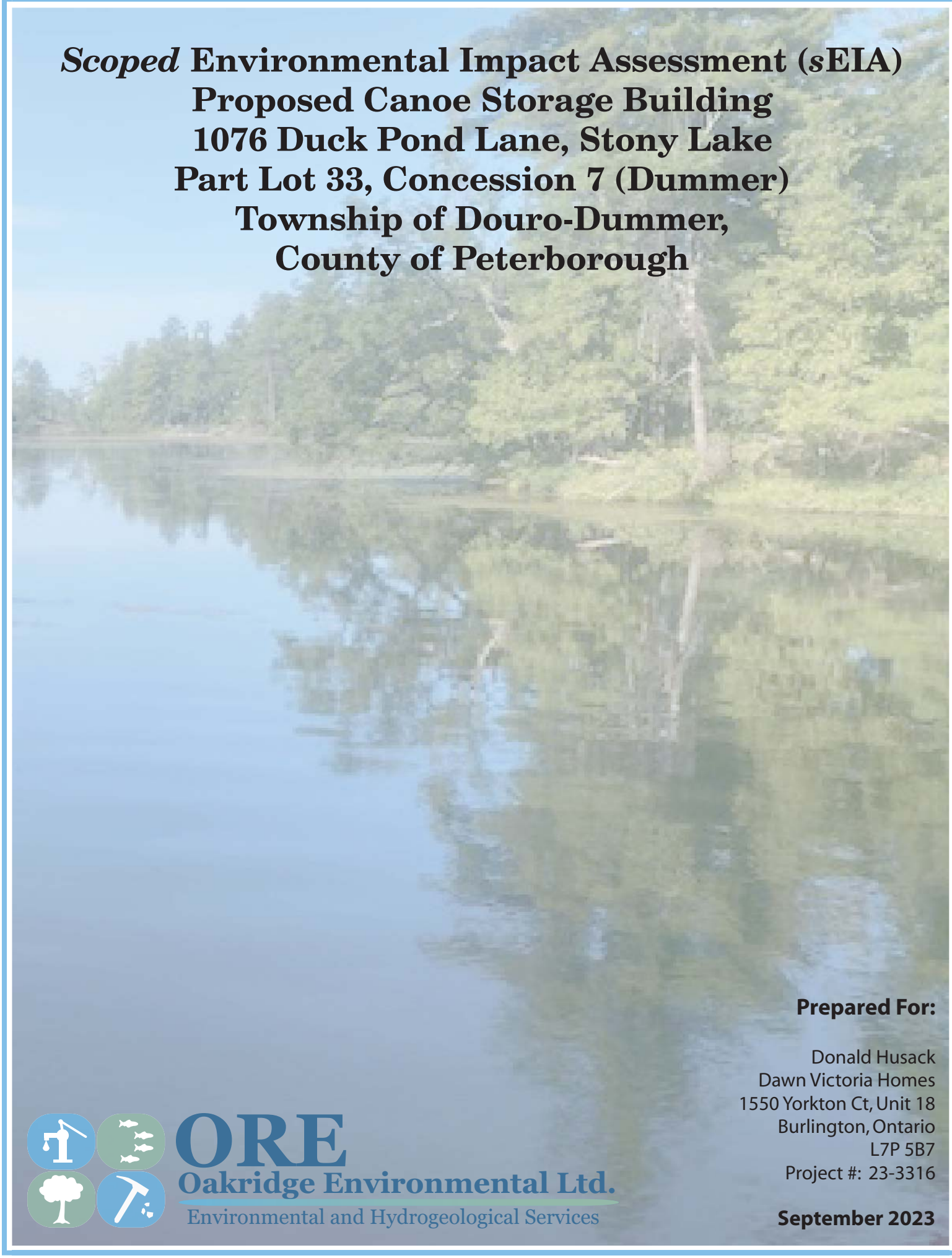
Scoped Environmental Impact Assessment (*s*EIA)
Proposed Canoe Storage Building
1076 Duck Pond Lane, Stony Lake
Part Lot 33, Concession 7 (Dummer)
Township of Douro-Dummer,
County of Peterborough



Prepared For:

Donald Husack
Dawn Victoria Homes
1550 Yorkton Ct, Unit 18
Burlington, Ontario
L7P 5B7
Project #: 23-3316

September 2023

ORE
Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

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September 15th, 2023

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1550 Yorkton Ct, Unit 18
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Attention: **Donald Husack**

Re: *Scoped* Environmental Impact Assessment (*s*EIA)
Proposed Canoe Storage Building
1076 Duck Pond Lane, Stony Lake
Part Lot 33, Concession 7 (Dummer)
Township of Douro-Dummer, County of Peterborough
ORE File No. 23-3316

We are pleased to provide this *scoped* Environmental Impact Assessment (*s*EIA) for the above referenced property. Our report has been completed in support of your application to construct a canoe storage building on your Stony Lake property.

Based on our review of the site conditions, Stony Lake and its associated Provincially Significant Wetland (PSW) appear to be the main environmental receptors. Provided the recommendations outlined in this report are adhered to, any potential adverse impacts to these features should be mitigated.

We trust that this report will be sufficient for any agency reviews. Should you have any questions or require clarification, please do not hesitate to contact our office.

Yours truly,

Oakridge Environmental Ltd.

Rob West, HBSc.
Senior Ecologist

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1.0 Introduction

Oakridge Environmental Ltd. is pleased to present this *scoped* Environmental Impact Assessment (*s*EIA) in support of your application to construct a canoe storage building on your Stony Lake seasonal residential property. It is understood that a Minor Variance will be required to obtain a permit.

The property is adjacent to the Whetung Road Provincially Significant Wetland (PSW) Complex, contains floodplain, and has an Environmental Constraint Area designation. Therefore, an *s*EIA is required to support the development application and to demonstrate that the development will not result in any impacts to nearby Key Natural Heritage Features (KNHF).

This *s*EIA was determined to be a requirement, by Township staff and the Otonabee Region Conservation Authority (ORCA), for a complete Minor Variance application through a pre-submission consultation meeting held on March 16th, 2023. The Terms of Reference (ToR) were not provided for the study at that time. However, similar to other applications, the pre-submission comments suggest that a *scoped* assessment will be acceptable, with the main focus being any sensitive hydrological features.

The following sections outline our data sources, methodologies, findings and recommendations.

2.0 Site Location and Description

The site is located at 1076 Duck Pond Lane (along the southern shoreline of Stony Lake), northeast of Warsaw, within Part Lot 33, Concession 7 (Dummer), Township of Douro-Dummer, and has an approximate area of 0.23 ha (0.57 acres), as illustrated on Figures 1 and 2.

The property is accessed from County Road 6 by turning north onto Crowe's Landing Road, west onto Whetung Road, continuing west onto Duck Pond Road, which eventually leads to Duck Pond Lane.

The property is currently developed with a cottage and garage. There are existing cottages/residences on the surrounding shoreline areas. The subject property is mapped as containing Stratum 2 - Deer Wintering Habitat and an Osprey nesting site, which are Significant Wildlife Habitats, as per Figure 2.

3.0 Proposed Development / Site Alteration

The proponent would like to build a canoe storage building on the south side of the property. The building will be approximately 20.4 m^2 in size, and will be used to store canoes and other water craft. The building will not include any habitable space.

The building is to be situated within an existing cleared area. The surrounding mature trees would be retained.

The reader is referred to the proponent's conceptual development plan (Appendix A).

4.0 Policy

This report has been prepared to meet the requirements outlined in the Township of Douro-Dummer's pre-consultation notes of March 16th, 2023. The requirements include relevant sections from the following policies/regulations:

- Provincial Policy Statement (PPS, 2020);
- County of Peterborough Official Plan (consolidated to December 2022);
- Growth Plan for the Greater Golden Horseshoe, and
- Otonabee Region Conservation Authority (ORCA) Ontario Regulation 167/06: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.

According to the pre-consultation comments, the study can be scoped and should include a planting plan to address Section 2.1.8 of the PPS and 4.2.4.5(b) of the Growth Plan, and should reference the Healthy Shorelines Planting Guide from ORCA.

This study has been *scoped* and formatted in accordance with the Township requirements.

5.0 Scope of Work

The following tasks were completed for this assessment:

- Relevant background information regarding the site (air photos, mapping, etc) was compile and reviewed. A high level screening of Species at Risk (SAR) databases was also completed.

- One (1) site inspection was completed by ORE's Senior Ecologist. The

inspection was focussed on the proposed development envelope and nearby sensitive features.

- Terrain mapping of the site included an assessment of vegetation communities, habitat, surficial soils, springs, recharge zones, etc., and confirmation of the presence or absence of wetland/drainage features. Any incidental observations of wildlife were recorded. All features were delineated and mapped.

- The proposed development footprint was superimposed on a geo-referenced air photo prepared from our library of air photo data. This information was used to determine any areas of potential concern (i.e., constraints) on the subject site.

- Upon completing the preceding tasks, the data was analysed and interpreted and this report was prepared.

6.0 Topography and Drainage

As illustrated by Figure 2, the subject property is situated on the northwest-facing slope of a small ridge overlooking Stony Lake, with a total relief of approximately 6 m. As the slope does not appear to be associated with a specific overburden landform, it is likely structurally controlled by the underlying bedrock surface.

The lake and lakeshore is occupied by a large Provincially Significant Wetland, referred to as the Whetung Road Wetland Complex, which includes part of Big Duck Pond, a wetland occupied bay. Several small wetland pockets (complexed with the main wetland) also occur inland from the lake, a short distance east of the site, within small (linear) depressions in the rock.

The site's proximity to the lake and the wetlands are likely indicative of a shallow water table condition.

7.0 Geological Setting

The subject site occurs near the southern edge of the Precambrian Shield, immediately north of the Paleozoic limestone terrain. As such, the topography is dominated by the bedrock structure.

As illustrated by Figure 3, the subject site is completely underlain by deposits referred

to as Precambrian bedrock drift complex. In general these are pebbly silt till deposits that adhere to the bedrock surface in thin, discontinuous layers, especially within bedrock depressions. In some instances, the drift (till) has a surficial layer of oxidized silty fine sand, which may be a weathering product of the till or outwash remnant. In general, the soils of the drift complex have low to moderate permeabilities.

Immediately to the south and southeast, Figure 3 also indicates that extensive deposits of stony, carbonate-rich silt and sand till occur. This till is part of the Dummer Complex. Dummer Complex sediments have a sandy matrix supporting a coarse stony component. The coarse component is typically composed of large and angular (broken) blocks of Paleozoic bedrock limestone. The stone composition primarily reflects the underlying bedrock lithology, although can contain some granitic materials. The Dummer Complex exhibits scattered, pitted hummocks of blocky, angular debris extending as a broad belt from Lake Simcoe to northeast of Kingston. Although not mapped on the site, it is possible that this till could also be present.

The thickness of the above soils cannot be determined from the mapping. However, from perusal of Ministry of the Environment, Conservation and Parks (MECP) well record database for the site area, we note that nearby well No. 7153395 encountered 1.3 m of "brown sand" above "granite" bedrock. That well reportedly had a static water level of 4.6 m (below ground surface in the bedrock), despite the drill encountering an aquifer at a depth of 33.5 m. Most other nearby wells penetrated through a minimal thickness of soil before encountering the bedrock.

8.0 SAR Database Review

The following databases were reviewed as part of a high level screening to determine the potential for SAR to exist on or within the vicinity of the subject property:

- Natural Heritage Information Centre (NHIC);
- Ontario Breeding Bird Atlas (OBBA);
- eBird;
- iNaturalist, and
- Fish ON-Line.

The search radius ranged from 1 km^2 square (NHIC) to 10 km^2 square (OBBA), depending on the available database. Based on our review, the following SAR occurrences were noted on or within proximity of the subject property:

Common Name	**Scientific Name**	**SARO Status**
NHIC		
Blanding's Turtle	*Emydoidea blandingii*	Threatened
Butternut	*Juglans cinerea*	Endangered
Common Five-lined Skink[1]	*Plestiodon fasciatus pop. 2*	Special Concern
Eastern Ribbonsnake	*Thamnophis saurita*	Special Concern
Eastern Whip-poor-will	*Antrostomus vociferus*	Threatened
Eastern Wood-Pewee	*Contopus virens*	Special Concern
Midland Painted Turtle	*Chrysemys picta marginata*	Special Concern[2]
Northern Map Turtle	*Graptemys geographica*	Special Concern
Snapping Turtle	*Chelydra serpentina*	Special Concern

Note: 1 Great Lakes/St. Lawrence population
2 SARA & COSEWIC status only

OBBA		
Bank Swallow	*Riparia riparia*	Threatened
Barn Swallow	*Hirundo rustica*	Special Concern
Black Tern	*Chlidonias niger*	Special Concern
Bobolink	*Dolichonyx oryzivorus*	Threatened
Canada Warbler	*Cardellina canadensis*	Special Concern
Eastern Meadowlark	*Sturnella magna*	Threatened
Eastern Whip-poor-will	*Antrostomus vociferus*	Threatened
Eastern Wood-Pewee	*Contopus virens*	Special Concern
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern
Golden-winged Warbler	*Vermivora chrysoptera*	Special Concern
Wood Thrush	*Hylocichla mustelina*	Special Concern
eBird		
Bald Eagle	*Haliaeetus leucocephalus*	Special Concern
Eastern Wood-Pewee	*Contopus virens*	Special Concern
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern
Wood Thrush	*Hylocichla mustelina*	Special Concern

iNaturalist

Bald Eagle	*Haliaeetus leucocephalus*	Special Concern
Black Ash	*Fraxinus nigra*	Endangered
Northern Map Turtle	*Graptemys geographica*	Special Concern
Monarch	*Danaus plexippus*	Special Concern
Olive-sided Flycatcher	*Contopus cooperi*	Special Concern

The following provincially rare species were also noted (not SAR but tracked by the ministry):

Common Name	**Scientific Name**	**S-Rank**
Swamp Darner	*Epiaeschna heros*	S3S4
Climbing Fumitory	*Adlumia fungosa*	S3

Fish On-Line

Database reviewed and no SAR were observed.

In addition, the NHIC query indicated that one (1) Wildlife Concentration Area is recorded in the area, a Colonial Waterbird Nesting Area. Unfortunately, the location is not disclosed in the database.

Excerpts from the database records are found in Appendix B.

9.0 Inspection Methodologies

The site has been characterized by its various vegetation communities using the methodologies included in the *Ecological Land Classification (ELC) - First Approximation and Its Applications* (1998). The 1998 Ecological Land Classification - First Approximation is a guide used by Ecologists to standardize the classification of different vegetation community types across Ontario. The classification system enables an ecologist to identify vegetation communities based on the species present, soil materials and moisture regimes. In this instance, the 1998 ELC was used to identify the wetland communities as the site occurs with Ecoregion 5E and possesses Precambrian Bedrock related woodlands.

There have been a number of updates to the ELC scheme to further refine the classification of Ecosites throughout Ontario. As a result, the 2008 *Draft* ELC Guide provides a further breakdown of the 1998 ELC Guide - First Approximation communities and includes many new communities to index from. The 2008 ELC scheme also provides a cross-reference to the 1998 guide communities. This report uses a combination of both the 1998 ELC communities (which are considered the primary vegetation communities) and the 2008 Draft ELC to supplement the wetland vegetation community lists.

As for the terrestrial communities on the subject property, the Field Guide to Forest Ecosystems of Central Ontario (FG-01), 1997 was used to classify the woodland communities. This guide is used to classify vegetation types in Ecoregion 5E.

Prior to conducting the site inspection, aerial photography of the subject site was analysed to roughly delineate communities based on recognizable vegetation differences. Each identified community was subsequently inspected. Dominant vegetation types were recorded and boundaries of the various communities mapped on an air photo or utilizing a dGPS.

In addition to identifying and mapping the vegetation communities, ORE staff assessed each vegetation community from the perspective of whether they are hydrologically sensitive or a SWH for either Stratum 2 - Deer Wintering or Osprey Nesting areas. The vegetation survey included examination of the development footprint and immediate surrounding areas.

10.0 Site Inspection Data

10.1 Site Inspection

ORE staff attended the site on the following date:

Date of Inspection	Temp. ^{O}C	Beaufort (Wind) Scale	Conditions Reason for Inspections
July 19, 2023	25	2 - Light Breeze	2% Cloud cover. Relatively clear warm summer day with very little air movement. Observe vegetation/existing site conditions, identify SAR, vegetation mapping - species list, wildlife detection and species list, SWH habitat review. PSW mapping confirmation and evidence of seeps and/or springs, wetlands in the area of proposed building site.

Appendix C contains the list of species identified on the property during our inspection.

10.2 Ecological Land Classification (ELC)

Based on our site observations, we have determined that there are two (2) upland communities/habitats on-site, and two (2) aquatic communities associated with Stony Lake and the PSW. The vegetation types were assessed by applying the protocols in the Ecological Land Classification for Southern Ontario (FG-02), 1998 (or draft 2008 version) and the Field Guide to Forest Ecosystems of Central Ontario (FG-01), 1997, where applicable.

Figure 4 illustrates the distribution of the on-site vegetation communities, and the off-site aquatic community. These habitats and their associated vegetation and environmental sensitivities are characterized below.

Representative photos of these communities are provided in Figure 5. Descriptions of the communities are provided below.

Upland Community:

1. Rural Property (CVR_4)

There is no description in the ELC regarding the Residential-type community.

This community includes the development footprint associated with the existing cottage, existing garage, the existing septic area, the driveway/parking, and the maintained disturbed areas surrounding them. The vegetation in this ELC type contains mainly open bedrock/frequently travelled disturbed areas. These envelope areas and access road related areas are relatively tight around the buildings. The very limited frequently disturbed areas quickly transition into the mature White Pine (*Pinus strobus*) woodland habitat that follows.

This community encompasses the area where the existing cottage and garage development occur. ORE staff did not observe any SAR flora or fauna in this community, or any wetlands or watercourses that would be considered a constraint to the proposed development.

The proposed canoe storage building is to be constructed within an opening directly southwest of the existing garage. However, it is not an area that is frequently used/disturbed to access the existing buildings on-site. There is an existing track-bare laneway that occurs directly south of the existing garage that allows the owner access to the lakeshore for the purpose of launching boats.

2. White Pine-Red Pine: dry to moderately fresh soils (ES11.1)

The FG-01 characterizes the ES11.1 woodland community as, White Pine and/or Red Pine dominated stands on dry to moderately fresh soils. The understorey has moderate levels of conifer regeneration, low hardwood shrubs and feathermosses. There is a low number of herbs and the soils are typically sandy to coarse loamy.

This community dominates the majority of the upland areas of the property with mature/large diameter White Pines occurring throughout. There are low shrub species such as Common Juniper (*Juniperus communis*), Low-Bush Blueberry (*Vaccinium angustifolium*), goldenrods and asters in the small openings where the sun is able to penetrate the canopy of pines. The acidic rock barren areas beneath the pine trees possesses patchy areas of bare bedrock, lichens, moss species and Poverty Oatgrass (*Danthonia spicata*).

None of the species identified within this community are Species at Risk. The White Pine does not represent Deer Wintering SWH as there is little to no undestorey in this

woodland type for browsing purposes. It could be suitable habitat for Osprey nesting considering the tall pines directly adjacent to the lakeshore, however, neither Osprey nor its nest were identified on-site during the site inspection/surveys.

It is within this habitat that the proposed canoe storage building is to be constructed. According to the site plan, no mature trees occur directly within the proposed building envelope.

Wetland/Aquatic Community:

3. Open Aquatic (OAO)

The ELC (2008) describes OAO as an aquatic environment containing no macrophyte vegetation. This ecosite tends to be dominated by plankton and has a lake trophic status.

This ecosite represents the open water/offshore habitat of Stony Lake, which occurs across the entire northwestern edge of the subject property. The lake bottom substrate along the shoreline is comprised of exposed Precambrian Bedrock and organic sand-filled bedrock cracks and crevasses. The shoreline contains some sandy sediments, however, there appears to be a relatively significant organic/detritus matt on the bottom that covers most of the sediments in the offshore areas, therefore, it is considered to be a relatively poor fisheries spawning habitat for most fish species.

ORE staff observed floating leaved aquatic plant species in the near-shore environment areas that likely constitute the PSW habitat, which is discussed in the following habitat.

4. Submerged Shallow Aquatic (SAS1) and Water Lily and Bullhead Lily Floating-Leaved Shallow Aquatic (SAF1-1)

According to the ELC, Submerged Shallow Aquatic communities are dominated by submerged macrophytes (greater than 25%). The SAS1 community forms part of the PSW and possesses submerged aquatic plant species such as Pondweeds (primarily *Potamogeton spp.*), Common Horn-wort (*Ceratophyllum demersum*), Common Waterweed (*Elodea canadensis*), Muskgrass (*Chara ssp.*), Common Water-Milfoil (*Myriophyllum sibiricum*), and Eurasian Milfoil (*Myriophyllum spicatum*).

According to the ELC, the SAF1-1 community is dominated by floating-leaved macrophytes (greater than 25%). This community, in addition to the submerged aquatic species, forms the surficial floating aquatic plants in the PSW and is dominated

by White Water-Lily (*Nymphaea alba*).

Both aquatic plant areas represent the PSW habitat within Stoney Lake that is adjacent to the terrestrial areas of the subject property. The combination of submerged and floating leaved aquatic plant species represents good quality spawning habitat for Northern Pike (*Esox lucius*) and Muskellunge (*Esox masquinongy*), and would be considered Significant Fisheries habitat. The young-of- year of these fish species would utilize the vegetation for foraging and cover.

10.3 Fauna

No significant fauna were observed directly on-site. Only tracks of common/secure mammals were observed on the subject parcel.

Due to the shoreline area being predominantly comprised of hard materials, there was very little spawning areas in the littoral zone/offshore area, other than in the area of the existing dock and boat launch area. The continued disturbance in this area keeps the organic/muck deposits from settling and covering Centrarchid redds.

Although ORE staff did not observe any turtles in the area of the subject property, there is the potential for turtles to access the developed areas of the subject property (e.g. the access road) and to use these areas for nesting. The property owner/contractor should install measures to prevent all turtle species from entering the construction area/work zone.

Similar to the turtles, ORE staff observed approximately ten (10) Centrachids off the dock area in the near-shore environment during the inspection. It was not spawning season for any of these species and they were utilizing the dock as cover.

No SAR fish nor SAR fauna were observed during the inspections.

According to the mapping on Figure 2, the subject site contains Stratum 2 - Deer Wintering Habitat. ORE staff inspected the subject site for deer use, typically utilized by deer for overwintering purposes. ORE staff did not observe deer concentration trails nor did we observe any scat or browsed vegetation on the subject site.

Tall mature White Pine habitats are open and airy and this type of setting is not indicative of deer wintering habitat. Therefore, the subject property does not appear to contain deer wintering habitat and the Stratum 2 mapped boundary is, therefore, incorrect.

The Eastern White Cedar (*Thuja occidentalis*) and Eastern Hemlock (*Tsuga*

canadensis) dominated shrub/tree content increases south of the subject parcel. ORE staff expect the Stratum 2 - Deer Wintering SWH would be in this area as there would be more cover and suitable browse materials in the winter. As such, no mitigation is necessary with respect to the Stratum 2 - Deer Wintering Habitat, and consequently, is not addressed in the following sections.

The fauna species observed on-site are listed within Appendix C for completeness.

10.4 Flora

ORE staff inspected the subject parcel and visible areas of the properties directly adjacent to the subject property to detect any SAR plant species or wetland areas that would be sensitive to the proposed development.

Very few SAR plant species occur within Ecoregion 5E landscape; they are predominantly in Ecoregion 6E, south of the contact.

No SAR species nor wetlands (other than what is identified in the LIO mapping) were detected on-site during the site surveys.

11.0 Impact Assessment

11.1 General Considerations

Based on our assessment, it is our opinion that potential impacts related to future development of the site could include the following:

1) Potential degradation/alteration of the upland vegetation communities and/or existing CVR_4 residential area that could impact Stony Lake, resulting in erosion/sedimentation and water quality deterioration.

2) Potential impacts related to construction activities (e.g., ground vegetation removal, etc.), including destabilisation and denuding of the groundcovers by track/tire equipment accessing the building construction site.

3) Potential impacts related to post-construction occupation and stabilizing of bare or disturbed/altered surficial soils.

These general impact considerations are further discussed in the following sections.

11.2 Development Envelope

Our field investigations have confirmed that the main concern with respect to the proposed canoe storage building is its location relative to the lakeshore (as illustrated on Figure 6). Construction of the proposed building could result in a relatively large area of bare soils being exposed adjacent to the lakeshore, as filling and grading will undoubtedly be necessary. Notwithstanding, it is expected that the construction zone will not expand significantly beyond the proposed footprint of the building and/or the existing opening in the forest floor. ORE also expects the majority of the construction can be completed from the existing laneway on the south side of the garage (Figure 6). As such, the construction can be mostly confined to those areas that have been historically altered/disturbed, without imposing on any new natural areas on the subject property.

Overall, the gradient down to the shoreline from the proposed canoe storage building is gentle as it occurs within a relatively wide trough between two (2) bedrock ridges. As such, the majority of runoff will be directed around the proposed building in this low relief bedrock trough. The flows will be slowed within this feature and will be manageable during the construction and post construction phase, with respect to the lake. It is expected that the canoe storage building footprint will need to be filled/raised in this area. However, there is sufficient area on the south side of the building footprint for runoff within the trough to continue as sheet flows, conveyed toward the lakeshore.

ORE staff noted that the trees in this wooded area are mostly large diameter mature trees sporadically interspersed within the bedrock trough area. The building site possesses very little tree cover and mainly groundcover vegetation. The mature trees are mainly comprised of Eastern White Pine. It should be possible to remove only shallow-rooted ground vegetation while retaining the majority of the shrubs and trees that have deep roots and are considered stabilizers.

The property owners have done well to retain and manage the woodland habitat in a natural state. Although the former practice of clearing vegetation and/or filling to the edge of the lake was considered a reasonable approach (especially to obtain vistas of the lake), this was clearly not implemented by property owners on this property. The highly vegetated natural setting on-site has likely improved/maintained the shoreline buffering capacity, especially with respect to on-site attenuation of runoff and septic effluent in the shallow flow zone. This property would receive a good to excellent review/rating if it were subjected to the shoreline assessment criteria by ORCA.

Based on these findings, the proposed canoe storage building should have undetectable adverse impacts on the lakeshore and overall water quality of Stony Lake.

Recommendations are provided in a following section to mitigate general construction

type impacts on nearby watercourse features.

11.3 Construction Related Impacts

The main potential impacts associated with construction activities could include the following:

- loss or disruption of vegetation (i.e., primarily in the construction area surrounding the footprint of the proposed canoe storage building which could result in some shrub and groundcover removal) - it should be possible to avoid mature tree removal and use the opening in this area to construct the proposed building;

- erosion and sediment generated by exposed and/or disturbed soils while operating equipment in the area of the build site;

- presence of construction debris and waste materials as a result of constructing the building;

- fauna such as turtles potentially entering the work area, and

- sensitivity of the site with respect to imported fill materials and stockpiling of these materials during construction.

Recommendations are provided below to ensure that the potential for impacts relating to occupation and use of the new dwelling are minimized.

12.0 Recommendations

12.1 Development Envelopes and Constraints

- The proposed canoe storage building should generally fit within the open area footprint to the south of the existing garage, as illustrated by Figure 6. Figure 6 also indicates the approximate limit of the *disturbance/construction area* defined by the proponent's Site Plan. No new disturbed areas are necessary to incorporate the proposed building on the subject property.

- Provided the authorities are in agreement with the proposal, the canoe storage building can proceed with very little additional disturbed area occurring on the subject property, other than some machinery impacts from filling/grading. ORE

staff anticipate the proposed building site can be accessed from an existing track-bare access road that occurs between the existing garage and proposed building location.

- It should be possible to construct the storage building, while avoiding any nearby mature trees. If any trees have to be removed due to their health, ORE staff recommend planting three (3) new native trees/shrubs between the shoreline and proposed storage building, to offset the tree loss. Certain shrub species can be planted without resulting in any significant reduction to the lake vistas in the area. The shrubs will also enhance the shoreline with respect to erosion-stabilization while improving the buffering capacity for runoff and/or potential shallow groundwater zone.

- ORE staff did not observe any other watercourses or wetlands in the area of the subject property, other than Stony Lake. Therefore, this Key Hydrologic Feature appears to be the only sensitive receptor downgradient of the proposed building site. The PSW corresponds to the lake and occurs in the form of floating leaved and submerged aquatic vegetation. The PSW does not occur on the subject property. Recommendations to retain both the form and function of Stony Lake and the PSW are provided below.
- To ensure the disturbed area does not advance any closer to Stony Lake, a 6 m wide setback/buffer should be applied to the shoreline and be demarcated on-site by installing a heavy-duty silt fence along this limitation, as illustrated by Figure 6. This will prevent the construction crew from unnecessarily increasing the overall disturbance footprint towards the lake, especially when the use of heavy equipment is necessary. The heavy-duty silt fence should be extended around the entire building envelope perimeter to ensure turtles cannot migrate from the lake and nest within any exposed soil areas or within areas of sandy fill materials placed in the building envelope (Appendix D). The contractor can open the silt fence along the existing track-bare area to access the building site and continue with the day-to-day construction activities. The heavy-duty silt fencing will ensure that any loose/unconsolidated materials will not migrate beyond the cordoned construction area, thereby protecting Stony Lake and the PSW.

- As there is a potential for SAR turtles to occur within Stony Lake (e.g., Snapping Turtle, Blanding's Turtle, Northern Map Turtle, and Midland Painted Turtle), the heavy-duty silt fence will serve as a turtle exclusion fence, as recommended by Ministry of Northern Development Mines, Natural Resources and Forestry (MNDMNRF). Light-duty silt fence is not considered an acceptable exclusion fence material, as large turtles such as Snapping Turtle, could dig beneath the fence or potentially push the fence over and enter the construction zone. Nesting turtles and/or their eggs can be damaged by construction equipment. The fence is there to prevent this from happening.

- Invasive/exotic species can also be an issue with respect to recently disturbed sites. They can out-compete other native species. As such, the contractor's machinery should be cleaned according to the provincial protocols to prevent transportation of invasive/exotic species to and from the subject site[1]. If the equipment leaves the site, it should be cleaned prior to reentering the property.

- Considering construction of the proposed canoe storage building will disrupt some of the natural groundcover vegetation within lands directly upgradient of Stony Lake and the PSW, the property owner shall apply new vegetation to the disturbed areas as per the Healthy Shorelines Planting Guide by ORCA. The property owner should submit a plan that illustrates the vegetation types to be planted around the periphery of the new building to rehabilitate/stabilize those groundcover species that are impacted by the construction activities. The planted vegetation's root balls/zones would become stabilizers preventing surficial sediments from eroding towards the lake/PSW. It is in the best interest of the proponent and the lakeshore habitat to install the vegetation as per the planting guide, to somewhat naturalize the disturbed areas around the building.

- The property owner can plant smaller seedling sized stock. These should be obtained from a reputable nursery as opposed to transplanting from the nearby woodland habitats. There are a variety of colourful native trees or shrubs that can be planted. ORE staff can provide recommendations in this regard. The plantings are not meant to obscure the vistas of the lake, but rather improve, protect and beautify the property and the shoreline area. Shorelines that are predominantly devoid of vegetation (i.e., only grass) tend to contribute more nutrient laden runoff to the lake, resulting in a deterioration of water quality. Considering the lake is used for recreational purposes, such as fishing, boating and swimming, any minor improvements would be beneficial.

- Grass seed and/or sod should also be applied to any exposed/bare soils resulting from site preparation and construction activities, in addition to the recommended shrub/tree planting. The recommended shrub and/or tree plantings around the edge of the storage building should be included on the Site Plan drawing. ORCA's Healthy Shorelines Planting Guide should be consulted again in this regard.

[1] Clean Equipment Protocol for Industry - Inspecting and cleaning equipment for the purposes of invasive species prevention

12.2 General Design Considerations

- The design/layout plan for the new build should demonstrate that the work can be completed outside the 6 m wide setback of the lakeshore as illustrated on Figure 6 (Constraints). The site plan should illustrate which native shrubs will be planted on-site to improve conditions between the proposed building and shoreline. The planted vegetation can become part of the landscaping plan, if one is proposed.

- All recommended erosion controls should be installed prior to commencing any work on the property, to ensure the sensitive hydrological features (lake and PSW) are not impacted. The prescribed vegetation to be planted on the property will help stabilize the soils between the development and the shoreline and reduce shoreline erosion effects. Vegetation/seed/sod must be established on any/all bare soil areas at the end of the construction. The works cannot be considered complete until all surfaces are stable. The Site Plan should illustrate how all surfaces/grades will be stabilized/finished.

- Passive stormwater management controls should be incorporated into the development design of the new roof area. Examples include roof leaders being directed to an area where the flows will not gouge or destabilize soils over time. The warm flows from the roof leaders should be infiltrated into the ground, so as to reduce thermal impacts to Stony Lake. ORE expects the soils are sandy in the area of the proposed storage building, therefore, it may be possible to outlet the roof leaders onto the grass/fill materials surface. Gravel can also be introduced at the end of the leaders (there are also plastic flow dissipaters that can be purchased at most hardware/landscaping retailers) to create an apron that dissipates the concentrated energy of the roof leader flows, distributing them over a larger area to enhance infiltration.

12.3 Construction Mitigation

- Proper erosion/sedimentation controls (ESC) will be required at all times while heavy equipment operates at the site. Heavy-duty silt fence should be installed around along the 6 m work zone setback limit and perimeter of the building envelope, as illustrated by Figure 6 (Appendix D). Construction should not continue during heavy precipitation events. After these events, the fence should be checked to ensure their effectiveness.

- The heavy-duty silt fence provides a solution to mitigate sheet runoff, not concentrated flows. Therefore, if a concentrated flow results from construction (not anticipated), another type of erosion/sedimentation control, such as a rock

check dam that incorporates stone and geotextile filter cloth to prevent sediment laden runoff from entering the sensitive watercourse features, should be utilized. The contractor or owner should illustrate any such interim or permanent ESC on their Site Plan.

- Only clean fill should be imported to the site. The fill should not contain organic materials such as plant debris or topsoil that may contain exotic or invasive species that could out-compete native species along the lakeshore. If imported topsoil is required, screened topsoil should be the only material applied to top-dress the fill. Any imported materials that are stockpiled on-site should also be surrounded by heavy-duty silt fence until the materials are applied. The fence will prevent species such as turtles from leaving the lakeshore to nest within the loose unconsolidated materials during construction.

- To reduce potential post-construction sedimentation, the site should be quickly seeded or sodded to re-establish the root structure within the upper soils where areas have been disturbed and soils are exposed. Planting of native vegetation, between the storage building and shoreline/PSW, is encouraged at this stage. Once the seeding or sodding is determined to be a success and the soils are stable, the erosion/sedimentation controls can be removed.

- Absolutely no construction equipment should be operated beyond the 6 m lakeshore setback limitation, nor should equipment grade any new swales or other drainage works on-site to direct water toward the lake. All equipment must remain within the area designated for construction (to be outlined by the heavy-duty silt fence).

12.4 Closing Remarks

It is our opinion that the applicant should be granted a Building Permit for the purpose of constructing a new canoe storage building, provided the mitigation measures recommended herein are adhered to. The proponent should recognize that this *scoped* Environmental Impact Study provides recommendations pertaining only to natural environmental issues. Other issues related to Land Use Planning, servicing and/or Engineering may also need to be addressed with respect to any future application(s) and/or development plans.

The proponent should obtain all required permits from the agencies prior to commencing any construction on-site. Failure to do so may result in delays and/or other liabilities.

End of *Scoped* EIS Report

Yours truly,
Oakridge Environmental Limited

Rob West, HBSc.
Senior Ecologist

Selected References

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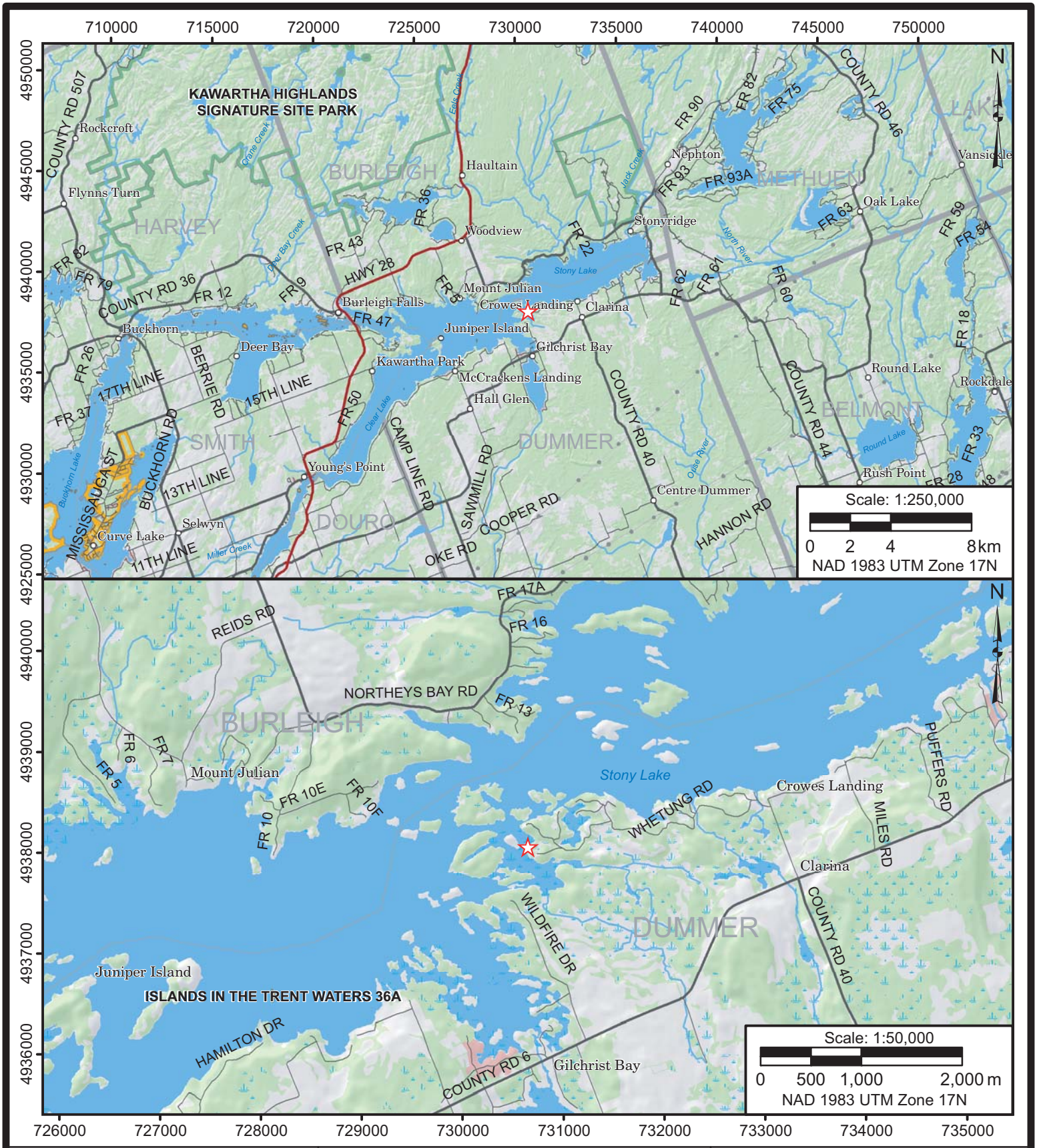
Figures



☆ Approximate Site Location

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2023)

Optimized for Oakridge Environmental Ltd. printing

***Scoped* Environmental Impact Assessment (sEIA)**
Proposed Canoe Storage Building
1076 Duck Pond Lane, Stony Lake
Part Lot 33, Concession 7 (Dummer)
Township of Douro-Dummer,
County of Peterborough

North American Datum (NAD) 1983

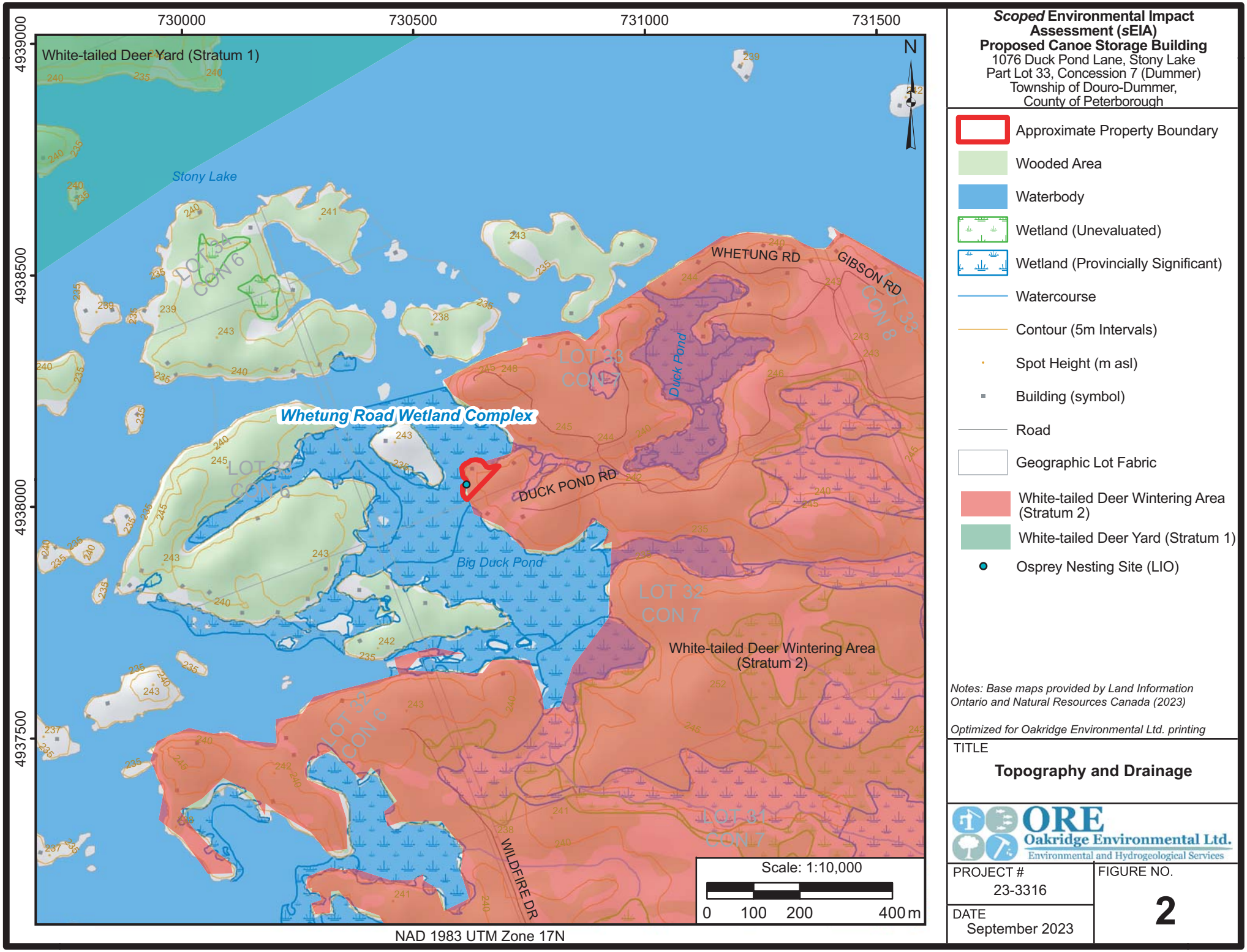
TITLE
General Location

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT # 23-3316

DATE September 2023

FIGURE NO. **1**



Scoped Environmental Impact Assessment (sEIA)
Proposed Canoe Storage Building
1076 Duck Pond Lane, Stony Lake
Part Lot 33, Concession 7 (Dummer)
Township of Douro-Dummer,
County of Peterborough

- Approximate Property Boundary
- Wooded Area
- Waterbody
- Wetland (Unevaluated)
- Wetland (Provincially Significant)
- Watercourse
- Contour (5m Intervals)
- Spot Height (m asl)
- Building (symbol)
- Road
- Geographic Lot Fabric
- White-tailed Deer Wintering Area (Stratum 2)
- White-tailed Deer Yard (Stratum 1)
- Osprey Nesting Site (LIO)

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2023)

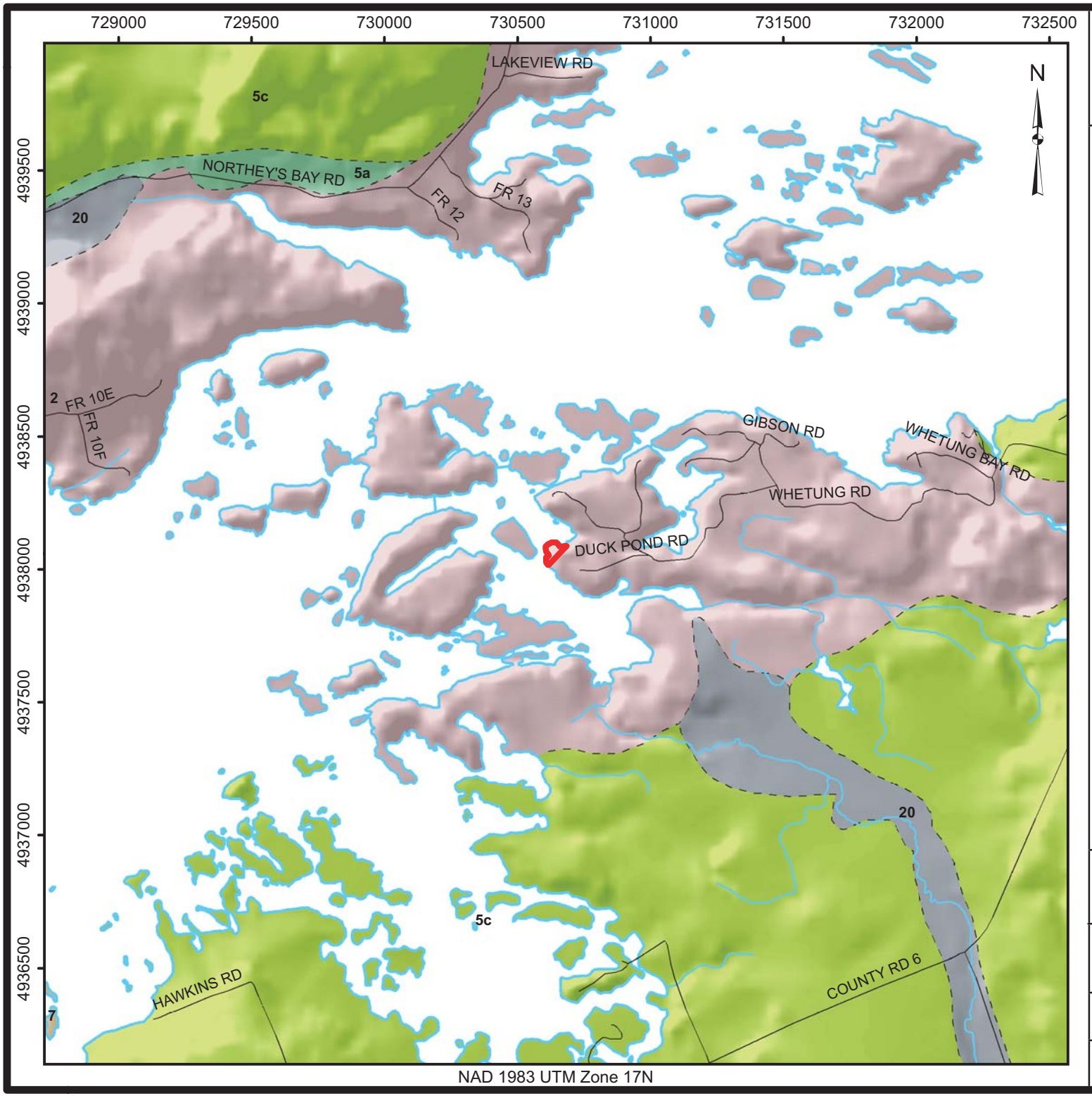
Optimized for Oakridge Environmental Ltd. printing

TITLE

Topography and Drainage

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3316	2
DATE: September 2023	



Scoped Environmental Impact Assessment (sEIA)
Proposed Canoe Storage Building
1076 Duck Pond Lane, Stony Lake
Part Lot 33, Concession 7 (Dummer)
Township of Douro-Dummer,
County of Peterborough

- Approximate Property Boundary
- Waterbody
- Watercourse
- Contact (approximate/assumed)
- 2 — Precambrian bedrock-drift complex
- 5a — Glacial Deposits (Till): Shield-derived silty to sandy till
- 5c — Glacial Deposits (Till): Stony, carbonate-derived silty to sandy till
- 7 — Glaciofluvial deposits
- 20 — Organic deposits

Scale: 1:20,000

0 200 400 800 m

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2023)

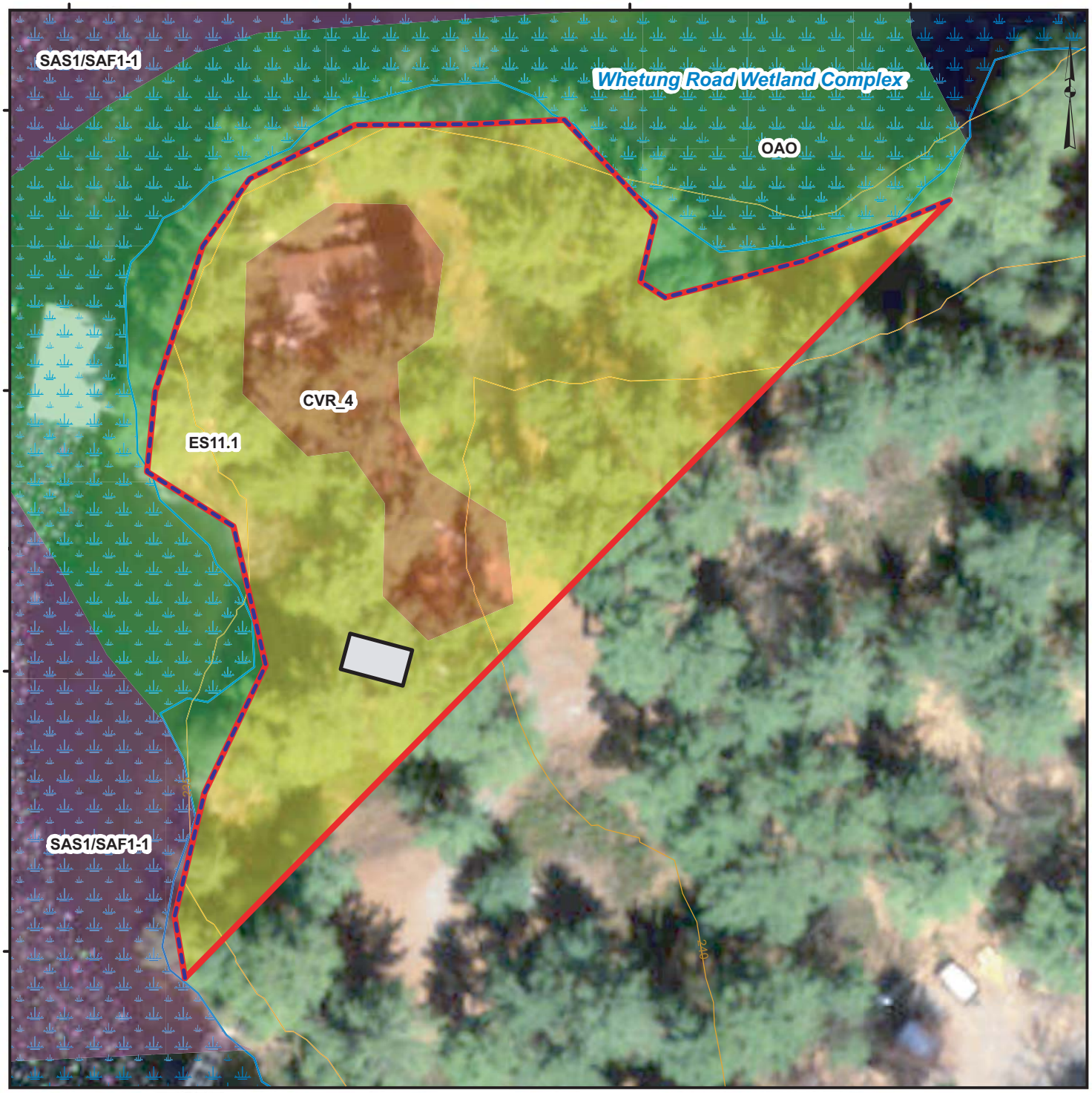
Optimized for Oakridge Environmental Ltd. printing

TITLE

Surficial Geology

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3316	3
DATE: September 2023	



NAD 1983 UTM Zone 17N

Scoped Environmental Impact Assessment (sEIA)
Proposed Canoe Storage Building
1076 Duck Pond Lane, Stony Lake
Part Lot 33, Concession 7 (Dummer)
Township of Douro-Dummer,
County of Peterborough

- Approximate Property Boundary (E&P)
- Proposed Canoe Storage Building
- Rural Property (CVR_4)
- White Pine-Red Pine: dry to moderately fresh soils (ES11.1)
- Open Aquatic (OAO)
- Submerged Shallow Aquatic (SAS1) and Water Lily and Bullhead Lily Floating- Leaved Shallow Aquatic (SAF1-1)
- Wetland (Provincially Significant)
- Shoreline (E&P)
- Contour (5 m Intervals)

Scale: 1:500

0 5 10 20 m

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2023)

Imagery provided by SCOOP (2013)

Site Plan provided by Elliot and Parr (E&P) (May 02, 2023)

Feature locations determined by differential GPS (+/- 3.0 m)

Optimized for Oakridge Environmental Ltd. printing

TITLE

Vegetation

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3316	4
DATE	
September 2023	

Photo A (Above): was taken looking southeast from the dock that occurs offshore from the cottage. Can see clearly where the open water and PSW floating leaved aquatic areas are in photo.

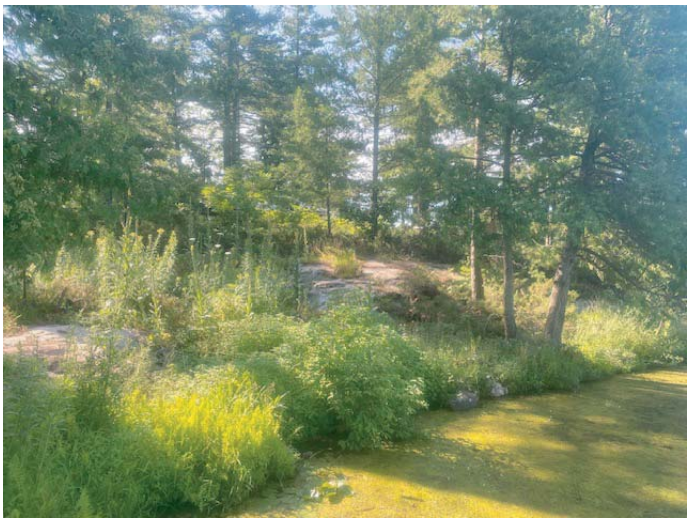


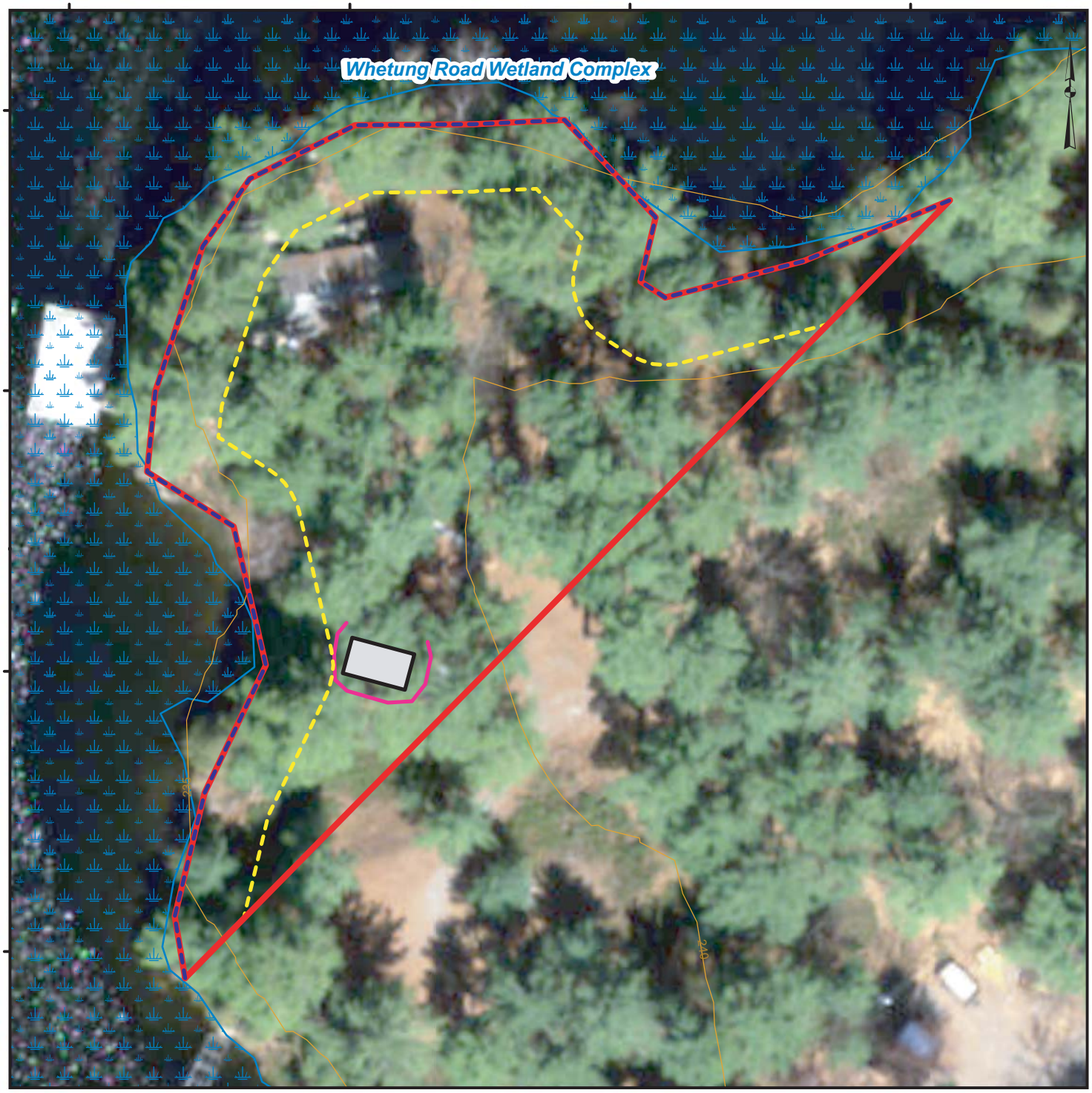
Photo B (Above): was taken looking southwest across the waterfront directly downgradient of the proposed boat storage building.

Photo C (Above): was taken looking west towards the area where the boat storage building is to be located, just beyond the large diameter pine.

Photo D (Above): was taken looking west along the south side of the existing garage. It illustrates the existing laneway that most of the machine operated work can be conducted from to construct the boat storage building.

	***Scoped* Environmental Impact Assessment (sEIA)** **Proposed Canoe Storage Building** 1076 Duck Pond Lane, Stony Lake Part Lot 33, Concession 7 (Dummer) Township of Douro-Dummer, County of Peterborough	TITLE **Site Photos**
Photos Taken: July 19, 2023	ORE Oakridge Environmental Ltd. Environmental and Hydrogeological Services	PROJECT # 23-3216
		DATE September 2023
		FIGURE NO. **5**

Optimized for Oakridge Environmental Ltd. printing



***Scoped* Environmental Impact Assessment (sEIA)**
Proposed Canoe Storage Building
1076 Duck Pond Lane, Stony Lake
Part Lot 33, Concession 7 (Dummer)
Township of Douro-Dummer,
County of Peterborough

- Approximate Property Boundary (E&P)
- Proposed Canoe Storage Building
- Wetland (Provincially Significant)
- Shoreline (E&P)
- Shoreline/Wetland Setback (6 m)
- Contour (5 m Intervals)
- Heavy Duty Silt Fence

Scale: 1:500

0 5 10 20 m

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2023)

Imagery provided by SCOOP (2013)

Site Plan provided by Elliot and Parr (E&P) (May 02, 2023)

Feature locations determined by differential GPS (+/- 3.0 m)

Optimized for Oakridge Environmental Ltd. printing

TITLE

Constraints

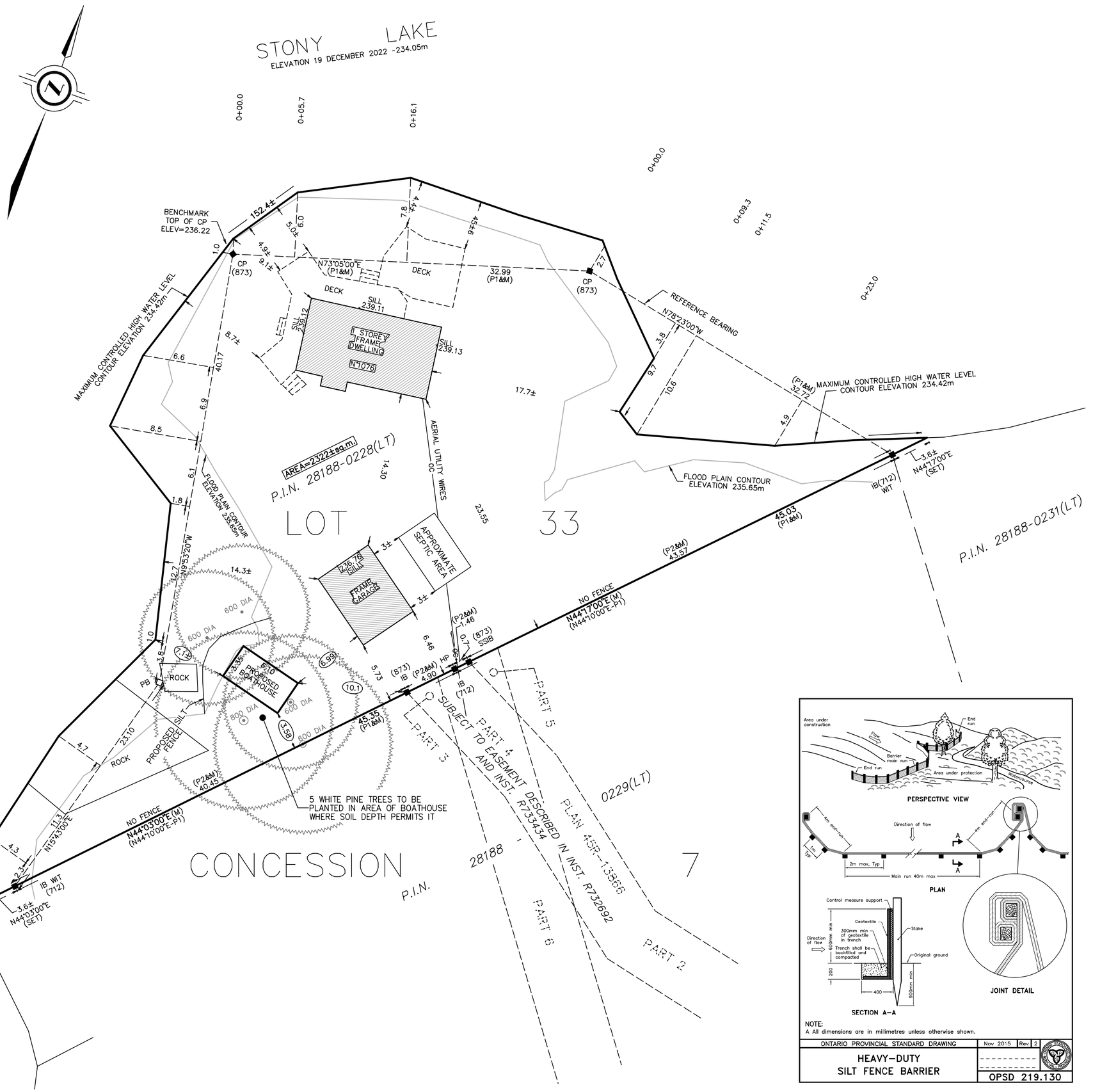
ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3316	6
DATE: September 2023	

Appendix A

Conceptual Development Plan

SITE PLAN OF
PART OF LOT 33
CONCESSION 7
GEOGRAPHIC TOWNSHIP OF DUMMER
TOWNSHIP OF DOURO-DUMMER
COUNTY OF PETERBOROUGH



ELLIOTT AND PARR (PETERBOROUGH), A DIVISION OF J.D. BARNES LIMITED

SCALE 1 : 250

5 0 5 10 15 metres

METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

PROPERTY AREA = 2322±sq.m.

EXISTING COTTAGE = 86.4sq.m.
EXISTING DECKS = 48.7sq.m.
EXISTING STAIRS = 5.4sq.m.
EXISTING GARAGE = 41.3sq.m.

EXISTING LOT COVERAGE = 7.8%

PROPOSED BOATHOUSE = 20.4sq.m.

PROPOSED LOT COVERAGE = 8.7%

NOTES

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO SHORE TRAVERSE LINE SHOWN ON PLAN BY BENINGER SURVEYING LTD. DATED 23 AUGUST 2006, SHOWN AS HAVING A BEARING OF N78°23'00"W.

STONY LAKE IS ARTIFICIALLY CONTROLLED BY THE TRENT CANAL AUTHORITY BY A DAM AT THE OUTLET OF CLEAR LAKE IN LOT 37, CONCESSION 12 TOWNSHIP OF SMITH

MAXIMUM CONTROLLED LEVEL IS ELEVATION 234.42m
MINIMUM CONTROLLED LEVEL IS ELEVATION 234.12m

ALL BUILDING TIES ARE TAKEN TO CONCRETE FOUNDATION

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO CGVD28:78 DATUM AND ARE DERIVED FROM THE COSINE BENCH MARK 0011960U3257 HAVING A PUBLISHED ELEVATION OF 215.75 METRES.

SITE REVEGETATION PLAN: 5 WHITE PINE TREES TO BE PLANTED IN AREA OF BOATHOUSE WHERE SOIL DEPTH PERMITS IT.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET, STAMPED JDB
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
IB	DENOTES	IRON BAR
CP	DENOTES	CONCRETE PIN
JDB	DENOTES	J.D. BARNES LTD..
712	DENOTES	G.W. ELLIOTT O.L.S.
873	DENOTES	BENINGER SURVEYING LTD.
M	DENOTES	MEASURED
P1	DENOTES	PLAN BY BENINGER SURVEYING LTD. DATED 23 AUGUST 2006 PROJECT 23705
P2	DENOTES	PLAN 45R-13866
600 DIA●	DENOTES	600mmø DIAMETER CONIFEROUS TREE

MAY 2, 2023
DATE

STEPHEN W. OLENDER
ONTARIO LAND SURVEYOR

Elliott and Parr
(PETERBOROUGH)
A Division of
J. D. Barnes Limited
SURVEYING
MAPPING
GIS
211 SHERBROOKE ST PETERBOROUGH, ON K9J 2N2
T: (705) 745-8444 F: (705) 745-5314 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
AR/ES	SWO	22-19-398-00A
FILE: DUMMER 90		DATED: 05/02/2023

PLOTTED: 5/2/2023

G:\22-19-398\00\Drawing\22-19-398-00-SITEPLAN.dgn

Appendix B

SAR Database Excerpts

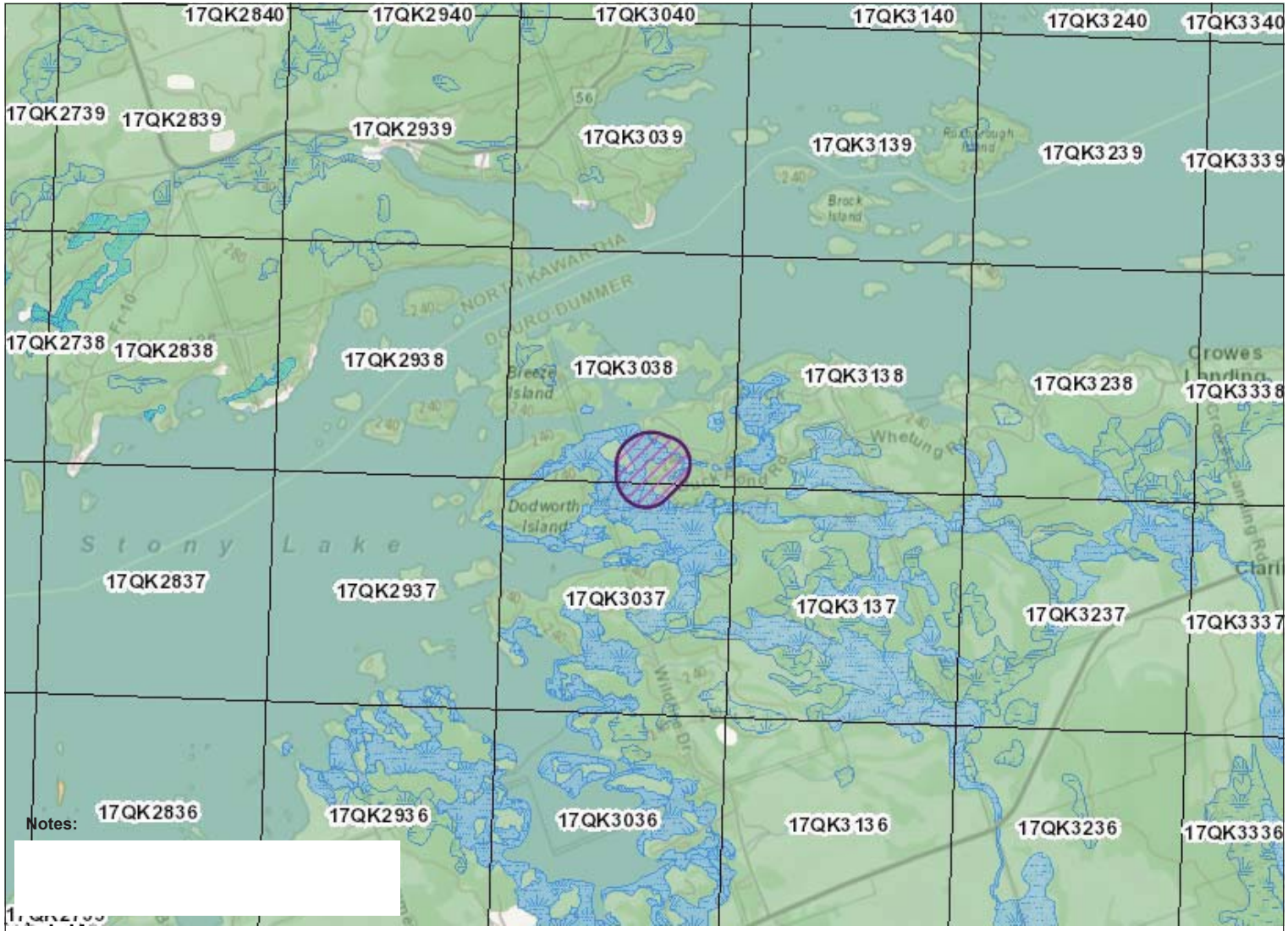
Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

NHIC Map

Map created:8/3/2023



Legend

- NHIC 1 Km Grid
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland
- Conservation Reserve
- Provincial Park
- Natural Heritage System

1.3 0 0.65 1.3 Kilometres

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

NHIC Data

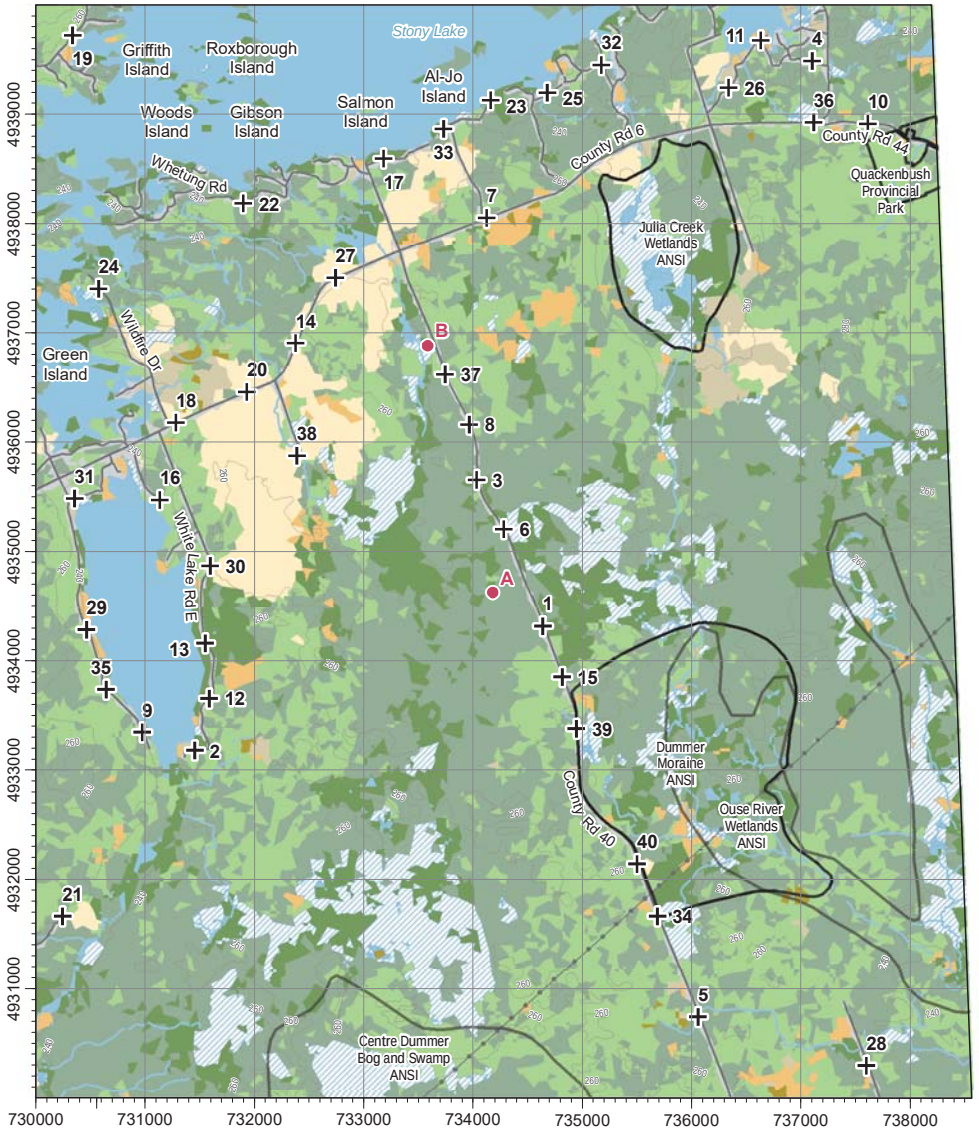
To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1065130	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area		SNR			17QK3037	
1065130	SPECIES	Midland Painted Turtle	Chrysemys picta marginata	S4		SC	17QK3037	
1065130	SPECIES	Eastern Wood-pewee	Contopus virens	S4B	SC	SC	17QK3037	
1065130	SPECIES	Snapping Turtle	Chelydra serpentina	S4	SC	SC	17QK3037	
1065130	SPECIES	Northern Map Turtle	Graptemys geographica	S3	SC	SC	17QK3037	
1065130	SPECIES	Swamp Darner	Epiaeschna heros	S3S4			17QK3037	
1065130	SPECIES	Butternut	Juglans cinerea	S2?	END	END	17QK3037	
1065130	SPECIES	Common Five-lined Skink (Southern Shield population)	Plestiodon fasciatus pop. 2	S3	SC	SC	17QK3037	
1065130	SPECIES	Eastern Ribbonsnake	Thamnophis saurita	S4	SC	SC	17QK3037	
1065130	SPECIES	Eastern Whip-poor-will	Antrostomus vociferus	S4B	THR	THR	17QK3037	
1065131	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area		SNR			17QK3038	
1065131	SPECIES	Wood Thrush	Hylocichla mustelina	S4B	SC	THR	17QK3038	
1065131	SPECIES	Eastern Wood-pewee	Contopus virens	S4B	SC	SC	17QK3038	
1065131	SPECIES	Swamp Darner	Epiaeschna heros	S3S4			17QK3038	
1065131	SPECIES	Common Five-lined Skink (Southern Shield population)	Plestiodon fasciatus pop. 2	S3	SC	SC	17QK3038	

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1065131	SPECIES	Blanding's Turtle	Emydoidea blandingii	S3	THR	END	17QK3038	

Region / Région: 16

Square / Parcelle: 17TQK33



Predefined point count coordinates
Coordonnées des points d'écoute prédéterminés

POINT	EASTING UTM Est	NORTHING UTM Nord
1	734638	4934318
2	731452	4933179
3	734035	4935657
4	737103	4939489
5	736061	4930741
6	734283	4935204
7	734125	4938053
8	733968	4936161
9	730974	4933344
10	737616	4938914
11	736635	4939675
12	731589	4933654
13	731548	4934162
14	732379	4936905
15	734815	4933852
16	731134	4935470
17	733182	4938594
18	731286	4936178
19	730333	4939721
20	731932	4936461
21	730244	4931663
22	731901	4938184
23	734165	4939127
24	730576	4937405
25	734681	4939197
26	736340	4939242
27	732740	4937503
28	737601	4930295
29	730466	4934285
30	731594	4934870
31	730355	4935486
32	735176	4939450
33	733733	4938866
34	735685	4931662
35	730643	4933736
36	737116	4938927
37	733745	4936623
38	732389	4935877
39	734947	4933377
40	735504	4932141

Number of off-road point counts
Nombre de points d'écoute hors route

Broadleaf forest:	1	Grassland:	0
Coniferous forest:	1	Wetland:	0
Mixed forest:	3	Shrubland:	0

Predefined / Prédéterminés: 20
Off-road / Hors route: 5

Atlas-2 off-road point ● **Point hors route Atlas-2**

0 1 km

Atlas des oiseaux nicheurs Ontario Breeding Bird Atlas

Legend	Légende
Expressway or highway	Autoroute ou route nationale (asphaltée)
Regional or local road	Route régionale ou locale (asphaltée ou non)
Resource / Recreation	Ressource / route récréative
Rail line	Chemin de fer
Utility corridor	Ligne de transport d'énergie
Watercourse	Rivière ou ruisseau
Protected or conserved area	Zone protégée ou conservée
Fire disturbance since 2000	Incendie perturbé depuis 2000
Broadleaf forest 22	Forêt de feuillus
Coniferous forest 9	Forêt de conifères
Mixed forest 41	Forêt mixte
Shrubland 2	Milieu arbustif
Grassland	Prairie
Barren 1	Dénudé
Wetland 7	Milieu humide
Agriculture 4	Milieu agricole
Water 11	Eau
Developed area 3	Zone développée
Unclassified	Non classifié

The approximate percent coverage of each habitat type is indicated by the numbered box in the legend.

La couverture approximative est indiquée en pourcentage dans le rectangle coloré de la légende.

Cartographic production by Birds Canada
Production cartographique par oiseaux Canada

Note: The project partners are in no way responsible for any inaccuracies, mistakes or omissions in the information that appears on this map.

Avis : Les responsables du projet d'atlas ne peuvent être tenus responsables de toute inexactitude, erreur ou omission concernant les informations apparaissant sur cette carte.

6° Universal Transverse Mercator (UTM) Projection; Zone 17, Central Meridian -81°; North American Datum 1983 (NAD 83)

Projection universelle transverse de Mercator (UTM) 6° Zone 17, méridien central -81°; Système de référence géodésique nord-américain 1983 (NAD 83)

BIRDS CANADA OISEAUX CANADA

March 2021 / mars 2021

https://www.birdsontario.org/

17TQK33

Peterborough

Region / Région: 16

BIRDS CANADA
OISEAUX CANADA

Square Summary (17TQK33) [change]

	#species				#hours		#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	33	38	22	93	46.3	10.2	24	0
Prev.	59	20	39	118	46.3	—	32	

Region summary (#16: Peterborough, ON)

#squares	#sq with data	#species	#squares (pc)	
			target	compl.
60	60	169	60	29
60	60	185	0	60

Target number of point counts in this square: 25 in total: 20 road side, 5 off road (Broadleaf Forest in 1, Coniferous Forest in 1, Mixed Forest in 3). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.**Predef. completed:** [01, 03, 04, 06, 07, 08, 09, 10, 14, 17, 18, 20, 26, 27, 28, 29, 31, 34, 35, 37, 38, 39, 40, A]

SPECIES	Prev.	Code	%
Canada Goose	FY	FY	83
Mute Swan ‡			3
Trumpeter Swan			26
Wood Duck	H	H	81
Blue-winged Teal ‡			10
Northern Shoveler ‡			1
Gadwall ‡			0
American Wigeon ‡			0
Mallard	P	P	85
American Black Duck	FY		6
Northern Pintail ‡			0
Green-winged Teal ‡			0
Redhead †			0
Ring-necked Duck	P		26
Lesser Scaup ‡			0
Hooded Merganser			63
Common Merganser ‡	H		21
Ruddy Duck ‡			0
Wild Turkey	T	FY	91
Ruffed Grouse	FY	D	85
Ring-necked Pheasant ‡			0
Pied-billed Grebe	S		23
Rock Pigeon (Feral Pigeon)	D		53
Mourning Dove	D	D	86
Yellow-billed Cuckoo		S	51
Black-billed Cuckoo	S		73
Coccyzus sp. ‡	S		0
Common Nighthawk §			28
Eastern Whip-poor-will §	S	S	41
Chimney Swift ‡			11
Ruby-throated Hummingbird	H	D	80
Virginia Rail	H	T	65
Sora	S		21

SPECIES	Prev.	Code	%
Common Gallinule ‡			13
American Coot ‡			1
Sandhill Crane ‡			38
Killdeer §	DD	A	55
Upland Sandpiper †			15
American Woodcock	S	S	56
Wilson's Snipe	S		48
Spotted Sandpiper	P	H	46
Ring-billed Gull § ‡	NY		1
Herring Gull §	AE	FY	31
Caspian Tern ‡			0
Black Tern †	P		1
Common Tern § ‡			0
Common Loon	FY	FY	76
Double-crested Cormorant § ‡			5
American Bittern	S	S	70
Least Bittern †			31
Great Blue Heron §	NY		66
Green Heron §	FY	H	48
Turkey Vulture	H		88
Osprey	AE	NY	56
Northern Harrier	H		26
Sharp-shinned Hawk	H		26
Cooper's Hawk			21
Northern Goshawk ‡			6
Bald Eagle ‡			11
Red-shouldered Hawk	NY	S	40
Broad-winged Hawk	P	S	86
Red-tailed Hawk	H		50
Eastern Screech-Owl			11
Great Horned Owl ‡	S		21
Barred Owl	P	S	45
Long-eared Owl ‡	S		6

SPECIES	Prev.	Code	%
Short-eared Owl †			0
Northern Saw-whet Owl		S	6
Belted Kingfisher	S		88
Yellow-bellied Sapsucker	NY	CF	98
Red-headed Woodpecker †			15
Red-bellied Woodpecker			38
Black-backed Woodpecker ‡			1
Downy Woodpecker	S	S	85
Hairy Woodpecker	D	T	91
Pileated Woodpecker	CF	T	96
Northern Flicker	CF	D	95
American Kestrel §			51
Merlin	AE		51
Peregrine Falcon ‡			1
Olive-sided Flycatcher ‡			10
Eastern Wood-Pewee §	A	T	100
Yellow-bellied Flycatcher ‡			0
Alder Flycatcher	S	S	93
Willow Flycatcher	S		38
Least Flycatcher	S	S	91
Eastern Phoebe	CF	T	100
Great Crested Flycatcher	NY	T	100
Eastern Kingbird	FY	T	91
Yellow-throated Vireo	S	S	38
Blue-headed Vireo	S	T	80
Philadelphia Vireo ‡			0
Warbling Vireo	S	S	75
Red-eyed Vireo	A	T	100
Loggerhead Shrike †			0
Canada Jay ‡			3
Blue Jay	FY	FY	100
American Crow	FY	NY	96
Common Raven	AE	FY	93

SPECIES	Prev.	Code	%
Black-capped Chickadee	FY	FY	100
Boreal Chickadee ‡			0
Horned Lark ‡			8
Northern Rough-winged Swallow			20
Purple Martin ‡	AE		5
Tree Swallow	AE	H	83
Bank Swallow §	H		16
Barn Swallow §	N	H	76
Cliff Swallow §			18
Ruby-crowned Kinglet ‡	H		0
Golden-crowned Kinglet			38
Red-breasted Nuthatch	FY	FY	95
White-breasted Nuthatch	CF	T	88
Brown Creeper	S	FY	75
Blue-gray Gnatcatcher ‡			3
House Wren	N	CF	81
Winter Wren	S	T	98
Sedge Wren ‡			10
Marsh Wren			48
Carolina Wren ‡			5
European Starling	CF	FY	81
Gray Catbird	S	CF	85
Brown Thrasher	S	S	76
Northern Mockingbird ‡			3
Eastern Bluebird		H	56
Veery	S	T	100
Swainson's Thrush	H		21
Hermit Thrush	S	T	83
Wood Thrush §	S	S	88
American Robin	CF	AE	98
Cedar Waxwing	P	H	93
House Sparrow	P		38
Evening Grosbeak ‡	FY		1

SPECIES	Prev.	Code	%
House Finch			20
Purple Finch	P	T	98
Red Crossbill ‡			23
White-winged Crossbill ‡			3
Pine Siskin ‡		S	30
American Goldfinch	P	P	95
Grasshopper Sparrow §			23
Chipping Sparrow	CF	CF	96
Clay-colored Sparrow ‡			18
Field Sparrow §	S	T	65
Dark-eyed Junco ‡	H		3
White-throated Sparrow	S	A	98
Vesper Sparrow	S		33
Savannah Sparrow	CF	T	58
Song Sparrow	FY	CF	100
Lincoln's Sparrow ‡			5
Swamp Sparrow	S	T	100
Eastern Towhee §		T	53
Bobolink §	P	T	51
Eastern Meadowlark §	CF	S	58
Orchard Oriole ‡			5
Baltimore Oriole	S	S	75
Red-winged Blackbird	CF	T	100
Brown-headed Cowbird	S	S	68
Common Grackle	CF	FY	100
Ovenbird	FY	T	100
Northern Waterthrush	A	T	95
Golden-winged Warbler †	S		21
Blue-winged Warbler ‡			11
Black-and-white Warbler	S	T	96
Tennessee Warbler ‡			0
Nashville Warbler	S	T	91
Mourning Warbler	S	S	76

SPECIES	Prev.	Code	%
Common Yellowthroat	FY	CF	100
Hooded Warbler ‡			0
American Redstart	P	S	98
Cape May Warbler ‡			0
Cerulean Warbler †			3
Northern Parula ‡			26
Magnolia Warbler	S	T	75
Bay-breasted Warbler ‡			0
Blackburnian Warbler	S	S	73
Yellow Warbler	S	S	85
Chestnut-sided Warbler	S	FY	95
Black-throated Blue Warbler	S	S	61
Pine Warbler	CF	CF	96
Yellow-rumped Warbler	S	T	86
Prairie Warbler †			0
Black-throated Green Warbler	S	T	93
Canada Warbler §	S	S	66
Scarlet Tanager	S	T	95
Northern Cardinal	S	S	51
Rose-breasted Grosbeak	S	T	100
Indigo Bunting	S	T	95

This list includes all breeding species expected in the region #16 (Peterborough). Underlined species are those that you should try to add to this square (17TQK33). They have not yet been reported in this square, but have been reported in more than 50% of the squares in this region so far. "Prev." is the code for the highest breeding evidence for that species in square 17TQK33 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TQK33 over the last 5 years. The % columns give the percentage of squares in that region where that species was reported (this gives an idea of the expected chance of finding that species in region #16). Rare/Colonial Species Report Forms should be completed for species marked: § (Species of interest), ‡ (regionally rare), † (provincially rare). An up-to-date version of this sheet is available from https://naturecounts.ca//nc//atlas/squaresummaryform.jsp?squareID=17TQK33&lang=EN Data current as of **2/08/2023 21:28**.

Jeffery-Cowan Forest Preserve (Kawartha Land Trust)

Peterborough County (/region/CA-ON-PB?yr=all&m=),
Ontario (/region/CA-ON?yr=all&m=),
CA (/region/CA?yr=all&m=)

Map(/hotspots?hs=L6057562&yr=all&m=)

Directions(https://www.google.com/maps/search/?api=1&query=44.5672075,-78.1136298)

Hotspot navigation

Overview (/hotspot/L6057562?yr=all&m=)

Illustrated Checklist (/hotspot/L6057562/media?yr=all&m=)

VIEW MY...

My eBird (/myebird/L6057562)

Life List (/lifelist/L6057562)

Target Species (/targets?r1=L6057562&bmo=1&emo=12)

Checklists (/mychecklists/L6057562)

EXPLORE...

Hotspot Map (/hotspots?hs=L6057562&yr=all&m=)

Bar Charts (/barchart?r=L6057562&yr=all&m=)

Media (https://ebird.org/media/catalog?regionCode=L6057562)

Printable Checklist (/printableList?regionCode=L6057562&yr=all&m=)

90
Species observed
(/hotspot/L6057562?yr=all&m=)

48
Complete checklists
(/hotspot/L6057562/activity?yr=all&m=)

1.	**Wild Turkey**	1	23 Jul 2023	Shayla McIsaac
2.	**Ruby-throated Hummingbird**	2	23 Jul 2023	Shayla McIsaac
3.	**Turkey Vulture**	1	23 Jul 2023	Shayla McIsaac
4.	**Osprey**	1	23 Jul 2023	Shayla McIsaac
5.	**Downy Woodpecker**	1	23 Jul 2023	Shayla McIsaac
6.	**Pileated Woodpecker**	1	23 Jul 2023	Shayla McIsaac
7.	**Northern Flicker**	1	23 Jul 2023	Shayla McIsaac
8.	**Red-eyed Vireo**	6	23 Jul 2023	Shayla McIsaac
9.	**Blue Jay**	2	23 Jul 2023	Shayla McIsaac
10.	**Black-capped Chickadee**	10	23 Jul 2023	Shayla McIsaac
11.	**House Wren**	1	23 Jul 2023	Shayla McIsaac
12.	**Gray Catbird**	1	23 Jul 2023	Shayla McIsaac
13.	**Eastern Bluebird**	1	23 Jul 2023	Shayla McIsaac
14.	**Veery**	2	23 Jul 2023	Shayla McIsaac
15.	**Hermit Thrush**	1	23 Jul 2023	Shayla McIsaac
16.	**American Robin**	2	23 Jul 2023	Shayla McIsaac
17.	**American Goldfinch**	2	23 Jul 2023	Shayla McIsaac
18.	**Song Sparrow**	2	23 Jul 2023	Shayla McIsaac
19.	**Pine Warbler**	6	23 Jul 2023	Shayla McIsaac
20.	**Indigo Bunting**	2	23 Jul 2023	Shayla McIsaac
21.	**Wood Thrush**	1	16 Jul 2023	martha hunt
22.	**Red-tailed Hawk**	1	3 Jul 2023	Patrick Strzalkowski
23.	**Yellow-bellied Sapsucker**	1	3 Jul 2023	Patrick Strzalkowski
24.	**Eastern Wood-Pewee**	3	3 Jul 2023	Patrick Strzalkowski
25.	**Great Crested Flycatcher**	2	3 Jul 2023	Patrick Strzalkowski

26.	**White-breasted Nuthatch**	1	3 Jul 2023	Patrick Strzalkowski
27.	**Winter Wren**	3	3 Jul 2023	Patrick Strzalkowski
28.	**White-throated Sparrow**	3	3 Jul 2023	Patrick Strzalkowski
29.	**Swamp Sparrow**	1	3 Jul 2023	Patrick Strzalkowski
30.	**Red-winged Blackbird**	6	3 Jul 2023	Patrick Strzalkowski
31.	**Ovenbird**	2	3 Jul 2023	Patrick Strzalkowski
32.	**Black-and-white Warbler**	2	3 Jul 2023	Patrick Strzalkowski
33.	**American Redstart**	1	3 Jul 2023	Patrick Strzalkowski
34.	**Blackburnian Warbler**	1	3 Jul 2023	Patrick Strzalkowski
35.	**Chestnut-sided Warbler**	1	3 Jul 2023	Patrick Strzalkowski
36.	**Black-throated Blue Warbler**	4	3 Jul 2023	Patrick Strzalkowski
37.	**Black-throated Green Warbler**	2	3 Jul 2023	Patrick Strzalkowski
38.	**Scarlet Tanager**	2	3 Jul 2023	Patrick Strzalkowski
39.	**Canada Goose**	1	1 Jun 2023	Luke Berg
40.	**Mallard**	2	1 Jun 2023	Luke Berg
41.	**Mourning Dove**	1	1 Jun 2023	Luke Berg
42.	**Ring-billed Gull**	4	1 Jun 2023	Luke Berg
43.	**Herring Gull**	1	1 Jun 2023	Luke Berg
44.	**Common Loon**	1	1 Jun 2023	Luke Berg
45.	**Double-crested Cormorant**	3	1 Jun 2023	Luke Berg
46.	**Great Blue Heron**	1	1 Jun 2023	Luke Berg
47.	**Hairy Woodpecker**	1	1 Jun 2023	Luke Berg
48.	**Eastern Phoebe**	1	1 Jun 2023	Luke Berg
49.	**Eastern Kingbird**	1	1 Jun 2023	Luke Berg
50.	**American Crow**	1	1 Jun 2023	Luke Berg

51.	**Brown Creeper**	1	1 Jun 2023	Luke Berg
52.	**Common Grackle**	2	1 Jun 2023	Luke Berg
53.	**Yellow Warbler**	1	1 Jun 2023	Luke Berg
54.	**Yellow-rumped Warbler**	1	1 Jun 2023	Luke Berg
55.	**Rose-breasted Grosbeak**	1	1 Jun 2023	Luke Berg
56.	**Belted Kingfisher**	1	31 May 2023	Luke Berg
57.	**Cedar Waxwing**	2	31 May 2023	Luke Berg
58.	**Chipping Sparrow**	1	31 May 2023	Luke Berg
59.	**Common Yellowthroat**	1	31 May 2023	Luke Berg
60.	**Northern Waterthrush**	2	13 May 2023	Glenn Desy
61.	**Nashville Warbler**	2	13 May 2023	Glenn Desy
62.	**Common Raven**	4	28 Jan 2023	John David Moffatt
63.	**Golden-crowned Kinglet**	3	5 Nov 2022	Scott Gibson
64.	**Evening Grosbeak**	12	5 Nov 2022	Scott Gibson
65.	**Bald Eagle**	1	30 Sep 2022	C Douglas
66.	**Ruby-crowned Kinglet**	18	30 Sep 2022	C Douglas
67.	**Tennessee Warbler**	1	30 Sep 2022	C Douglas
68.	**Red-breasted Nuthatch**	1	24 Aug 2022	Kathryn Sheridan
69.	**Wood Duck**	3	24 Apr 2022	Scott Gibson
70.	**Broad-winged Hawk**	1	24 Apr 2022	Scott Gibson
71.	**Dark-eyed Junco**	1	24 Apr 2022	Scott Gibson
72.	**White-winged Crossbill**	1	1 Jan 2022	Scott Gibson
73.	**Purple Finch**	1	25 Aug 2021	Donald A. Sutherland
74.	**Blue-headed Vireo**	3	4 Jul 2021	Anonymous eBirder
75.	**Palm Warbler**	1	16 May 2021	Scott Gibson

76.	**Pine Siskin**		2	9 May 2021	Travis Cameron
77.	**Great Horned Owl**		1	2 May 2021	Scott Gibson
78.	**Red-bellied Woodpecker**		X	24 Apr 2021	Matthew Purvis
79.	**Bufflehead**		6	10 Apr 2021	Scott Gibson
80.	**Hooded Merganser**		1	10 Apr 2021	Scott Gibson
81.	**Common Merganser**		5	10 Apr 2021	Scott Gibson
82.	**Red-shouldered Hawk**		1	3 Oct 2020	Glenn Desy
83.	**Yellow-billed Cuckoo**		1	21 Jun 2020	Chris Risley
84.	**Black-billed Cuckoo**		1	21 Jun 2020	Chris Risley
85.	**European Starling**	*	1	20 Jun 2020	Glenn Desy
86.	**Philadelphia Vireo**		1	20 Sep 2019	Mike V.A. Burrell
87.	**Rock Pigeon**	*	2	4 Jul 2012	Matthew Tobey
88.	**Caspian Tern**		1	4 Jul 2012	Matthew Tobey
89.	**House Finch**	*	1	4 Jul 2012	Matthew Tobey
90.	**Field Sparrow**		1	4 Jul 2012	Matthew Tobey

Appendix C

Species List

Species List

KINGDOM	Common Name	Scientific Name	SARO	SARA
Animalia				
	American Crow	Corvus brachyrhynchos		
	American Goldfinch	Spinus tristis		
	American Robin	Turdus migratorius		
	Belted Kingfisher	Megaceryle alcyon		
	Black-and-white Warbler	Mniotilta varia		
	Black-capped Chickadee	Poecile atricapillus		
	Black-throated Green Warbler	Setophaga virens		
	Blue Jay	Cyanocitta cristata		
	Bluegill	Lepomis macrochirus		
	Cabbage White	Pieris rapae		
	Canada Goose	Branta canadensis		
	Cedar Waxwing	Bombycilla cedrorum		
	Chipping Sparrow	Spizella passerina		
	Cicada Killer	Sphecius speciosus		
	Common Grackle	Quiscalus quiscula		
	Common Gull	Larus canus		
	Common Loon	Gavia immer	NAR	
	Common Merganser	Mergus merganser		
	Common Yellowthroat	Geothlypis trichas		
	Eastern American Toad	Anaxyrus americanus americanus		
	Eastern Chipmunk	Tamias striatus		
	Eastern Fishing Spider	Dolomedes scriptus		
	Eastern Kingbird	Tyrannus tyrannus		
	European Starling	Sturnus vulgaris		
	Gray Catbird	Dumetella carolinensis		
	Gray Treefrog	Dryophytes versicolor		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Great Blue Heron	Ardea herodias		
	Green Frog	Lithobates clamitans		
	Mallard	Anas platyrhynchos		
	Muskrat	Ondatra zibethicus		
	Northern Cardinal	Cardinalis cardinalis		
	Northern Flicker	Colaptes auratus		
	Northern Parula	Setophaga americana		
	Northern Pearly-Eye	Lethe anthedon		
	Northern Raccoon	Procyon lotor		
	Orange Sulphur	Colias eurytheme		
	Ovenbird	Seiurus aurocapilla		
	Pumpkinseed	Lepomis gibbosus		
	Red Admiral	Vanessa atalanta		
	Red Squirrel	Tamiasciurus hudsonicus		
	Red-breasted Nuthatch	Sitta canadensis		
	Red-eyed Vireo	Vireo olivaceus		
	Red-winged Blackbird	Agelaius phoeniceus		
	Rock Bass	Ambloplites rupestris		
	Ruby-crowned Kinglet	Corthylio calendula		
	Song Sparrow	Melospiza melodia		
	Spotted Sandpiper	Actitis macularius		
	Swamp Sparrow	Melospiza georgiana		
	Turkey Vulture	Cathartes aura		
	Veery	Catharus fuscescens		
	White-crowned Sparrow	Zonotrichia leucophrys		
	White-throated Sparrow	Zonotrichia albicollis		
	Wood Duck	Aix sponsa		
	Yellow Perch	Perca flavescens		
	Yellow Warbler	Setophaga petechia		
Fungi				

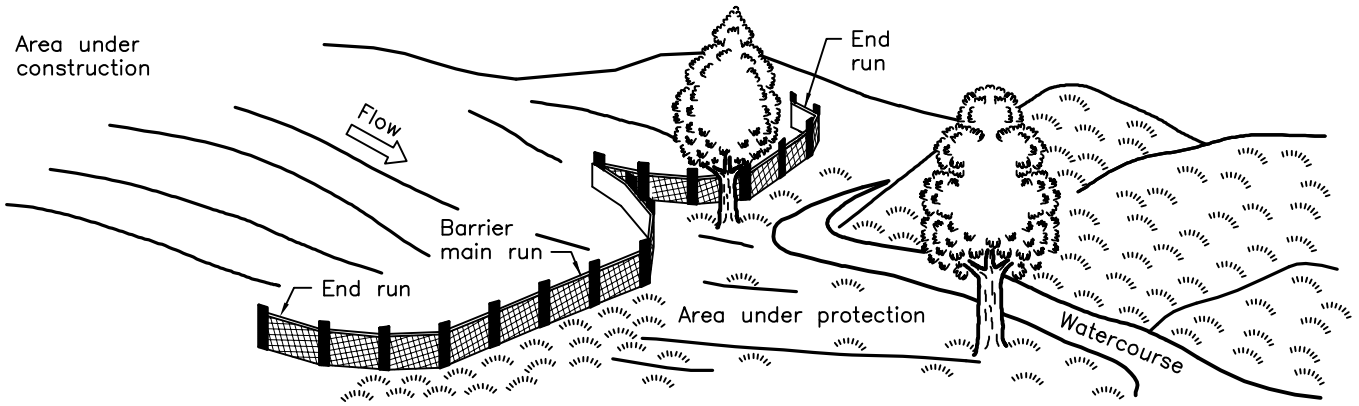
KINGDOM	Common Name	Scientific Name	SARO	SARA
	Gray Reindeer Lichen	Cladonia rangiferina		
	Green Reindeer Lichen	Cladonia arbuscula ssp. mitis		
	Tree Pelt Lichen	Peltigera collina		
	Wand Lichen	Cladonia rei		
	White-rim Lichen	Lecanora rupicola		
Plantae				
	American Eelgrass	Vallisneria americana		
	Annual Bluegrass	Poa annua		
	Black Cherry	Prunus serotina		
	Broad-leaved Helleborine	Epipactis helleborine		
	Bull Thistle	Cirsium vulgare		
	Bur Oak	Quercus macrocarpa		
	Calico Aster	Symphyotrichum lateriflorum		
	Canada Goldenrod	Solidago canadensis		
	Canada Waterweed	Elodea canadensis		
	Cardinal Flower	Lobelia cardinalis		
	Chokecherry	Prunus virginiana		
	Common Dandelion	Taraxacum officinale		
	Common Hornwort	Ceratophyllum demersum		
	Common Juniper	Juniperus communis		
	Common Panicgrass	Panicum capillare		
	Common St. John's-wort	Hypericum perforatum		
	Common Timothy	Phleum pratense		
	Common Viper's Bugloss	Echium vulgare		
	Curly-leaved Pondweed	Potamogeton crispus		
	Dark-green Bulrush	Scirpus atrovirens		
	Early Lowbush Blueberry	Vaccinium angustifolium		
	Eastern Hemlock	Tsuga canadensis		
	Eastern White Cedar	Thuja occidentalis		
	Eastern White Pine	Pinus strobus		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	English Plantain	Plantago lanceolata		
	Eurasian Water-milfoil	Myriophyllum spicatum		
	Fern-leaved Yarrow	Achillea filipendulina		
	Flat-top White Aster	Doellingeria umbellata		
	Fragrant Water-lily	Nymphaea odorata		
	Hemp Dogbane	Apocynum cannabinum		
	Illinois Pondweed	Potamogeton illinoensis		
	Indian-pipe	Monotropa uniflora		
	Large-leaved Aster	Eurybia macrophylla		
	Large-leaved Pondweed	Potamogeton amplifolius		
	Large-toothed Aspen	Populus grandidentata		
	North American Red Raspberry	Rubus idaeus ssp. strigosus		
	Northern Dewberry	Rubus flagellaris		
	Northern Red Oak	Quercus rubra		
	Northern Rough-stemmed Goldenrod	Solidago rugosa ssp. rugosa		
	Northern Willowherb	Epilobium ciliatum		
	Old Field Aster	Symphyotrichum pilosum		
	Old Switch Panicgrass	Panicum virgatum		
	Orange Hawkweed	Pilosella aurantiaca		
	Panicled Aster	Symphyotrichum lanceolatum		
	Paper Birch	Betula papyrifera		
	Partridgeberry	Mitchella repens		
	Perennial Ragweed	Ambrosia psilostachya		
	Pickerelweed	Pontederia cordata		
	Poverty Oatgrass	Danthonia spicata		
	Red Clover	Trifolium pratense		
	Red Maple	Acer rubrum		
	Richardson's Spear Moss	Calliergon richardsonii		
	Rock Fescue	Festuca rubra ssp. pruinosa		
	Sensitive Fern	Onoclea sensibilis		

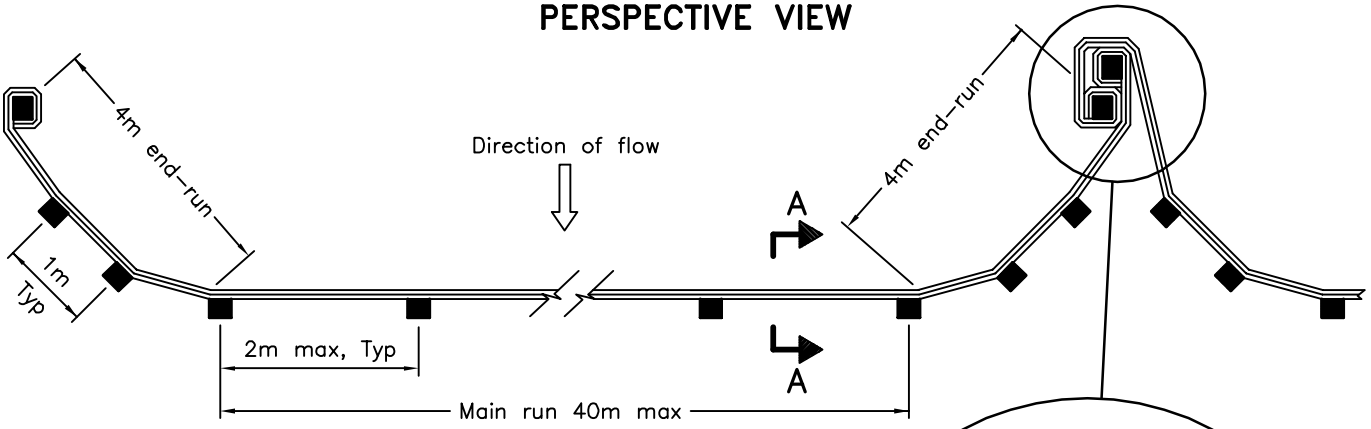
KINGDOM	Common Name	Scientific Name	SARO	SARA
	Sharp-lobed Hepatica	Hepatica acutiloba		
	Siberian Water-milfoil	Myriophyllum sibiricum		
	Silver Maple	Acer saccharinum		
	Speckled Alder	Alnus incana ssp. rugosa		
	Spotted Jewelweed	Impatiens capensis		
	Sugar Maple	Acer saccharum		
	Tall Meadow-rue	Thalictrum pubescens		
	Trembling Aspen	Populus tremuloides		
	Virginia Creeper	Parthenocissus quinquefolia		
	Watershield	Brasenia schreberi		
	White Heath Aster	Symphyotrichum ericoides		
	White Meadowsweet	Spiraea alba		
	Wild Calla	Calla palustris		
	Wild Carrot	Daucus carota		
	Wild Chicory	Cichorium intybus		
	Wild Lily-of-the-valley	Maianthemum canadense		
	Winged Loosestrife	Lythrum alatum		

Appendix D

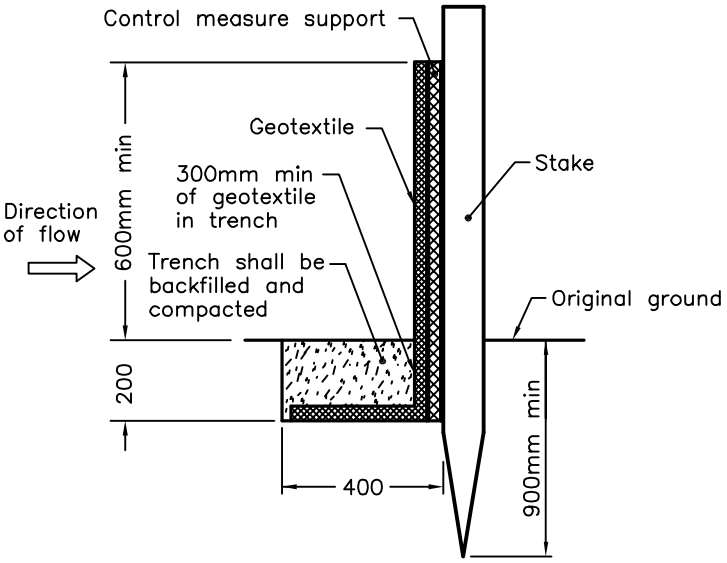
OPSD Heavy-duty Silt Fence



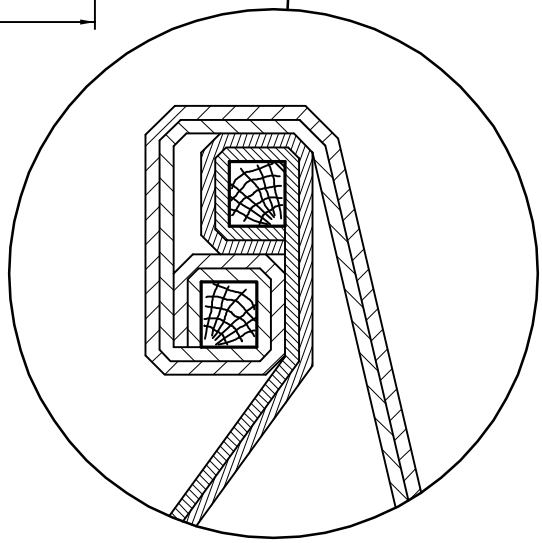
PERSPECTIVE VIEW



PLAN



SECTION A–A



JOINT DETAIL

NOTE:

A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev	2
HEAVY–DUTY SILT FENCE BARRIER			
	OPSD 219.130		