, July 2026.



Photo 2 South shoreline at the dock structure, July 2026.



Photo 3 Existing dock structure, July 2026.



Photo 4 North shoreline area, July 2026.

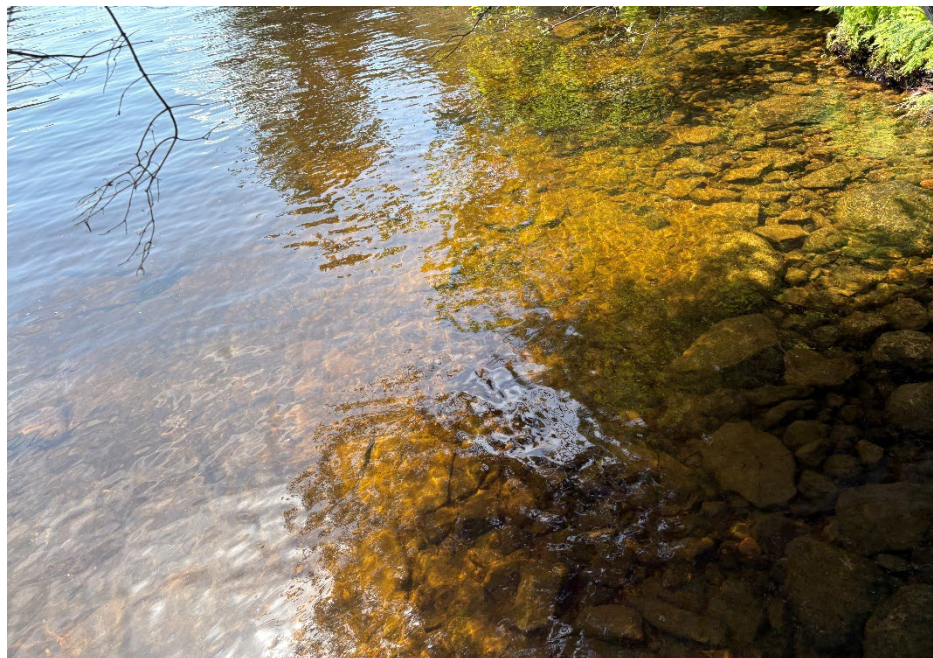


Photo 5 Representative bedform substrate, north shoreline area, July 2026.



Photo 6 West Shoreline Area, July 2026.



Photo 7 Representative bedform substrate, west shoreline area, July 2026.



Photo 8 Representative bedform substrate, east shoreline area, July 2026.



Photo 9 Community 1, July 2026.



Photo 10 Community 2, July 2026.



Photo 11 Representative aquatic vegetation in Community 2, July 2026.



Photo 12 Existing dwelling, July 2026.



Appendix F

Significant Wildlife Habitat Assessment

APPENDIX: Significant Wildlife Habitat Screening - SE			SITE			ADJACENT LANDS
SWH Type	Habitat Descriptions & Criteria for Candidate SWH	Listed Species & Defining Criteria for Confirmed SWH	Candidate SWH Criteria Present: Yes/No	Species or Defining Criteria Observations	Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes	Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No
Seasonal Concentration Areas of Animals						
Waterfowl Stopover and Staging Areas (Terrestrial)	Meadow, Thicket, or Agricultural Field <u>WITH</u> spring flooding/sheet water (Mar-May) <u>AND</u> size potential to support 100+ individuals <u>AND</u> potential established/recurring annual use	American Black Duck, American Wigeon, Blue-winged Teal, Gadwall, Green-winged Teal, Mallard, Northern Pintail, Northern Shoveler, Wood Duck Defining Criteria: 100+ individuals SWH: ecosite + 100-300m radius; dependent on local site conditions and adjacent land use	No	N/A	Absent SWH	No
Waterfowl Stopover and Staging Area (Aquatic)	Marsh, Swamp, Shallow Aquatic, Open Aquatic, reservoirs managed as wetland/ lake pond, and agricultural fields <u>AND</u> size potential to support 100+ indiv. for 7+ days *Rare: typically only a few locations per EcoDistrict <u>EXCLUDES</u> SWM and sewage treatment ponds	American Black Duck, American Wigeon, Black Scoter, Blue-winged Teal, Brant, Bufflehead, Cackling Goose, Canada Goose, Canvasback, Common Goldeneye, Common Merganser, Gadwall, Greater Scaup, Green-winged Teal, Hooded Merganser, Lesser Scaup, Long-tailed Duck, Northern Pintail, Northern Shoveler, Red-breasted Merganser, Redhead, Ring-necked duck, Ruddy Duck, Snow Goose, Surf Scoter, White-winged Scoter Defining Criteria: 100+ individuals for 7+ days (>700 waterfowl use days) <u>OR</u> annual staging of Ruddy Ducks, Canvasbacks and Redheads <u>OR</u> wetlands and shorelines associated with sites identified in SWHTG Appendix K SWH: ecosite + 100m radius	No	N/A	Absent SWH	No
Shorebird Migratory Stopover Area	Beach/Bar, Sand Dune, Meadow Marsh, Shorelines of lakes, rivers and wetlands, including armour rock shorelines of Great Lakes <u>WITH</u> size potential to support 100+ Whimbrel <u>OR</u> 3+ species for 1000+ shorebird use days <u>EXCLUDES</u> SWM and sewage treatment ponds	American Golden Plover, Baird's Sandpiper, Black-bellied Plover, Dunlin, Greater Yellowlegs, Hudsonian Godwit, Least Sandpiper, Lesser Yellowlegs, Marbled Godwit, Pectoral Sandpiper, Purple Sandpiper, Red-necked Phalarope, Ruddy Turnstone, Sanderling, Semipalmated Plover, Semipalmated Sandpiper, Short-billed Dowitcher, Solitary Sandpiper, Spotted Sandpiper, Silt Sandpiper, Whimbrel, White-rumped Sandpiper Defining Criteria to Confirm: 3+ species and 1000+ shorebird use days (Rbirds x #days) <u>OR</u> 100+ Whimbrel for at least 3 yrs (makes brief stops of <24 hrs during migration) SWH: ecosite + 100m radius	No	N/A	Absent SWH	No
Raptor Wintering Area	COMBINATION of Forest, Meadow, Thicket, Savannnah, Woodland or lightly grazed pasture of combined 20-ha area <u>WITH</u> 15+ha of the area consisting of open habitat. Fields should be wind swept with limited snow accumulation depth	<u>Hawks</u> : Rough-legged Hawk <u>Owls</u> : Boreal Owl, Long-eared Owl, Northern Saw-whet Owl, Short-eared Owl Defining Criteria: 1+ Short-eared Owls <u>OR</u> 10+ individuals of 2+ listed species <u>AND</u> used regularly (at least 20 days during each year for at least 3 in 5 years) SWH: not specified in Criteria Schedules	No	N/A	Absent SWH	No
Bat Hibernacula	Caves, Crevices, Karsts, Abandoned Mines *Calcareous bedrock is fairly rare in SE <u>EXCLUDES</u> buildings and active mines	Big Brown Bat, Tri-coloured Bat Defining Criteria: all sites with confirmed hibernacula are SWH SWH: entrance + 1000m radius for wind farms <u>OR</u> + 200m radius for other projects	No	N/A	Absent SWH	No
Bat Maternity Colonies	Mature (dominant trees >80yrs old) Deciduous or Mixed Forests and Treed Swamps <u>EXCLUDES</u> Coniferous Forests and Treed Swamps and buildings	Big Brown Bat, Silver-haired Bat Defining Criteria: 10+ha cavity trees <u>WITH</u> 25+ cm dbh <u>AND</u> >10 Big Brown Bats <u>OR</u> >5 adult female Silverhaired Bats (trees in lesser decay categories (1-3) preferred) SWH: entire woodland, Ecosite, or Ecoelement containing the maternity colonies	Yes	One potential wildlife tree identified; defining criteria density not met.	Absent SWH	No
Turtle Wintering Area (Painted and Snapping Turtles)	Swamp, Marsh, Shallow Aquatic, Open Aquatic, Open Fen, Open Bog <u>WITH</u> soft mud substrates <u>AND</u> enough depth to maintain free water beneath ice <u>AND</u> adequate dissolved oxygen <u>EXCLUDES</u> man-made ponds such as SWM and sewage treatment ponds	Midland Painted Turtle, Snapping Turtle Defining Criteria: 5+ Painted Turtles <u>OR</u> 1+ Snapping Turtle SWH: ecosite	No	N/A	Absent SWH	Yes
Turtle Wintering Area (Northern Map Turtle)	Open Aquatic, including deeper rivers or streams and lakes <u>WITH</u> current <u>AND</u> soft mud substrates <u>AND</u> enough depth to maintain free water beneath ice <u>AND</u> adequate dissolved oxygen <u>EXCLUDES</u> man-made ponds such as SWM and sewage treatment ponds	Northern Map Turtle Defining Criteria: 1+ Northern Map Turtle SWH: ecosite <u>OR</u> the pool where overwintering occurs in a stream/river	No	N/A	Absent SWH	Yes
Reptile Hibernaculum (Snakes)	Talus, Rock Barren, Crevice, Cave, Alvar or certain Wetlands (conifer/shrub swamps/swales, poor fens, depressions in bedrock terrain with sparse trees/shrubs and sphagnum or sedge hummocks), broken/fissured bedrock, rock piles or slopes, old stone fences, or abandoned crumbling foundations <u>WITH</u> openings below frost line	Eastern Gartersnake, Eastern Ribbonsnake, Milksnake, Northern Brownsnake, Northern Red-bellied Snake, Northern Ring-necked, Northern Watersnake, Smooth Green Snake Defining Criteria: 5+ individuals of a species <u>OR</u> any number of snakes of 2+ species <u>OR</u> presence of a Special Concern species <u>AND</u> observed near a potential hibernacula on warm sunny days in spring and fall SWH: feature containing hibernacula + 30 m radius	No	N/A	Absent SWH	No
Reptile Hibernaculum (Five-lined Skink)	Mixed Forests, Deciduous Forest, or Coniferous Forest dominated by Pine/Hemlock <u>WITH</u> cover rocks overlaying fissured granite bedrock	Five-lined Skink Defining Criteria: All sites with active Skink hibernacula SWH: feature containing hibernacula +30 m radius	No	N/A	Absent SWH	No
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills/piles, pits, steep slopes, cliff faces <u>WITH</u> size potential to support 8+ nests <u>EXCLUDES</u> all man-made structures (bridge abutments, silos, barns, etc.) <u>AND</u> recently (2 years) disturbed soil (berms, embankments, stock piles, aggregate operations)	Cliff Swallow, Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies) Defining Criteria: 1+ nesting site with 8+ pairs SWH: peripheral nests + 50m radius	No	N/A	Absent SWH	No
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Mixed Swamp (excluding those dominated by Cedar) or Treed Fen, lake shorelines/ islands/ peninsulas <u>WITH</u> size to support 5+ nests; Nests are typically 11-15 m above ground near top of live or dead standing trees / occasionally in shrubs and emergents	Black-crowned Night Heron, Great Blue Heron Defining Criteria: 10+ active nests of Great Blue Heron <u>OR</u> 1+ active nest of Black-crowned Night Heron SWH: edge of the colony + 300+m radius <u>OR</u> extent of the forest ecosite <u>OR</u> any island <15ha	No	N/A	Absent SWH	No
Colonially-nesting Bird Breeding Habitat (Ground; Terns and Gulls)	Rocky island or peninsula (natural or artificial) in lake or large river <u>WITH</u> Meadow Marsh, Shallow Marsh, Shallow Aquatic, or Open Aquatic	Caspian Tern, Common Tern, Great Black-backed Gull, Herring Gull, Little Gull, Ring-billed Gull Defining Criteria: 25+ active Herring Gull or Ring-billed Gull nests <u>OR</u> 5+ active Common Tern nests <u>OR</u> 2+ active Caspian Tern nests <u>OR</u> 1+ active Little Gull or Great Black-backed Gull nest SWH: edge of the colony + 150+m radius <u>OR</u> the ecosites containing the colony <u>OR</u> any island <3ha	No	N/A	Absent SWH	No
Colonially-nesting Bird Breeding Habitat (Ground; Brewer's Blackbird)	Close proximity to watercourses in pastures, Meadows, Thickets, Savannah, Meadow Marsh, Shallow Marsh <u>AND</u> scattered trees or shrubs	Brewer's Blackbird Defining Criteria: 5+ pairs SWH: edge of the colony + 150+m radius <u>OR</u> the ecosites containing the colony <u>OR</u> any island <3ha	No	N/A	Absent SWH	No
Deer Yarding Areas	<u>Stratum I</u> (Core): Coniferous Forest or Swamp <u>WITH</u> 60+% canopy cover by Pine, Hemlock, Cedar, or Spruce <u>Stratum II</u> (typically surrounds Stratum I): Mixed or Deciduous Forest or Swamp <u>WITH</u> plenty of browse (esp. those dominated by Poplar or Birch); can include agricultural fields <u>EXCLUDES</u> woodlots with high densities of deer due to artificial feeding	White-tailed Deer Presence is determined by MNRF <i>If present, consider Movement Corridors</i>	Yes	Mapped White-tailed Deer Yard (Stratum 1)	Confirmed SWH	Yes

Rare Vegetation Communities	



APPENDIX: Significant Wildlife Habitat Screening - 5E

SWH Type	Habitat Descriptions & Criteria for Candidate SWH	Listed Species & Defining Criteria for <u>Confirmed</u> SWH	SITE			ADJACENT LANDS
			Candidate SWH Criteria Present: Yes/No	Species or Defining Criteria Observations	Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes	Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No
Beach/Beach Ridge/ Bar/Sand Dunes	Beach/Bar, Sand Dune, Shoreline <u>WITH</u> <60% tree cover; characterized by unstable sand	Indicator Species: American Beachgrass, Beach Pea Defining Criteria: 1+ indicator sp SWH: ecostite	No	N/A	Absent SWH	No
Shallow Atlantic Coastal Marsh	Meadow Marsh, Shallow Marsh, Floating-leaved Shallow Aquatic on inland lakes <u>AND</u> associated with low wave action, sand and sandy peat substrates in areas with seasonally fluctuating water levels (i.e., some years with exposed shorelines in summer/fall) such as inland lakes and beaver ponds	Indicator Species: Virginia Meadow Beauty Other Associated Species: Bayonet Rush, Bog Yellow-eyed-grass, Carey's Smartweed, Sand Panicgrass, Small-headed Beakrush, Virginia St. John's-wort Defining Criteria: Virginia Meadow Beauty <u>AND</u> 4+ other associated sp SWH: ecostite	No	N/A	Absent SWH	No
Cliffs and Talus Slopes	Cliff (near vertical bedrock 3+m tall) <u>OR</u> Talus slope (coarse rock rubble at base of cliff) <u>WITH</u> <60% tree cover (patchy to barren)	Rock Tripe Lichen (Umbilicaria spp.), Alpine Woodsia, Fragile Fern, Fragrant Cliff Fern, Laurentian Woodsia, Rock Polypody, Rusty Woodsia, Steller's Rockbrake, White Mountain Saxifrage Defining Criteria: Any population of Fragrant Cliff Fern or Laurentian Woods <u>OR</u> Umbilicaria spp <u>AND</u> 3+ other listed sp SWH: ecostite	No	N/A	Absent SWH	No
Rock Barren (Precambrian Rock)	Rock Barren <u>WITH</u> size of 1+ha <u>AND</u> relatively undisturbed <u>AND</u> tree cover <60%	Reindeer lichens (Cladina spp.), Haircap mosses (Polytrichum spp.), Poverty Oatgrass, Wavy Hairgrass, Common Juniper, Early Lowbush Blueberry, Sweet-fern, White Oak, Red Oak, Eastern White Pine, Bracken Fern, Bristly Sarsaparilla, Case's Ladies'-tresses, Early Saxifrage, Black Huckleberry, Pale Corydalis, Pin Cherry, Bastard Toadflax Defining Criteria: >4 listed sp <u>AND</u> a relatively undisturbed site SWH: ecostite	No	N/A	Absent SWH	No
Sand Barren	Sand Barren <u>AND</u> <60% tree cover; usually located within forest or savannah, caused by lack of moisture, periodic fires and erosion	Reindeer Lichens (Cladina spp.), Houghton's Sedge, Fernald's Sedge, Labrador Violet, Northern Dewberry, Northern Jointweed, Plains Porcupine Grass, Rock Spikemoss, Sweet-fern Defining Criteria: 1+ listed sp <u>AND</u> <50% cover by exotic/invasive species SWH: ecostite	No	N/A	Absent SWH	No
Alvar	Alvar, Coniferous Forest dominated by Pine or Cedar, Bedrock Cultural Meadow, Juniper Bedrock Alvar Cultural Thicket, Bedrock Cultural Savannah (CUS2), Bedrock Cultural Woodland (CUW2) <u>WITH</u> size 0.5+ha <u>AND</u> <60% tree cover; typically level mosaic of rock pavements and bedrock overlain by thin veneer of soil	Indicator Species: Balsam Groundsel, Fragrant Sumac, Hairy Beardtongue, Philadelphia Panicgrass, Small Skullcap, Wild Bergamot Defining Criteria: 1+ indicator sp <u>AND</u> <50% cover by exotic/invasive species <u>AND</u> its surrounding landscape with few conflicting land uses SWH: ecostite	No	N/A	Absent SWH	No
Old Growth Forest	Forest, Treed Swamp <u>WITH</u> size of 30+ha <u>WITH</u> 10+ha interior habitat (measured 100 m from forest edge)	No listed species Defining Criteria: 140+ year old trees of dominant tree species <u>AND</u> no cut stumps or other signs of logging SWH: ecostites <u>OR</u> ecoelement containing old growth characteristics	No	N/A	Absent SWH	No
Bog	Bog of any size	Sphagnum moss, ericaceous shrubs, sedges Defining Criteria: no additional criteria SWH: ecostite	No	N/A	Absent SWH	No
Tallgrass Prairie	Tallgrass Prairie of any size <u>WITH</u> <25 tree cover, may be natural or restored, primarily along shorelines in 5E <u>EXCLUDES</u> remnant sites such as railway right of ways	Indicator Species: Big Bluestem, Prairie Cordgrass Characteristic Species: Black-eyed Susan, Hairy Beardtongue, Kalm's Brome, Large-pod Pinweed, Narrow-leaved New Jersey Tea, Ovate-leaved Violet, Racemed Milkwort, Wild Bergamot, Yellow Indiangrass Defining Criteria: 1+ indicator sp <u>AND</u> 2+ characteristic species <u>AND</u> <50% cover by exotic/invasive species SWH: ecostite	No	N/A	Absent SWH	No
Savannah	Tallgrass Savannah, Tallgrass Woodland, Cultural Savannah of any size <u>WITH</u> tree cover 25-60%; may be natural or restored	Indicator Species (SHWTG Appendix N - use 6E): Dwarf Hackberry, Early-branching Panicgrass, Illinois Tick-trefoil, Redtop Panicgrass, Side-oats Gramma, Small-leaved Tick-trefoil, White Prairie Gentian Defining Criteria: 1+ of the listed species <u>AND</u> <50% cover by exotic/invasive species SWH: ecostite	No	N/A	Absent SWH	No
Rare Forest Type - Red Spruce Forest	Coniferous Forest and Coniferous Swamps/Bottomlands of any size <u>WITH</u> Red Spruce, often on shallow till soils, organic soils over rock, or steeper slopes	Red Spruce (similar to and hybridizes with Black Spruce) Defining Criteria: >10% cover by Red Spruce SWH: ecostite	No	N/A	Absent SWH	No
Rare Forest Type - White Oak Forest	Deciduous or Mixed Forest of any size <u>WITH</u> White Oak	White Oak Defining Criteria: >10% cover by White Oak SWH: ecostite	No	N/A	Absent SWH	No
Specialized Habitat for Wildlife						
Waterfowl Nesting Area	Upland habitats 120+m wide <u>AND</u> adjacent shallow aquatic, shallow marsh, meadow marsh, thicket swamp, or deciduous treed swamp (i.e., all wetlands excluding coniferous and mixed treed swamps). Wetlands must be >0.5 ha or a cluster of three or more <0.5 ha wetlands within 120 m of each other where waterfowl nesting is known to occur *Wood Ducks Bufflehead, Common Goldeneye, and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites	American Black Duck, American Widgeon, Blue-winged Teal, Bufflehead, Canada Goose, Common Goldeneye, Common Merganser, Gadwall, Green-winged Teal, Hooded Merganser, Mallard, Northern Pintail, Northern Shoveler, Red-breasted Merganser, Wood Duck Defining Criteria: 1+ nesting site of American Black Duck <u>OR</u> 10+ nesting pairs (including Mallards) <u>OR</u> 3+ nesting pairs (excluding Mallards) SWH: 120 m radius (+/- as determined by site-specific study) of upland habitat adjacent to a wetland	No	N/A	Absent SWH	No
Bald Eagle and Osprey Nesting, Foraging, and Perching Habitat	Forest, Swamp <u>AND</u> directly adjacent to shoreline/riparian areas of rivers, lakes, ponds, wetlands <u>EXCLUDES</u> nests on man-made objects (e.g., telephone poles, constructed platforms)	Osprey, Bald Eagle Defining Criteria: 1+ active nest <u>AND</u> known to be used annually; to be excluded nests must be known to be inactive for 3+ yrs or suspected to be inactive for 5+ yrs SWH: Osprey: active nest +300m radius <u>OR</u> contiguous woodland; Bald Eagle: active nest +400-800m radius	No	N/A	Absent SWH	No
Woodland Raptor Nesting Habitat	Forest, Treed Swamp, Coniferous Plantations <u>WITH</u> size 30+ha <u>AND</u> 4+ha of interior habitat (measured 200m from the forest edge)	Broad-winged Hawk, Cooper's Hawk, Merlin, Northern Goshawk, Red-shouldered Hawk, Red-tailed Hawk, Sharp-shinned Hawk, Barred Owl, Great-horned Owl Defining Criteria: 1+ active nest SWH: Red-shouldered Hawk, Northern Goshawk: active nest +400m radius <u>OR</u> 28ha suitable habitat; Barred Owl: active nest +200m radius; Broad-winged Hawk, Coopers Hawk, Great-horned Owl, Red-tailed Hawk: active nest +100m radius; Merlin, Sharp-shinned Hawk: active nest +50m radius	No	N/A	Absent SWH	No
Turtle Nesting Areas	Open sand and gravel <u>WITH</u> adjacent Bog, Fen, Meadow Marsh, Floating Marsh, or undisturbed shallow weedy areas of marshes, lakes, and rivers <u>EXCLUDES</u> habitat along municipal or provincial roads	Midland Painted Turtle, Snapping Turtle, Northern Map Turtle Defining Criteria: 5+ nesting Midland Painted <u>OR</u> 1+ nesting Northern Map or Snapping Turtle SWH: nesting area + 30-100m radius, depending on slope, riparian vegetation, adjacent land use, and consideration of travel routes to/from nest sites	No	N/A	Absent SWH	No
Lizard Nesting Areas	Deciduous and Mixed Forest; skink nests in logs, in stumps or under loose rock in partially wooded areas	Five-lined Skink Defining Criteria: 1+ nesting skink SWH: active nest +30m radius	No	N/A	Absent SWH	No



APPENDIX: Significant Wildlife Habitat Screening - SE

SWH Type	Habitat Descriptions & Criteria for Candidate SWH	Listed Species & Defining Criteria for <u>Confirmed</u> SWH	SITE			ADJACENT LANDS
			Candidate SWH Criteria Present: Yes/No	Species or Defining Criteria Observations	Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes	Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No
Seeps and Springs	Forest in headwaters area of a stream/river system; important wildlife feeding/drinking areas, especially in the winter	Wild Turkey, Ruffed Grouse, Spruce Grouse, Moose, White-tailed Deer, Salamander spp. Defining Criteria: 2+ seeps/springs SWH: ecosite/ecolement; may include adjacent habitats pending consideration of: slope, vegetation, height of trees and groundwater condition	No	N/A	Absent SWH	No
Aquatic Feeding Habitat	Wetlands or isolated embayments that provide an abundance of submerged aquatic vegetation (Pondweeds, Water Milfoil, and Yellow Water Lily preferred) <u>WITH</u> adjacent Conifer/Mixed Forest	Moose, White-tailed Deer *Mapped by MNRF on Crown Land Defining Criteria: observed or demonstrated (tracks, scat) moose use SWH: wetland +120m adjacent mixed or conifer forest, particularly those that provide thermal cover and/or travel corridors to other habitat features <i>If present, consider travel corridor SWH</i>	No	N/A	Absent SWH	No
Mineral Licks	Forest <u>WITH</u> upwelling groundwater	Moose, White-tailed Deer Survey: Observational survey in early spring prior to leaf out Defining Criteria: confirmed habitat SWH: wetland ecosite, seep or spring +100-200m radius of contiguous forest habitat, depending on level of disturbance	No	N/A	Absent SWH	No
Denning Sites for Mink, Otter, Marten, Fisher and Eastern Wolf	All species: Forest ecosites Mink: Shorelines dominated by Coniferous or Mixed forest; occasionally old muskrat lodges for denning Otters: Undisturbed Shorelines with productive fish populations, abundant shrubby vegetation and downed woody debris; often use beaver lodges, log jams or rock piles for denning Marten and Fisher: Large tracts of Coniferous or Mixed Forest of mature or older age classes; often use cavities in large trees or under large downed woody debris	Mink, Otter, Marten, Fisher, Grey Wolf, Eastern Wolf Defining Criteria: confirmed active den SWH: known Wolf den +200m radius <u>OR</u> known den of any other listed species +100m radius	No	N/A	Absent SWH	No
Amphibian Breeding Habitat (Woodland)	Wetland, pond or breeding pool, including vernal pools <u>WITH</u> size of 500+m ² (~25m diameter) <u>AND</u> located in or within 120m of Forest or Treed Swamp *Permanent ponds or those containing water until at least mid-July are preferred	Blue-spotted Salamander, Eastern Newt, Spotted Salamander, Four-toed Salamander, Northern Two-lined Salamander, Spring Peeper, Wood Frog, American toad Defining Criteria: 1+ breeding salamander sp <u>OR</u> 2+ breeding frog sp <u>WITH</u> 20+ individuals (adults or eggs masses) / Call Level Code 3 SWH: breeding pond/wetland +230m radius of woodland habitat <i>If present adjacent to woodland, travel corridor SWH is to be included</i>	No	N/A	Absent SWH	No
Amphibian Breeding Habitat (Wetlands)	Swamp, Fen, Bog, Meadow Marsh, Shallow Marsh, Shallow Aquatic, Open Aquatic <u>WITH</u> size of 500+m ² (~25 m diameter) <u>AND</u> typically >120 m from Forest except in the case of larger habitats containing predominantly aquatic species (e.g., Bullfrog) which may have riparian Forest *Shrubs and logs increase significance for some species because of structure for calling, foraging, escape, and concealment from predators	Blue-spotted Salamander, Eastern Newt, Four-toed Salamander, Spotted Salamander, American Toad, Bullfrog, Gray Treefrog, Green Frog, Mink Frog, Northern Leopard Frog, Pickerel Frog, Western Chorus Frog Defining Criteria: 1+ breeding salamander sp <u>OR</u> 3+ breeding frog/toad sp <u>WITH</u> 20+ individuals (adults or eggs masses) / Call Level Code 3 <u>OR</u> any number of breeding Bullfrogs SWH: wetland ecosite + adjacent shoreline <i>If present, travel corridor SWH is to be considered</i>	No	N/A	Absent SWH	No
Mast Producing Areas	Deciduous and Mixed Forests >0.5ha <u>WITH</u> >50% cover by mast producing tree species of >40-65cm dbh <u>OR</u> opening within Forest with >50% cover by mast producing shrub species Temporary clearings such as burns or clear-cuts are less significant	Tree Species: Beech, Red Oak, Basswood, Black Cherry, Butternut, Hickory, Ironwood, Mountain Ash, Pin Cherry Shrub Species: Beaked Hazel, Blackberry, Blueberry, Choke Cherry, Hawthorn, Raspberry, Serviceberry Associated wildlife: Black Bear, Ruffed Grouse, White-tailed Deer, Wild Turkey Defining Criteria: Forest with >50% cover by mature (>40-65cm dbh) mast producing tree species <u>OR</u> opening within Forest with >50% cover by mast producing shrub species SWH: ecosite or ecoelement with suitable habitat	No	N/A	Absent SWH	No
Habitat of Species of Conservation Concern						
Marsh Bird Breeding Habitat	Wetland <u>WITH</u> shallow water <u>AND</u> emergent vegetation *Green Heron prefers edge of water (sluggish streams, ponds, marshes sheltered by shrubs and trees), but can also be found in upland shrubs or forest a considerable distance from water	American Bittern, American Coot, Black Tern, Common Loon, Common Moorhen, Green Heron, Lesser Scaup, Sora, Marsh Wren, Pie-billed Grebe, Redhead, Red-necked Grebe, Ring-necked Duck, Ruddy Duck, Sandhill Crane, Sedge Wren, Trumpeter Swan, Wilson's Phalarope, Yellow Rail Defining Criteria: 1+ breeding Black Tern, Trumpeter Swan, Green Heron, Yellow Rail or Sandhill Crane <u>OR</u> 5+ nesting pairs of Sedge Wren or Marsh Wren <u>OR</u> breeding by 5+ other listed species SWH: ecosite	No	N/A	Absent SWH	No



APPENDIX: Significant Wildlife Habitat Screening - 5E

SWH Type	Habitat Descriptions & Criteria for Candidate SWH	Listed Species & Defining Criteria for <u>Confirmed</u> SWH	SITE			ADJACENT LANDS
			Candidate SWH Criteria Present: Yes/No	Species or Defining Criteria Observations	Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes	Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No
Open Country Bird Breeding Habitat	Natural and Cultural Meadows <u>WITH</u> size 30+ha <u>AND</u> history of longevity; present for at least 5 years <i>EXCLUDES Class 1 or 2 agricultural lands AND lands being actively used for row crops, intensive hay or pasture in the last 5 years</i>	Grasshopper Sparrow, Northern Harrier, Savannah Sparrow, Short-eared Owl, Upland Sandpiper, Vesper Sparrow Defining Criteria: nesting/breeding of 2+ listed species <u>OR</u> 1+ breeding Short-eared Owl SWH: contiguous ecosite field habitats	No	N/A	Absent SWH	No
Shrub/Early Successional Bird Breeding Habitat	Field habitats succeeding to Cultural Woodland, Cultural Savannah or Cultural Thicket <u>WITH</u> size of 30+ha <u>AND</u> history of longevity; abandoned fields or lightly grazed pastures <i>EXCLUDES Class 1 or 2 agricultural lands AND lands being actively used for row crops, hay or intensive pasture in the last 5 years</i>	Black-billed Cuckoo, Blue-winged Warbler, Brown Thrasher, Clay-coloured Sparrow, Eastern Towhee, Field Sparrow, Golden-winged Warbler, Prairie Warbler, Tennessee Warbler, Willow Flycatcher Defining Criteria: nesting/breeding of 2+ listed species <u>OR</u> 1+ breeding Golden-winged Warbler SWH: contiguous ecosite field/thicket habitats	No	N/A	Absent SWH	No
Special Concern and Rare Wildlife Species	Any - varies by species; habitat needs to cover an important life stage component (e.g., nesting, foraging, or wintering habitat)	Species that are ranked S1-S3 by the NHIC Defining Criteria: no additional criteria SWH: finest scale that protects the habitat form and function	No	N/A	Absent SWH	Yes
Animal Movement Corridors						
Amphibian Movement Corridors	Any habitat associated with water; shorter corridors are more significant than longer corridors *potential determined based on identification of Amphibian Breeding SWH	Blue-spotted Salamander, Eastern Newt, Spotted Salamander, Gray Treefrog, Spring Peeper, Western Chorus Frog, Wood Frog Defining Criteria: allowing amphibians to travel between summer and breeding habitat; several layers of native vegetation; ideally unbroken by roads, waterways, waterbodies, and development; gaps <20 m SWH: 15+m on both sides of a waterway/ecosite <u>OR</u> up to 200m wide in woodland habitats with gaps <20 m	No	N/A	Absent SWH	No
Cervid Movement Corridors	Any forested habitat; shorter corridors are more significant than longer corridors; typically follow riparian areas, woodlots, areas of physical geography (ravines or ridges) *potential determined based on identification of Deer Wintering SWH, Moose Aquatic Feeding Area SWH or Mineral Lick SWH	White-tailed Deer, Moose Defining Criteria: allowing cervids to move to and from yard, mineral lick or aquatic feeding area; should be unbroken by roads and residential areas SWH: 15+m on both sides of a waterway/ecosite <u>OR</u> up to 200m wide with gaps <20m	No	N/A	Absent SWH	No
Furbearer Movement Corridor	Any Forest habitat within/adjacent to shoreline *potential determined based on identification of Denning Site SWH for <u>Mink or Otter</u>	Mink, Otter Defining Criteria: no additional criteria SWH: not identified in Criteria Schedules	No	N/A	Absent SWH	No