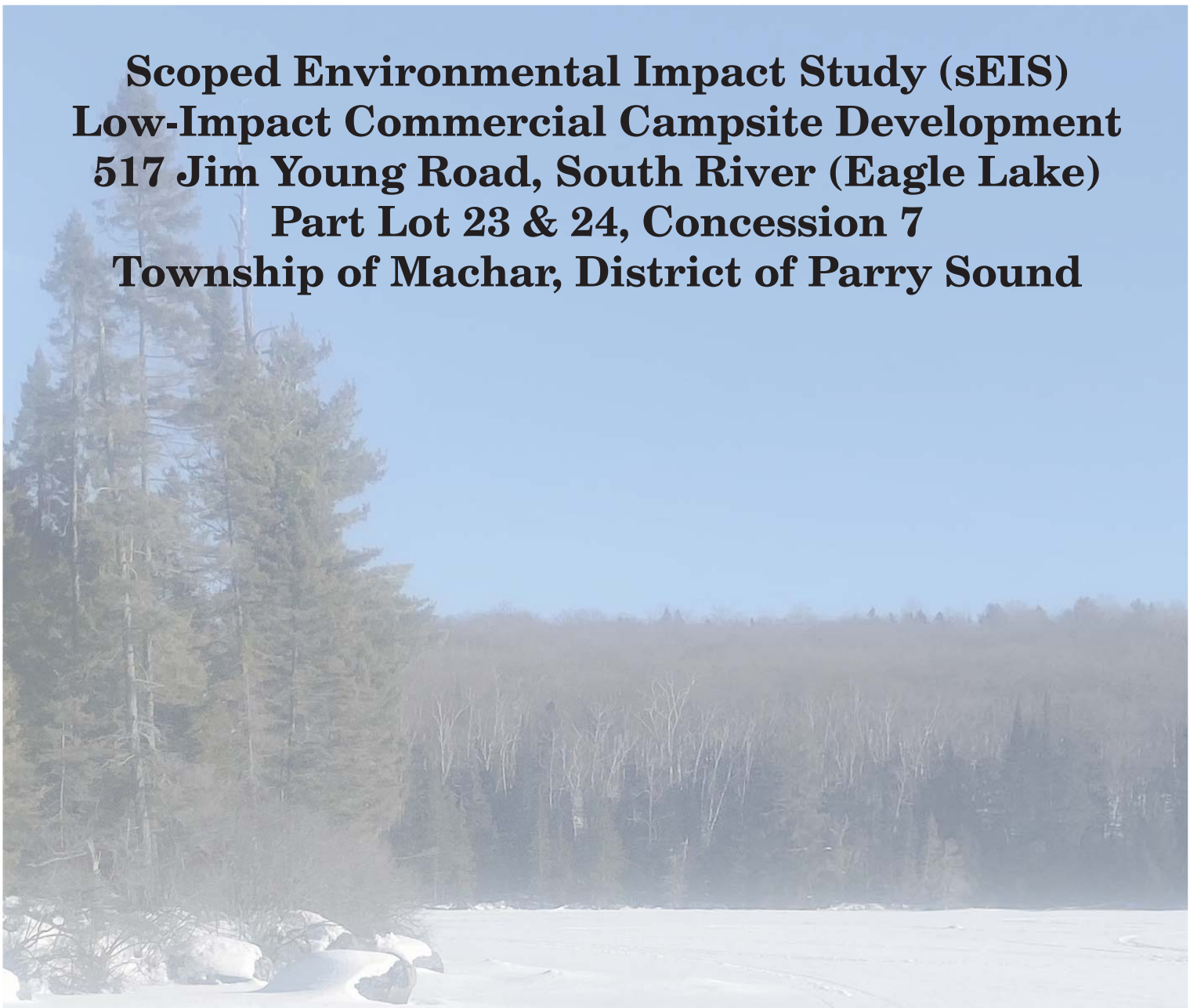
Scoped Environmental Impact Study (sEIS)
Low-Impact Commercial Campsite Development
517 Jim Young Road, South River (Eagle Lake)
Part Lot 23 & 24, Concession 7
Township of Machar, District of Parry Sound



Prepared For:

Bob Hoang
1968792 Ontario Inc.
272 Glebeholme Blvd.
Toronto, Ontario
M4J 1T2
Project #: 23-3319

April 2024

ORE
Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

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April 5th, 2024

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Attention: **Bob Hoang**

Re: *Scoped* Environmental Impact Study (*s*EIS)
Proposed Low-Impact Commercial Campsite Development
517 Jim Young Road, South River (Eagle Lake)
Part Lot 23 & 24, Concession 7
Township of Machar, District of Parry Sound
ORE File No. 23-3319

We are pleased to provide this *scoped* Environmental Impact Study (*s*EIS) for the above referenced property. Our report has been completed in support of your application to develop a low-impact commercial campsite located west of South River.

Based on our review of the site conditions, Eagle Lake appears to be the main environmental receptor. All of the proposed campground areas would appear to occur within the upland areas on the property other than the proposed beach which appears to be in the location of an old trail/opening along the lakeshore. Provided the recommendations outlined in this report are adhered to, any potential adverse impacts to this feature 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. (ORE) is pleased to present this *scoped* Environmental Impact Study (*s*EIS) in support of your application for an Official Plan Amendment and a Site Specific Draft Zoning By-law Amendment to develop a low-impact commercial campsite development.

The property is adjacent to Eagle Lake, contains Type 1 Fish Habitat, is designated Natural Heritage Protection, and is located within an Environmental Protection (EP) Zone. Therefore, an *s*EIS is required to support the application and to demonstrate that the development will not result in any impacts to nearby Natural Heritage Features (NHF) and/or Natural Heritage Protection Areas (NHPAs) as per the Natural Heritage System (NHS) in the Township of Machar's Official Plan. The study must also include best management practices and recommendations to reduce phosphorus inputs to Eagle Lake.

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

2.0 Site Location and Description

The site is located at 517 Jim Young Road (along the northeast side of Eagle Lake), west of South River, within Part Lot 23 & 24, Concession 7, Township of Machar, District of Parry Sound, and has an approximate area of 40.4 ha (100 acres), as illustrated on Figures 1 and 2.

The property can be accessed from South River by heading west on Ottawa Avenue, north on Eagle Lake Road, then north on Jim Young Road until the end of the road (ends at a cul-de-sac). An access road then leads toward a gravel driveway that enters into the subject property.

The property is currently developed with a few structures for the campsite in the northern portion of the site. The remaining portion of the property is vacant. There are existing cottages/residences on the surrounding shoreline areas.

3.0 Proposed Development / Site Alteration

The proponent would like to develop a low-impact campsite within the northwest portion of the property. The campsite is proposed to contain the following:

- Twelve (12) new elevated tent platforms (campsites);
- Sixteen(16) new* parking spaces accessed via a gravel driveway;
- One (1) new* camp centre constructed out of shipping containers (gathering centre/hall);
- One (1) new* kitchen facility;
- Two (2) new* accessory building (shelter) with outhouse;
- One (1) new* maintenance office
- One (1) new* septic system
- One (1) sauna (existing);
- One (1) dock (existing);
- One (1) beach area (existing to be enhanced)*;
- One (1) fire pit (existing);
- Outdoor toilets (existing) and outdoor showers, and
- Trails to access the tent platforms and beach area.

* certain items listed above, that are considered "new" development features may require site alterations in the form of vegetation removal, filling or grading as per the 2020 PPS.

ORE staff did not include the proposed twelve (12) new elevated tent platforms as development that will require site alterations as the elevated platforms on the point can be constructed such that they do not remove the vegetation, nor would there be any filling or grading involved.

The development does not have municipal services available, and as such, will rely on treated water from Eagle Lake for water to service the showers and toilets.

One (1) septic system will be necessary to service the campground facility it is to be situated proximal to the proposed Camp Centre. According to the proponent's septic installer, the septic system can be constructed inground due to the sandy substrates and will not require fill materials being relocated to the site for the purpose of constructing the septic (unless a high water table is encountered).

Furthermore, with respect to servicing the camps water needs, the proponent has identified that they will be seeking approvals to obtain water from Eagle Lake to service the camp facility's water needs. We are unsure if this includes potable/drinking water or if potable water will be delivered to the property.

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

4.0 Township of Machar

This report has been prepared to meet the requirements of the Township of Machar. According to the pre-consultation memo prepared on behalf of the Township by MHBC on November 6th, 2023, the following applies to the site:

- *"The subject property is designated Shoreline, Rural and Natural Heritage Protection on Schedule A of the Official Plan.*
- *Portions of shoreline on the subject property contain Type 1 Fish Habitat on Eagle Lake on Schedule B of the Official Plan.*
- *As shown on Schedule C of the Official Plan, the subject property is accessed via a Private Road (Spring Water Road) on the north end of the subject property. There also appears to be an easement that provides access on the south end of the subject property, off of Jim Young Road which is a Year Round Maintained Road.*
- *The subject property is located within the Shoreline Residential (SR) Zone, the Backlot Residential (BR) Zone, the Rural (RU) Zone and the Environmental Protection (EP) Zone.*
- *The lands identified as Type 1 Fish Habitat on the shoreline are located within the Environmental Protection (EP) Zone.*"

The memo indicates that an Environmental Impact Report would be required, and would need to include a fish habitat assessment. Furthermore, it is understood that phosphorus impacts would need to be addressed. In this regard, clarification of Section B4.10 d) of the Official Plan (OP) was provided, as per the following:

> "*In terms of establishing the existing use on the subject property, we agree with the interpretation that the permitted uses under the current zoning framework can be utilized for the purposes of demonstrating that the proposed use has a scale and density that is less or equal to a permitted use. As discussed, the EIS should provide a comment on this policy and demonstrate through site design that there is net reduction of phosphorus loading on the lake.*"

Other relevant sections of the OP were reviewed, including Section B5.6 which outlines the detailed requirement for an EIS.

ORE staff presume the proponent's Planner will speak to section B4.6 Shoreline Commercial Development Policies in the OP with respect to the patron density and number of units in the proposed campground as it relates spatially to the waterfront area on the subject property.

The Township of Machar OP also includes a Shoreline Alterations section in the OP that would be pertinent to the proposed campground facility development:

"*B4.16 SHORELINE ALTERATIONS*

Subject to the approval of Council, the Ministry of Natural Resources and/or the Federal Department of Fisheries and Oceans, development may be approved in shoreline areas, adjacent to and within 23 metres of the shoreline, subject to a satisfactory Environmental Impact Study being completed, which shows that development will not have a negative impact. Filling, dredging and/or other shoreline alterations within 120 metres of fish habitat areas is prohibited and may be subject to enforcement by the Federal Department of Fisheries and Oceans."

In addition, to the Official Plan requirements we have included relevant sections of the zoning by-law in Appendix B.

This study has been *scoped* and formatted in accordance with the Township's OP and By-law requirements to address the potential impacts to natural areas on the subject site, based on the proposed development concept. Relevant excerpts from the Township policies have been included in Appendix B.

5.0 Policy

In addition to the Township's Official Plan, this report has been prepared to meet the relevant sections from the following:

- Provincial Policy Statement (PPS, 2020).

The applicable excerpts from the Provincial Policy Statement are provided in Appendix C. However, ORE staff have relied more heavily on the Township of Machar's OP and the comments provided in the pre-consultation report by the Township, as they are very thorough in this regard.

This study has been *scoped* and formatted to address the Township OP which also takes into account much of the 2020 PPS requirements. The PPS provides the minimum planning requirements and it is up to the corresponding tiered municipalities to either require the same as the PPS or include more than what is required.

6.0 Topography and Drainage

The subject site occurs on a west-facing slope overlooking the northern arm of Eagle Lake, exhibiting approximately 30 m of topographic relief. The south-central part of the property contains a northeast-southwest trending ridge that forms a local drainage divide. Runoff to the northwest of the ridge is conveyed to the lake by overland flow whereas runoff southeast of the divide flows toward a small creek and wetland system.

The site includes a small peninsula that is likely to be one of several similar bedrock-controlled features that occur along the shore, typical of the Canadian Shield terrain (Figure 2).

Other than Eagle Lake, there are no mapped watercourses or wetlands occurring on the property, other than a small linear wetland feature on the southeast side of the divide, which conveys minor flows away from the site. It was not until the on-site surveys were completed that an unmapped valleyland feature was identified via which surficial flows are being conveyed beneath the existing access road and discharged to Eagle Lake. The location of the unmapped feature is illustrated on other figures in this report. Additional details of the feature are also discussed in the following sections.

7.0 Geological Setting

As illustrated by Figure 3, although the subject site occurs within the Precambrian Shield terrain, the property is mapped as having a continuous cover of glacially-derived soils. The southern part of the site is covered by a stratified bedrock drift complex, typically composed of sandy and silty till, mixed with silty fine sand layers. In contrast, the northern part of the site is mapped as being covered by shield-derived (i.e., siliceous sand and silt till), which presumably consists of a fairly uniform till, in comparison to the layered drift complex. There may not be a significant difference between the two units, in terms of permeability. The mapped till unit is, however, more likely to be thicker.

Between the lakeshore and the west-central part of the site, deposits of coarse-textured glaciolacustrine origin occur, representing the remnants of an ancient period of innundation. Pockets of the glaciolacustrine sands occur sporadically throughout the site area, suggesting that the ancient innundation was likely widespread, occupying the deeper valleys.

Elsewhere in the site area, some of the larger lowland areas are mapped as containing "organic deposits", likely composed of organic-rich alluvium, commonly with wetlands at the surface. Below the organic layer, the substrate likely consists of the glaciolacustrine sands.

As outlined above, although there are no mapped outcroppings in the site area, it is expected that the site's topography is largely bedrock-controlled. As such, the soil cover is not expected to be very thick although the thickness cannot be determined from the mapping. However, from perusal of local well records from the Ministry of the Environment, Conservation and Parks' database, we note that the log of nearby well No. 4800374 indicates the presence of 6.1 m of clay and boulders (i.e., likely till)

overlying the granitic bedrock. The log of another nearby well (No. 7149713) similarly indicates the presence of sand, clay, and sand & gravel layers, extending to a depth of 11.3 m.

The reported static water levels in these wells (which may be representative of the local water table) varies from approximately 6.1 m to 2.4 m, respectively, likely being similar to the level of Eagle Lake.

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. Excerpts from the database records are found in Appendix D.

NHIC (Squares 17PL1678, 17PL1679, 17PL1778, and 17PL1779)

Common Name	Scientific Name	SARO Status
Snapping Turtle	*Chelydra serpentina*	Special Concern

A Colonial Waterbird Nesting Area was reported in the above database. The location is not specified.

OBBA (Square 17TPL17, Region 28, Parry Sound)

Common Name	Scientific Name	SARO Status
Bank Swallow	*Riparia riparia*	Threatened
Barn Swallow	*Hirundo rustica*	Special Concern

Bobolink	*Dolichonyx oryzivorus*	Threatened
Canada Warbler	*Cardellina canadensis*	Special Concern
Chimney Swift	*Chaetura pelagica*	Threatened
Eastern Meadowlark	*Sturnella magna*	Threatened
Eastern Wood-Pewee	*Contopus virens*	Special Concern
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern
Olive-sided Flycatcher	*Contopus cooperi*	Special Concern
Wood Thrush	*Hylocichla mustelina*	Special Concern

eBird (nearest hotspot is the Mikisew Provincial Park L1807300 site, located approximately 1.5 km west of the site)

Common Name	Scientific Name	SARO Status
Bald Eagle	*Haliaeetus leucocephalus*	Special Concern
Bank Swallow	*Riparia riparia*	Threatened
Barn Swallow	*Hirundo rustica*	Special Concern
Eastern Wood-Pewee	*Contopus virens*	Special Concern
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern
Lesser Yellowlegs	*Tringa flavipes*	Threatened
Wood Thrush	*Hylocichla mustelina*	Special Concern

iNaturalist (search extent is an approximate 2 km radius from the on the approximate property boundary)

Common Name	Scientific Name	SARO Status
Bald Eagle	*Haliaeetus leucocephalus*	Special Concern
Snapping Turtle	*Chelydra serpentina*	Special Concern

Fish On-Line (nearest data location is Eagle Lake located adjacent to the site)

Common Name	Scientific Name	SARO Status
Lake Whitefish	*Coregonus clupeaformis*	Threatened*

*Note: Opeongo Lake large and small-bodied populations

The following other common species were listed:

Brown Bullhead (*Ameiurus nebulosis*)
Burbot (*Lota lota*)
Northern Pike (*Esox lucius*)
Pumpkinseed (*Lepomis gibbosus*)
Rainbow Smelt (*Osmerus mordax*)
Smallmouth Bass (*Micropterus dolomieu*)
Walleye (*Sander vitreus*)
White Sucker (*Catostomos commersonii*)
Yellow Perch (*Perca flavescens*)

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 on a best efforts basis, given the winter season. Where possible, dominant vegetation types were recorded and boundaries of the various communities mapped on an air photo or utilizing a dGPS.

ORE staff completed a single site inspection in the winter period whereby the site was blanketed with snow. The ELC communities were therefore identified using a best effort approach based on the tree and shrub cover without the majority of the groundcover and soils data being available. ORE staff notes there were some test pits that were excavated about the site that did aid with the soils determinations.

In addition to identifying and mapping the vegetation communities, ORE staff assessed each vegetation community from the perspective of whether they are hydrologically sensitive. 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**
February 3rd, 2024	2	3 - Gentle Breeze	15% Cloud cover. Relatively clear winter day with a slight breeze at the lakeshore. Observed vegetation through snow/existing site conditions, inspected for evidence of SAR and SAR habitat, vegetation mapping - species list, wildlife detection and species list. Inspect shoreline and identify any natural heritage features.

Appendix E 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 four (4) upland woodland communities/habitats on-site, and three (3) aquatic/wetland communities associated with Eagle Lake. The vegetation types were assessed by applying a best effort approach to 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 rural property-type community.

This community includes the development footprint associated with the existing road access, loop parking areas, existing washroom facilities and storage buildings in the parking area. The vegetation in this ELC type contains mainly openings in the deciduous woodland floor that contain travelled or disturbed areas. The openings/envelope areas and access road related areas are relatively tight around the buildings. The very limited frequently disturbed areas quickly transition into the mature Sugar Maple (*Acer saccharum*) dominated deciduous type woodland habitat that follows.

ORE staff did not observe any SAR flora or fauna in this community, nor any wetlands or watercourses that would be considered a constraint to the proposed camping facility uses.

The only areas the proposed camping facility development that would require alterations would be in the areas of the proposed buildings, septic system and parking area. These development elements would require new footprints within the forest floor which will result in trees being cleared, fill imported and the sites graded. The locations of the buildings, septic and parking areas are identified on Figure 4. As for the campground area out on the peninsula, it will require very little alterations as it is meant to remain in a mostly natural state. The camping facility area would eventually expand the existing openings in the woodland tract and become additional CVR_4 type community.

2. Sugar Maple - Red Oak - Basswood Dry to Moderately Fresh (ES24.1)

The FG-01 characterizes the ES24.1 woodland community as Sugar Maple - Red Oak -

Basswood dominated stand on dry to moderately fresh soils. Associates in the main canopy include Paper Birch (*Betula papyrifera*), Largetooth Aspen (*Populus grandidentata*) and White Ash (*Fraxinus americana*). The understorey can contain high levels of hardwood regeneration. It contains a moderate number of herbs. Soils are typically sandy to coarse loamy, very shallow to shallow, and often calcareous; crests, and upper to mid slopes.

The understorey is typically comprised of Maple-leaved Viburnum (*Viburnum acerifolium*), Striped Maple (*Acer pensylvanicum*), Fly Honeysuckle (*Lonicera caerulea*), Leatherwood (*Dirca palustris*), and Prickly Gooseberry (*Ribes cynosbati*). It can also contain the following groundcover species, Large-leaved Aster (*Eurybia macrophylla*), Wild Sarsaparilla (*Aralia nudicaulis*), Wild-Lily of the Valley (*Maianthemum canadense*), Hairy Solomon's Seal (*Polygonatum pubescens*), False Solomon's Seal (*Maianthemum racemosum*), Red Trillium (*Trillium erectum*), Mountain Rice-Grass (*Piptatherum racemosum*), Round-lobed Hepatica (*Anemone americana*), Helleborine (*Epipactis helleborine*), Spinulose Woodfern (*Dryopteris carthusiana*), White Trillium (*Trillium grandiflorum*), and Downy Yellow Violet (*Viola pubescens*).

This community dominates the majority of the upland areas of the property with mature/large diameter Sugar Maples, Red Oaks and Basswoods occurring throughout. ORE staff observed the majority of the shrubs in the understory, however, the dominant species was Maple-Leaved Viburnum and Honeysuckle. ORE staff also detected White Trillium and Spinulose Woodfern in areas where the snow had melted.

None of the species identified within this community are Species at Risk. It could be suitable habitat for nesting hawks and eagles, considering the tall trees overlooking the lakeshore. However, no stick nests were identified on-site during the site inspection/ surveys.

It is within this community that ORE staff observed a small valleyland feature that contains an intermittent watercourse. The small valley feature extends from the easterly portion of the subject property and is believed to be draining the overflows of an unevaluated wetland in the eastern portion of the subject property.

3. <u>White Cedar - White Pine - White Birch - White Spruce - Dry to moderately fresh (ES21.1)</u>

The FG-01 characterizes the ES22 (White Cedar - White Pine - White Birch - White Spruce) mixedwood stands as having fresh to moist soils. It has an understorey with moderate levels of conifer regeneration, tall hardwood shrubs, Sphagnum spp., feathermosses and liverworts, and a moderate number of herbs. Soils are typically sandy to coarse loamy.

It can also include the following understory and groundcover species: Mountain Maple, Fly Honeysuckle (*Lonicera caerulea*), Beaked Hazel (*Corylus cornuta*), Bush Honeysuckle (*Diervilla lonicera*), Low Sweet Blueberry (*Vaccinium angustifolium*), Northern Wild Raisin (*Viburnum nudum*), Wintergreen (*Gaultheria procumbens*) Herbs, Ferns and Allies, and Grasses: Starflower (*Trientalis borealis*), Bunchberry (*Cornus canadensis*), Blue Bead Lily (*Clintonia borealis*), Wild-Lily-of-the-Valley, Spinulose Woodfern, Wild Sarsaparilla. Bracken Fern (*Pteridium aquilinum*), Ground Pine (*Dendrolycopodium obscurum*), Large-Leaved Aster, Rose Twisted-Stalk (*Streptopus lanceolatus*), Shining club-moss (*Huperzia lucidula*), Goldthread (*Coptis trifolia*), and Gaywings (*Polygala paucifolia*).

This community corresponds to the mixwood areas between the shoreline interface and upland habitats in the slightly more elevated areas directly off the lakeshore.

4. Hemlock - Yellow Birch - Dry to moderately fresh (ES30.1)

According to the FG-01 guide the ES30.1 is a Hemlock - Yellow Birch dominated stand on dry to moderately fresh soils. White cedar and balsam fir are associates in the sub canopy. Understorey with moderate levels of conifer regeneration. Low number of herbs. Red spruce is occasional as an overstorey and understorey species in this ecosite. Wide range of soil textures; shallow; crests; upper and mid slopes.

The shrub and groundcover layers can contain: Shrubs: Striped Maple, Fly Honeysuckle, Beaked Hazel (*Corylus cornuta*), Mountain Maple, Hobblebush (*Viburnum lantanoides*), Twinflower (*Linnaea borealis*) Herbs, Ferns and Allies, and Grasses: Spinulose Woodfern, Wild-lily-of-the-Valley, Wild Sarsaparilla, Starflower, Blue Bead Lily, Goldthread, Rose Twisted-Stalk, Bunchberry, Wood sorrel, Shining Club-Moss, Ground Pine, and Indian pipe (*Monotropa uniflora*).

This wooded community occurs as a thin corridor along the waterfront on the south side of the peninsula overlooking the small south bay. It occurs between the shoreline and the ES21.1 community described above. It occurs towards the lower to upper slope area on the peninsula area where the proposed campsites are to be located.

Wetland/Aquatic Community:

5. Open Aquatic (OAW)

The ELC (2008) describes OAW 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 Eagle Lake. The lake was iced over at the time of the inspection, therefore we were unable to determine what the lake bottom conditions were like during the inspection.

ORE staff observed some minor floating leaved aquatic plant frozen in the ice and matted along shoreline in the near-shore environment, however, the shore appears to be comprised of bedrock dominated and barren type habitat around the majority of the point/peninsula.

The only form of development proposed to impose within this community is the planned beach/swimming area. However, the proposed location of the beach would not impair any spawning areas for fisheries and would also not impair any turtle resting/perching areas on the lake.

6. Black Ash Mineral Deciduous Swamp (SWD2-1)

This type of treed swamp habitat usually contains tree and shrub cover exceeding 25% of its total area. The species must be hydrophytic, being able to withstand a variable flooding regime whereby water levels can be up to 2 m deep. During the summer period, the wooded swamp is expected to possess vernal pools which can potentially dessicate between precipitation events.

This Black Ash dominated swamp type of community occurs on the north side of the peninsula as a sliver wetland overlooking the shoreline in this area. There were other wetland thicket, grasses and minor reeds in this area. It is a very minor shoreline wooded swamp and is less than 0.5 ha, not meeting the Ontario Wetland Evaluation System size threshold criteria.

None of the proposed campsites or camping elements out on the point/peninsula will impose on this minor wooded swamp feature.

7. 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 small embayment which appears to contain White Water-Lily (*Nymphaea alba*).

This community occurs within the small bay associated with the north side of the peninsula. Although ORE staff did not detect the Water-lilies in this area, there appears to be vegetation near or on the surface in this small embayment and would likely be Water-Lily. The combination of submerged and floating leaved aquatic plant species represents good quality spawning habitat for Northern Pike (*Esox lucius*) and possibly Muskellunge (*Esox masquinongy*) in Eagle Lake, and would be considered Significant Fisheries habitat. The young-of-year of these fish species would utilize the vegetation for foraging and cover. This area is also believed to possess downed woody debris as there are what appears to be downed or sunken logs in this area according to the aerial photography.

The floating leaved and submergent aquatic plant species in addition to the abundance of downed wood debris in the small embayment wetland also makes it ideal habitat for turtles.

No elements of the proposed camping facility would impose on this aquatic community or its corresponding shoreline on the subject property, it will be retained in a natural state.

8. Thicket Swamp (SWT)

A Thicket Swamp community typically has 25% or less tree or shrub cover which is predominantly hydrophytic species. During flood conditions, the water depth is typically less than 2 m. During dry periods, depressions can host vernal pools comprising 20% or more of the total area of the swamp.

The SWT habitat is located within the small bay on the south side of the point/peninsula. ORE staff was able to see the lacustrine wetland vegetation protruding through the ice conditions while traversing the shoreline.

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 on the point, there were very few potential spawning areas in the littoral zone/offshore area. In addition, there were some areas along the shoreline that had melted within the small embayment south of the point where the campsites are proposed. This area contained organic/muck deposits and is less likely to contain spawning areas for fish. If fish do spawn in this area, they would likely consist of Centrarchid species. If the beach is proposed to be located in this area, the best location would appear to be in the vicinity of where the dock is currently located, as this is a disturbed area and boat traffic going in and out of the site has already disturbed the sediments in this area.

The proposed beach location is outside any Type 1 Fish Habitat identified in the Natural Heritage System - Schedule B in the Township of Machar Official Plan. ORE notes that there is a Type 1 Fish habitat on the north side of the point/peninsula.

ORE staff did not observe any turtle species as they are currently overwintering in Eagle Lake. The only turtle species detected within the prescreened database information is Snapping Turtle. This type of turtle species is very much an aquatic-type turtle and rarely perches on logs/woody debris. If it does perch in the sunshine, it typically situates itself within reedy areas of marshes to sunbathe, which is not a community that ORE detected on-site. Therefore, subject property is unlikely to be an an area within Eagle Lake where turtles congregate. That being said, if the beach were permitted on-site, the exposed sandy materials may be useful to Snapping Turtle and other species in Eagle Lake for nesting purposes which would be a net benefit. If the beach and other elements of the campsite development are permitted, the property owner/contractor should install measures to prevent all turtle species from entering the construction area/work zone.

Similar to the turtles, if the beach were approved, the proponent/contractor should install protection measures within the shoreline and offshore areas of Eagle Lake to prevent fish from entering the beach area while it is being constructed. Mitigation measures should be applied to the beach area to make sure the sediments do not migrate beyond the specified area.

No SAR fish nor SAR fauna were observed during the inspections. Considering the inspections were completed in the winter period when the majority of SAR are either dormant or overwintering towards the equator, we have included the table below to determine whether there is the potential for the SAR within the prescreen information to be on-site:

Species at Risk from Prescreen:	**Preferred Habitat Type:**	**Present on Subject Site or Not:**
Bank Swallow (Threatened)	Embankments in cuts or hillsides that are fresh or eroded.	Habitat not observed on-site. No embankments with nesting holes observed.
Barn Swallow (Special Concern)	Buildings on farms or structures along waterways.	Habitat not observed on-site. Nests not observed on structures.
Bobolink (Threatened)	Farmfields and golf course fringe.	Habitat not observed on-site.
Canada Warbler (Special Conern)	Conifer lined waterway.	Habitat present on the point/peninsula. However, it is very narrow.
Chimney Swift (Threatened)	Nesting structures in settlement areas and lightning struck or hollowed trees.	Habitat not observed on-site nor were any nests in lightning struck trees or hollowed trees detected.
Eastern Meadowlark (Threatened)	Farmfields and golf course fringe.	Habitat not observed on-site.
Eastern Wood-Pewee (Special Concern)	Mature deciduous woodland habitats.	Habitat is present and covers the majority of the subject site. A good probability this species may be present and nesting.
Evening Grosbeak (Special Concern)	Mixed woodlands adjacent to watercourses and wetlands.	Habitat is present along the shoreline however it is a very narrow mixwood habitat. Moderate chance this species is present. It was not detected during the winter surveys.
Olive-sided Flycatcher (Special Concern)	Edge habitats where woodlands interface with wooded swamps and/or watercourses.	Habitat is present but not to any great degree for OSF.
Wood Thrush (Special Concern)	Relatively mature deciduous and mixed secondary succession woodlands.	Habitat is present throughout the subject site.
Bald Eagle (Special Concern)	Woodlands overlooking waterways. Nests are quite often on points or islands that contain trees the large stick nest can support.	Large pines along the shoreline are suitable for nesting, perching and nesting. The occurrence seems to be from Mikisew PP.
Lesser Yellowlegs (Threatened)	Mudflats and sandspits	Habitat not observed on-site.
Snapping Turtle (Special Concern)	Lakes, rivers and wetlands. Nesting on sandy open substrates that have direct sun.	Eagle Lake is suitable habitat for this species however there are no open sunny sandy areas on-site for this species to nest within.

Lake Whitefish (Threatened)	Habitat within Eagle Lake	Eagle Lake contains suitable habitat however this species tends to spawn in deeper sections of the lake. The shoreline associated with the subject property would not be used for spawning purposes.

All of the SAR that could be associated with the subject site are Special Concern species. Special Concern species are not regulated under the Endangered Species Act (ESA), but rather, subject to the measures outlined in the Significant Wildlife Habitat Mitigation Support Tool (SWHMiST).

The SWHMiST recommends avoiding the habitat of Special Concern species. However, if the development cannot avoid the habitat of the Special Concern species it should be located along the edge of the habitat so it avoids the core habitat of the species.

During the winter season inspection, ORE staff detected several sets of Moose tracks crossing the road access within the road allowance coming into the site. The moose appear to be crossing the road to access the mixed wooded area to the south of the subject property to browse on new buds and likely access runoff and seeps in this area (visibly melting the snow).

In addition to the moose, ORE staff observed the tracks of the following mammals on-site:

- Fox (*Vulpes vulpes*)
- Snowshoe Hare (*Lepus americanus*)
- Red Squirrel (*Sciurus vulgaris*)
- Mink (*Mustela erminea*)
- White-footed Mouse (*Peromyscus leucopus*)

The fauna species observed on-site are listed within Appendix E 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 limestone/acidic bedrock contact.

No SAR species nor wetlands (other than what is identified in Figure 4 and LIO) were

detected during the site surveys.

11.0 Impact Assessment

11.1 General Considerations

It has been determined in consultation with the proponent which items listed below would require site alterations according to the PPS and those that would not and why:

- Twelve (12) tent platforms (campsites) - *does not require vegetation removal, filling or grading, the platforms are elevated and have a small footprint*;
- Sixteen (16) parking spaces accessed via a gravel driveway - *will require vegetation removal, filling and/or grading and would be considered a site alteration under the PPS*;
- One (1) camp centre constructed out of shipping containers (gathering centre/hall) - *will require vegetation removal, filling or grading to situate/level the container/structure*;
- One (1) kitchen facility - *will require vegetation removal, filling or grading to situate/level the container/structure*;
- Two (2) accessory building (shelter) *will not require vegetation removal, filling or grading to situate the container/structure*;
- One (1) maintenance office - *will require vegetation removal, filling or grading to situate/level the container/structure*;
- One (1) sauna - *already exists and no plans to relocate the unit, so no site alterations required*;
- One (1) dock - *already exists and no plans to relocate the dock, so no site alterations required*;
- One (1) beach area - *already exists but there are plans to enhance the existing beach area by placing some new clean sand overtop of the existing footprint (in-water and shoreline works) and therefore would be considered a site alteration*;
- One (1) fire pit - *already an existing pit area that would be used by campers, no site alterations required*;
- Outdoor toilets and outdoor showers - *minor vegetation removal and excavating/grading will be necessary to construct the outdoor shower units and therefore would be considered a site alteration under the PPS. As for the outdoor toilets, those are existing and no site alterations will be necessary in regards these units*, and
- Trails to access the tent platforms and beach area - *is a passive use and is not considered a site alteration under the PPS*.

Therefore, based on our assessment and the above mentioned site alteration areas, it is our opinion that potential impacts related to future development of the site could include the following:

1) Potential for new site alterations to occur within the upland wooded areas of the site and/or expansion of the existing CVR_4 altered areas on the property, that could impact Eagle Lake resulting in erosion/sedimentation and water quality deterioration.

2) Potential impacts related to construction activities (e.g., vegetation removal, filling, grading, etc.), which may result in destabilisation and denuding of the groundcover by track and/or tire mounted equipment accessing the building footprint locations, parking area and septic location.

3) Potential impacts related to enhancing the existing beach area along the shoreline south of the existing dock with respect to wildlife utilizing Eagle Lake. The filling/enhancing of the existing beach area would displace some onshore and offshore habitats.

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

5) Potential impacts from the new septic system to facilitate the new shower and existing outdoor toilet facilities. There is the potential for the proposed new septic system to increase the phosphorus loading to nearby waterbodies due to the potentially high infiltration rates on the property (according to the septic installer).

6) Potential impacts on the habitat of Special Concern species that have been identified to potentially be on the subject property based on the ELC/habitats being observed during the site inspections.

These general impact considerations are further discussed in the following sections and measures to mitigate the above-mentioned potential impacts are provided in Section 12 below.

11.2 Development Envelope

Our field investigations have confirmed that the main concern with respect to the proposed camping facility development is its location relative to Eagle Lake (as illustrated on Figure 6). Construction of the proposed building areas (ie. parking area, septic system, etc.) could result in some large areas of bare soils being exposed

upgradient of the lakeshore, as filling and grading will undoubtedly be necessary to prepare for these new development elements.

Notwithstanding, it is expected that the majority of the construction zone can be targeted in and around the existing storage buildings at the end of the current road access and utilize as much of the existing openings in the forest floor (with the exception of the new development further up the hillside in the area of the small valleyland/intermittent watercourse feature). ORE also expects the majority of the construction can be completed from the existing laneway that would be upgraded as part of the new development (Figure 6). As such, the construction can be mostly confined to those areas that have been historically altered/disturbed (with the exception of the new development area further up the hillside and adjacent to the small valleyland/intermittent watercourse), without significantly imposing on any new natural areas on the subject property.

The proposed new beach would impose on Eagle Lake, however, the proposed area where the existing dock is located is an area where the shoreline has been historically used and somewhat disturbed already by boat motor/traffic in this area.

Overall, the gradient down to the shoreline from the proposed new development areas is gentle and those elements that require site alterations are to be located further upgradient from Eagle Lake (50 m or greater for new elements). As such, the runoff flows from around the proposed new buildings, parking area, and septic location, will be slowed within the nearby wooded areas and be manageable during the construction and post construction phase, in relation to the lake. It is expected that the new building areas, parking area and septic system footprint will need to be filled/raised in their prospective locations. However, there is sufficient area around the entire footprint of these development elements for runoff to continue as sheet flows in the post construction period toward the lakeshore and wetland. The significant distance for these newer elements that require site alterations is also beneficial with respect to containing any potential erosion-sedimentation issues.

ORE staff noted that the trees in this wooded area are mostly large diameter mature trees, sporadically interspersed within moderate relief areas. The mature trees are mainly comprised of deciduous species in the area where the alterations are planned, and the campsite area that is proposed to be out on the point will be a passive use and no construction/site alterations are proposed within this area. The only construction will be the wooden platforms in the peninsula area. The platforms are to be elevated above the natural groundcovers on the point and located amongst the trees. Tree removal would be minimal and no grading or filling is proposed within this area. Smaller equipment may need to access the area to better define the trail system network on the peninsula by applying either gravel or woodchips to these designated trails, however there will be no filling or grading (alterations) on the peninsula as part

of the application.

Considering the maturity of the trees, it should be possible to situate the development elements (buildings, etc) within any openings to retain as many trees as possible to achieve the footprint for these camping facility elements. The only areas where this may not be possible is in the proposed parking area and within the area of the new septic system to service the facility.

Considering there are existing camping areas on-site, the property owners have done well to retain and manage the woodland habitat in a natural state while incorporating some of the existing elements. Although the former practice of clearing vegetation and/or filling to the edge of the lake in other older campground facilities was considered a reasonable approach (especially to obtain vistas of the lake), this is clearly not the practice implemented by the property owners on this property. The highly vegetated natural setting is still intact which optimizes the shoreline buffering capacity. This is beneficial with respect to on-site attenuation of runoff and septic effluent in the shallow flow zone.

One (1) new septic system is proposed to be constructed near the proposed camp centre (~60 m from the shoreline of Eagle Lake). The proposed location easily meets the Ontario Building Code's (OBC) 15 m setback (5 times the OBC) to a watercourse and the Township of Machar's 30 m setback requirement from wetlands and watercourses (additional 45 m). Maximizing the distance to Eagle Lake also optimizes phosphorus uptake by plants and trees along the way, reducing inputs to the lake which is the receiving body. Additional information regarding phosphorus impacts is provided in a following section.

Based on these findings, the proposed camping facility development should have undetectable adverse impacts on the lakeshore and overall water quality of Eagle Lake as there will still be a significant vegetation buffer between the proposed development areas that require site alterations (including the new septic location) and the shoreline of Eagle Lake.

The only proposed element that could have a negative impact on Eagle Lake would be the proposed swimming area/beach. The beach materials would be placed directly within the lake and along the lakeshore in the proposed location. Mitigation in the form of identifying the least impact location is the best choice in this matter. Locating the beach in an area that has been historically disturbed by boat traffic would reduce the overall impacts to the lake and mitigate clearing/disturbing new areas along the lakeshore. That way, the more natural/untouched shoreline areas can be retained and continue to be the better quality habitat on the subject property and lakeshore.

Recommendations are provided in Section 12 to mitigate/address general construction

type impacts on Eagle Lake.

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 new buildings, parking area and septic system which could result in some tree, shrub and groundcover removal);
- 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 proposed camping facility elements listed in Section 3.0, above;
- fauna such as turtles potentially entering the work area via Eagle Lake;
- sensitivity of the site with respect to imported fill materials and stockpiling of these materials during construction, and
- impacts on potential Special Concern species in the woodland habitats during the construction period.

Recommendations are provided in Section 12 to address the potential for impacts relating to occupation and use of the new seasonal structures are minimized.

11.4 Impacts from Phosphorus Inputs

According to the Township, potential phosphorus impacts must be considered for this development application. Specifically, the Township stated:

> "*In terms of establishing the existing use on the subject property, we agree with the interpretation that the permitted uses under the current zoning framework can be utilized for the purposes of demonstrating that the proposed use has a scale and density that is less or equal to a permitted use. As discussed, the EIS should provide a comment on this policy and demonstrate through site design that there is net reduction of phosphorus loading on the lake.*"

Phosphorus export loads from developments generally result from two main streams: wastewater and runoff/stormwater. Recommendations and Best Management Practices (BMPs) to reduce phosphorus loadings to Eagle Lake are discussed in the following section (Section 12).

12.0 Recommendations

12.1 Species at Risk Prescreen

According to the SAR prescreen, only Special Concern species are likely to be associated with the subject property. Consequently, there is unlikely to be any Endangered Species Act (ESA) requirements for the subject property. Special Concern Species do not require permitting and a low-impact camping facility can undoubtedly coexist without impairing or negatively impacting the habitat of any Special Concern species that may be on-site. Considering the majority of the Special Concern species are bird species, the following would apply:

- It is recommended that the property owner retain as much of the woodland habitat as possible to preserve the core woodland areas for the Special Concern species. ORE staff provide similar recommendations in this regard in the following sections, to retain more of the woodland habitat which would be beneficial to the Special Concern bird SAR.

- It is recommended that the property owner abide by the vegetation removal restrictions as per the Migratory Bird Convention Act and complete any/all vegetation removals outside the migratory/breeding bird period which is between April 1st and August 31st each year.

- It is recommended that measures be put in place to exclude Snapping Turtle from the work areas. If the work can be completed outside the period when Snapping Turtle is active April 1st to October 31st each year light-duty silt fence can be installed instead of heavy-duty silt fence. There are additional recommendations regarding silt fence in the following sections, if the work can be conducted outside the period identified above the proponent and/or their contractor can install light-duty silt fence, instead.

- A permit does not have to be acquired from the Ministry of Environment, Conservation and Parks as it has been determined through the prescreen review that there does not appear to be any

Threatened or Endangered species that have been identified in the past within or proximal to the site.

12.2 Development Envelopes and General Constraints

- The proposed camping facility development should be situated/oriented such that each element reduces the amount of tree loss in their respect building locations, as illustrated by Figure 6. This can be done, by targeting the majority of the proposed development areas that require site alterations within any existing openings. This should reduce the overall disturbed areas on the property and retain as much of the woodland as possible which is beneficial to Eagle Lake.

- An existing road is located on the property. Rather than create new road openings, the proponent should upgrade and utilize as much of the existing road access as possible, rather than create any new open swaths within the woodland. It is possible that grades may come into play with respect to siting the roadway. Therefore, a "best efforts" approach should be applied to routing the new road through existing openings on the forest floor to retain trees and natural vegetation in the understory and on the ground.

- If it is determined that moose commonly utilize the road access, it may be beneficial to post signs along the roadway to warn patrons of the moose crossing area. If the moose use on, and adjacent to, the subject lands is mainly a winter type event, then it is highly unlikely the moose would be affected by the camping facility, as it would not be operational during this period.

- Provided the authorities are in agreement with the proposal, the new elements of the campground facility can proceed with very little additional disturbed areas occurring on the subject property. ORE staff anticipate the areas that require site alterations can, for the most part, be accessed from the access road and trail openings on-site. It may be necessary to construct the beach via the existing trail that extends off the access road to the dock location. The trail is not wide enough for dump trucks to access this area. Therefore, the materials will have to be piled nearby and machinery (preferably track-mounted equipment) may have to transport the sand to the proposed location. This will reduce tree loss and not open-up a large swath within the trees to access the waterfront.

- If the proposed beach area is approved, it is recommended that any/all beach sand

be contained within the designated footprint in the area of the existing dock. Therefore, a heavy-duty silt fence should be installed around the onshore portion of the beach area, to ensure the unconsolidated sand does not migrate beyond the limit of the proposed beach.

It will also be necessary to install a sediment curtain around the perimeter of the proposed beach area to contain the materials to the footprint provided on the survey. The silt curtain will also serve as a barrier to fish, turtles and other biota within the lake and to prevent them from entering the cordoned area.

The silt curtain should be installed in such a way as to force any fish outside the cordoned section of water prior to filling it with clean sand. The section of water should be inspected to be sure there are no fish within the cordoned area. If fish are present, they should be relocated to the safe side of the curtain.

If there are any sunken logs or woody debris on the lake bottom, these are important habitat for species such as Logperch (*Percina caprodes*). The sunken log or woody debris should be located outside the area of the proposed beach and situated such that it can remain as habitat for fish and other aquatic species.

- ORE staff observed only minor wetland rims around the shoreline area on the point/peninsula of the subject property, where the camp sites are to be located. According to Land Information Ontario (LIO), there is an unevaluated wetland towards the east side of the subject property. It is believed the small valleyland feature that contains the intermittent watercourse may drain overflows from the easterly unevaluated wetland feature to Eagle Lake via the small valleyland feature. Recommendations to retain both the form and function of the small valleyland/intermittent watercourse feature and Eagle Lake are provided below.

- The access road to the proposed building furthest away from Eagle Lake and proximal to the small valleyland/intermittent watercourse feature should be situated a minimum of 10 m from the top-of-bank of this feature to protect the integrity of the this valley feature on-site. The access road should also utilize the existing valley/intermittent feature crossing location as it is already disturbed and in an area where the valley is relatively shallow and would not require any significant filling or grading to upgrade the crossing.

- To ensure the disturbed areas do not advance any closer to Eagle Lake, a heavy-duty silt fence shall be installed around the limit of any elements where site alterations/disturbance is necessary, as generally illustrated by Figure 6. This

will prevent the construction crew from unnecessarily increasing the overall disturbance footprint beyond what is necessary to establish the element, especially where heavy equipment use is necessary.

The heavy-duty silt fence (or light-duty silt fence, depending on the time of year) should be extended around the entire building envelope perimeter to ensure turtles cannot migrate from Eagle Lake and nest within any exposed soil areas or within areas of sandy fill materials placed on or near the building envelope (Appendix F). The contractor can open the silt fence to access the construction zone each day to access the work areas. Once they leave the site in the evening hours the fence should be closed to prevent wildlife from entering the work area. The heavy-duty silt fencing will ensure that any loose or unconsolidated materials will not migrate beyond the cordoned construction area, thereby protecting Eagle Lake. The fence can be removed once the grading is complete and bare soil areas are secure/stable in the work areas.

- As there is a potential for SAR turtles to occur within Eagle Lake and/or the unevaluated wetland (e.g., Snapping Turtle, etc.), the heavy-duty silt fence will also serve as a turtle exclusion fence, as recommended by Ministry of Natural Resources and Forestry (MNRF). Light-duty silt fence is not considered an acceptable exclusion fence material, as large turtles such as Snapping Turtle (known to be present within Eagle Lake), could dig beneath the fence or potentially push the fence over and enter the construction zone. However, if the work can be completed outside the season turtles are active, Light-duty-silt fence can be installed instead. Nesting turtles and/or their eggs can be damaged by construction equipment.

  The purposes of installing Heavy-duty silt fence are two-fold; it will prevent any eroded soil materials from the leaving the work areas and prevent turtles (and other wildlife) from entering the work area and potentially being harmed, harassed or possibly culled. Heavy-duty silt fence will be necessary if the proposed alterations are to be completed during the seasons when turtles are active. The window is provide in an earlier section.

- 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.

- Grass seed and/or sod should also be applied to any exposed/bare soils resulting from site preparation and construction activities, the property owner could also plant native shrub/trees stabilizers within any disturbed areas in the post construction period.

12.3 General Development Design Considerations

- The Township of Machar includes a policy under Section B4.16 - Shoreline Alterations in their OP. This policy would impact certain development design and implementation elements.

  It is ORE's interpretation of Policy B4.16 that the 120 m distance is not meant to be an upland setback from the Type 1 - Fish Habitat as it only applies to any potential filling, dredging or shoreline works proposed within 23 m of shoreline and within 120 m of the fish habitat. ORE staff interpret the 120 m distance to be the shoreline distance between any proposed shoreline and/or in-water works and Type 1 - Fish Habitat, and not as the crow flies or a radius.

  Therefore, the shoreline distance between the mapped boundary of the Type 1 - Fish Habitat on the north side of the peninsula to the proposed beach location is 440 m, which is significantly greater than the 120 m shoreline distance and therefore complies with Section B4.16 of the OP. If for some reason the policy were interpreted to be a 120 m radius or as the crow flies distance, the proposed beach would still be outside the 120 m prohibition area.

  The proposed camping areas/elevated platforms will occur outside the 23 m shoreline/riparian zone buffer, however, none of the camping elements on the point or along the shoreline are considered site alterations under the PPS, other what is proposed in the beach area. Therefore, the camping elements on the point/peninsula are not subject to Section B4.16, the Shoreline Alterations Policy in the Township's OP.

- The design/layout plan for the building areas should demonstrate that the work

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

can be completed within the confines of the development footprint defined by the silt fence as illustrated on Figure 6 (Constraints). The site plan should illustrate whether native trees/shrubs and/or groundcovers will be planted on-site within any open or disturbed areas on the property in the post construction period. 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 Eagle Lake or the small valley feature/intermittent watercourse feature are not impacted. At a minimum, either seed or sod must be applied to 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/Sketch should illustrate how all surfaces/grades will be stabilized/finished.

- Passive stormwater management controls should be incorporated into the development design of the buildings. Examples include roof leaders and/or drainage off the storage bins 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 Eagle Lake which occurs downgradient of the development areas.

  ORE staff observed sandy soils in the test pits identified throughout the site. Therefore, it may be possible to outlet roof leaders/drains onto the grass/fill materials surface. Gravel can also be introduced at the end of the drains/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.

12.4 Construction Mitigation

- Proper erosion/sedimentation controls (ESC) will be required at all times while heavy equipment operates at the site. Heavy-duty silt fence (Appendix F) should be installed around each building envelope, as illustrated by Figure 6, provided the alterations are to occur during the seasons the turtles are active. Construction should not continue during heavy precipitation events. After these events, the fence should be checked to ensure their effectiveness.

- 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. These types of concentrated flows ESC are likely unnecessary for this site due to the shallow grades. The only instance would be, if the property owner creates a concentrated flow condition due to fill placement and grading. The property owner should try to maintain the existing grades as much as possible.

- 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 silt fence until the materials are applied. According to the proponent's septic installer, the septic system can be constructed inground due to the sandy substrates and will not require fill materials being relocated to the site for the purpose of constructing the septic (unless a high water table is encountered). 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. 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 silt fence 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 silt fence).

12.5 Best Management Practices to Reduce Phosphorus Loadings

To reduce the potential for phosphorus migration in the subsurface, the proposed tile bed system should be constructed as far from the lake as is practical, while maintaining all required setbacks under the Ontario Building Code (15 m setback requirement from watercourses) and the Township of Machar's OP requirement (30 m setback or greater

from watercourses).

One (1) septic bed is to be located near the proposed camp centre (~60 m from the shoreline of Eagle Lake), which is a significant distance from Eagle Lake, thereby eliminating potential phosphorus inputs to this waterbody.

With respect to reducing phosphorus inputs resulting from stormwater/runoff, best management practices should be implemented to help reduce the volume of runoff that enters the lake. This can be accomplished by implementing the following:

- Enhanced grass/water quality swales to capture site runoff;
- Soakaways or infiltration trenches to capture roof runoff (as recommended in previous section);
- Sand/gravel driveways and walkways (as opposed to paved);
- Maintenance of a natural vegetation buffer between the development and Eagle Lake, and planting of trees or shrubs if possible, and
- Limitation on, or omission of, lawn watering (not anticipated).

The following additional recommendations should be considered:

- Elimination of fertilizer use on lawns, and
- Use of phosphorus-free biodegradable soaps.

In addition to the above, there is evidence from historical soil testing in the nearby Muskokas (as far north as Nobel) indicating that the natural granular soils have (on average) a high phosphorus retention capacity.[2] Our review of surficial geology mapping for the Eagle Lake area suggests similar geological conditions, in that the bedrock is siliceous (i.e. “acidic”), therefore, lacks significant natural carbonate content. As such, the phosphorus retention capacity of the soils should be similar to those tested by Robertson (2003). It is our expectation that the native soils could significantly attentuate phosphorus loadings from the private sewage system effluent as a result of their phosphorus retention capacity.

In the event that the materials encountered are not similar to the conditions observed by Robertson (2003), the proponent should consider having tile bed fill materials utilized for the construction of the sewage system be composed of soils that are verified to have a phosphorus retention capacity of at least 6 mgP/100 mg. If the supplier cannot provide verification, the source materials should be sampled and analysed under the direction of a Qualified Person. This requirement should be applied to bed till and mantle materials.

[2] W.D. Robertson; Enhanced Attenuation of Septic System Phosphate in Noncalcareous Sediments; 2003.

Based on discussions with the planner on this file, we have been advised that there are existing permissions for the creation of 3 additional residential lots within the subject lands, which could create a total of 4 lots. Presumably, and based on the existing land use permissions, the lands could accommodate a minimum of four (4) residential homes which would all require private water and waste servicing in the form of wells and/or septic systems, that would operate all year long. It is our opinion that the proposed seasonal use of the lands for a tourist commercial use will generate similar if not less impacts as compared to the theoretical residential use of the lands.

The above considerations should protect water quality in Eagle Lake with respect to phosphorus exports from the development, and will address potential harmful algal blooms and improve the health of the lake. A net reduction in phosphorus should be possible.

12.6 Closing Remarks

Provided that the mitigation measures recommended herein are adhered to, it is our opinion that the applicant should be granted the Rezoning and Building Permit for the purpose of constructing and implementing the following elements within the proposed camping facility. 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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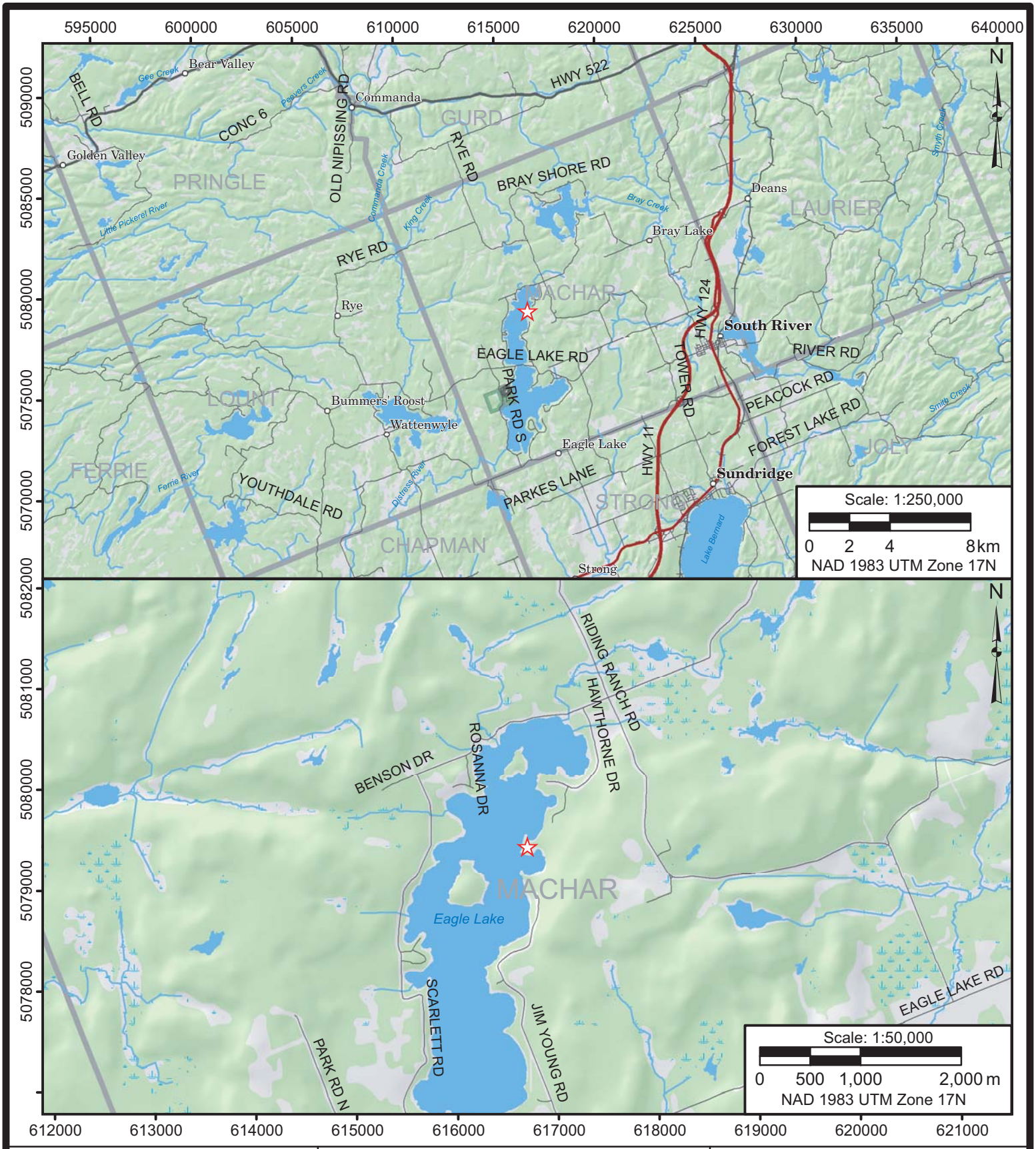
Figures



☆ 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 Study (sEIS)**
Low-Impact Commercial Campsite Development
517 Jim Young Road, South River (Eagle Lake)
Part Lot 23 & 24, Concession 7
Township of Machar, District of Parry Sound

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

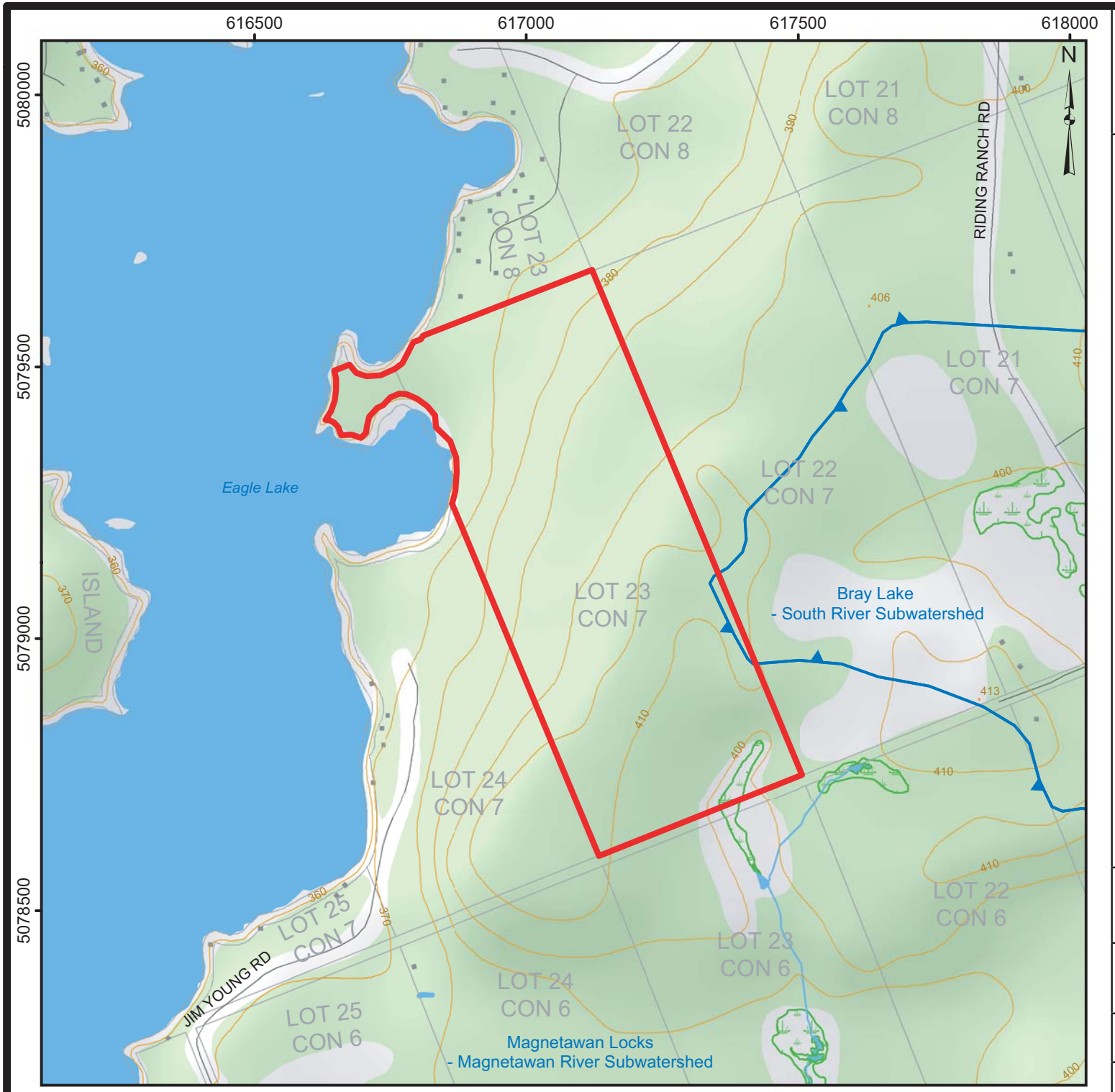
North American Datum (NAD) 1983

TITLE
General Location

PROJECT # 23-3319

DATE April 2024

FIGURE NO. **1**



***Scoped* Environmental Impact Study (*s*EIS)**
Low-Impact Commercial Campsite Development
517 Jim Young Road,
South River (Eagle Lake)
Part Lot 23 & 24, Concession 7
Township of Machar, District of Parry Sound

- Approximate Property Boundary
- Wooded Area
- Waterbody
- Wetland (Unevaluated)
- Watercourse
- Watershed Boundary
- Contour (5m Intervals)
- Spot Height (m asl)
- Building (symbol)
- Road
- Geographic Lot Fabric

Scale: 1:10,000

0 100 200 400 m

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

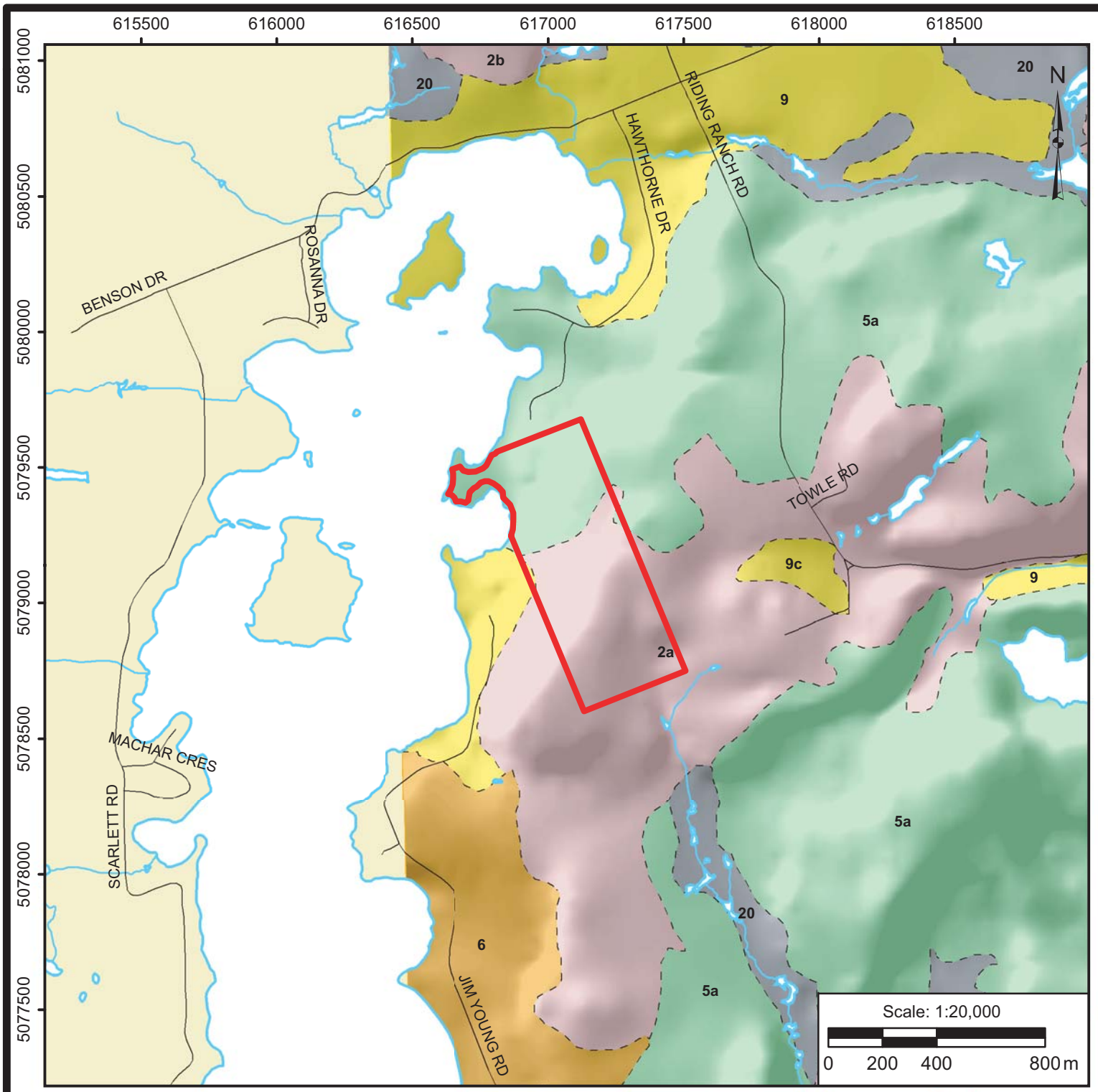
Optimized for Oakridge Environmental Ltd. printing

TITLE

Topography and Drainage

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3319	**2**
DATE	
April 2024	



***Scoped* Environmental Impact Study (*s*EIS)**
Low-Impact Commercial Campsite Development
517 Jim Young Road,
South River (Eagle Lake)
Part Lot 23 & 24, Concession 7
Township of Machar, District of Parry Sound

- Approximate Property Boundary
- Waterbody
- Watercourse
- Contact (approximate/assumed)
- 2 — Precambrian bedrock-drift complex
- 2a — Precambrian bedrock-drift complex Mainly till veneer
- 2b — Precambrian bedrock-drift complex Mainly stratified veneer
- 5a — Glacial Deposits (Till): Shield-derived silty to sandy till
- 6 — Ice-contact stratified deposits
- 9 — Coarse-textured glaciolacustrine deposits
- 9c — Coarse-textured glaciolacustrine deposits: Foreshore-basinal deposits
- 20 — Organic deposits
- Limit of Southern Ontario Surficial Geology Mapping

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

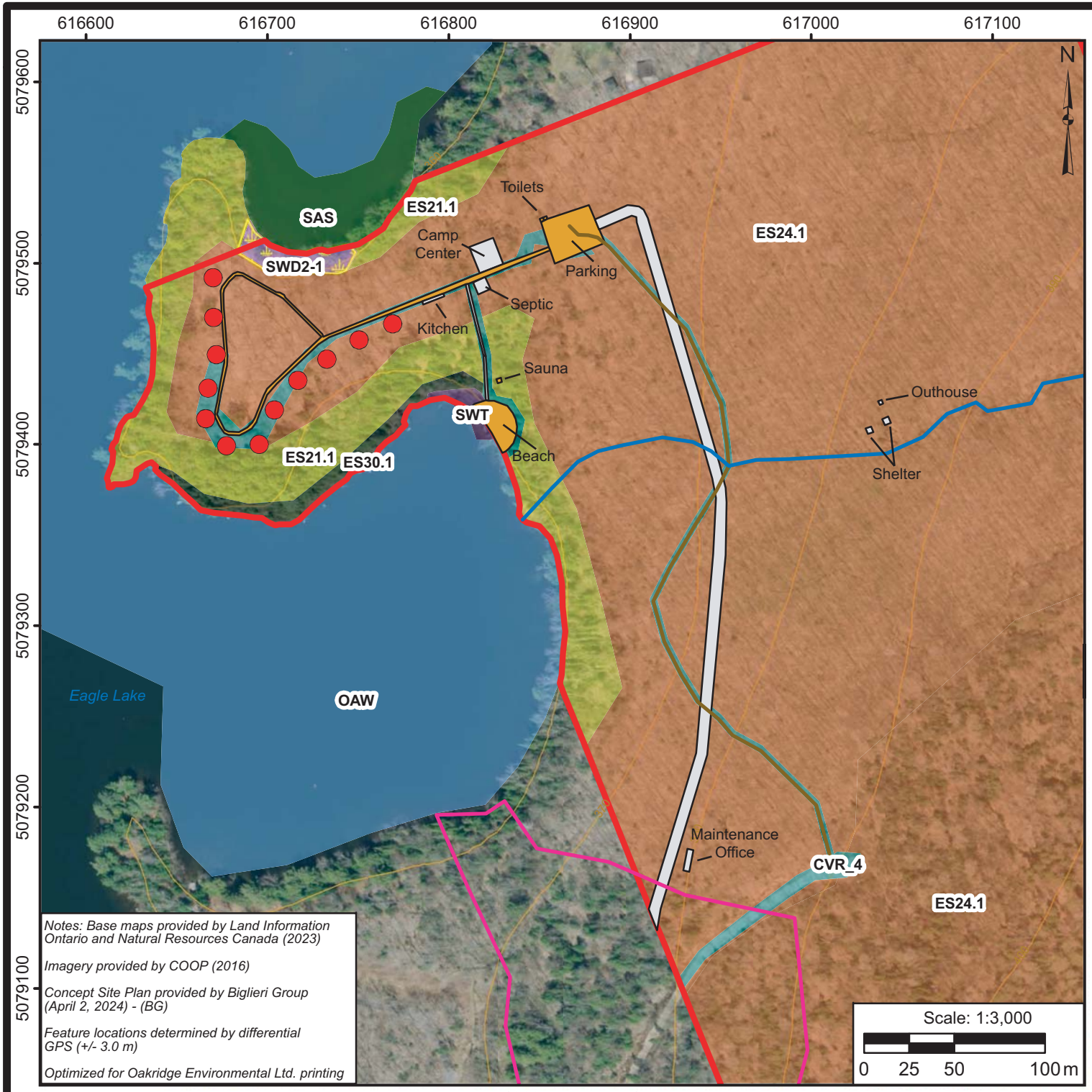
Optimized for Oakridge Environmental Ltd. printing

TITLE

Surficial Geology

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3319	3
DATE	
April 2024	



***Scoped* Environmental Impact Study (*s*EIS)**
Low-Impact Commercial Campsite Development
517 Jim Young Road,
South River (Eagle Lake)
Part Lot 23 & 24, Concession 7
Township of Machar, District of Parry Sound

- Property Boundary (Tullock Engineering)
- Existing Road
- Proposed Development Features (BG)
- Exisiting Features (BG)
- Rural Property (CVR_4)
- Sugar Maple – Red Oak - Basswood Dry to Moderately Fresh (ES24.1)
- White Cedar - White Pine - White Birch - White Spruce - Dry to moderately fresh (ES21.1)
- Hemlock - Yellow Birch - Dry to moderately fresh (ES30.1)
- Open Water (OAW)
- Black Ash Mineral Deciduous Swamp (SWD2-1)
- Submerged Shallow Aquatic (SAS)
- Thicket Swamp (SWT)
- Wetland (ORE)
- Valley/Intermittent Watercourse (ORE)
- Contour (5 m Intervals)
- CampsiteMarker
- Moose Feeding Habitat

TITLE
Vegetation

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3319	4
DATE	
April 2024	

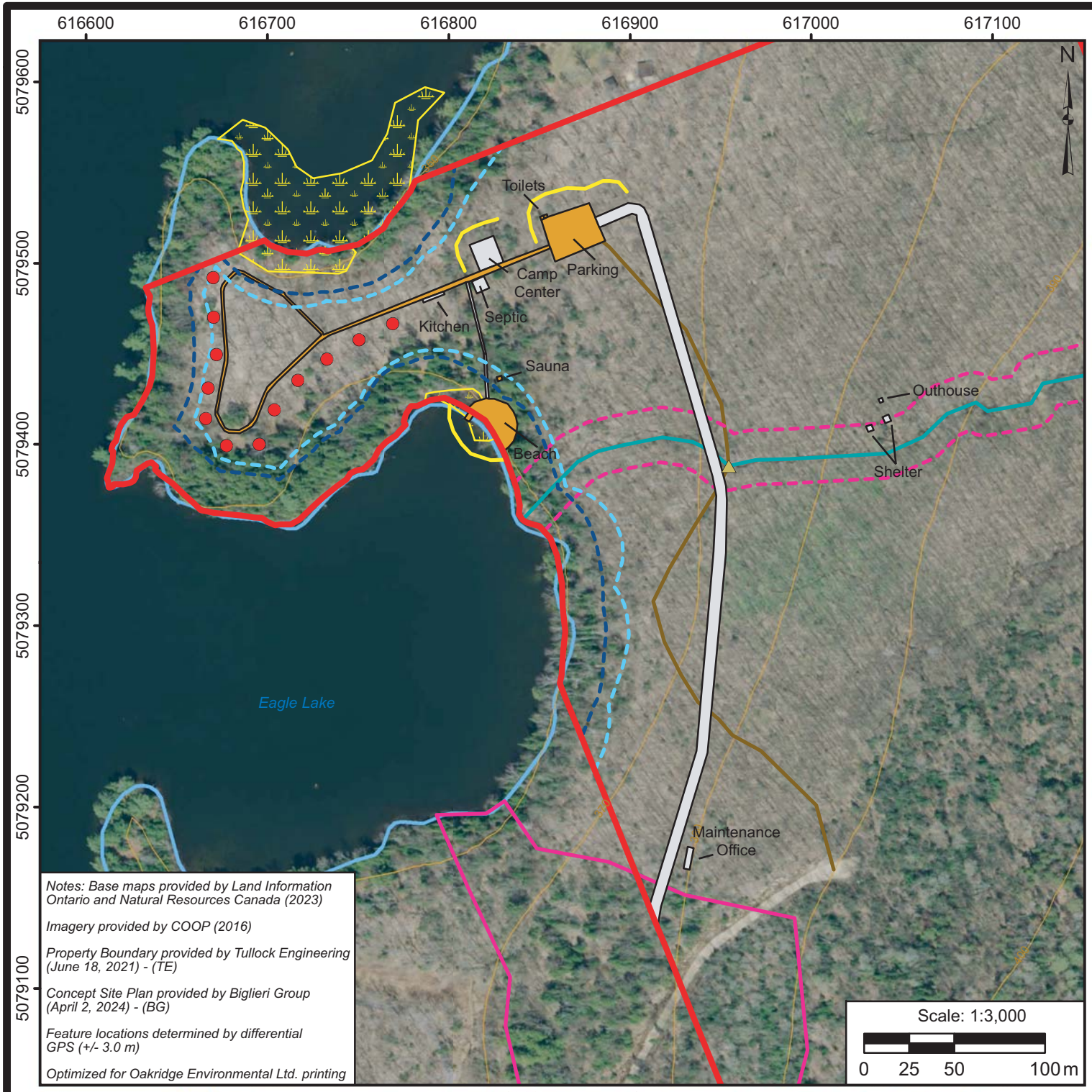
Photo A (Above): was taken along the existing trail/road upgradient of where the proposed campground facility is proposed to occur. It identifies the upland deciduous woodland habitat observed throughout the subject property.

Photo B (Above): was taken in the existing parking lot area where vehicles can turn around on the roadway. One of the existing vaulted toilets is visible in the background (left side) of the photo. This is the area where the parking will be expanded to include 16 spaces, and the area where the Camp Centre is proposed to be located.

Photo C (Above): was taken looking west towards Eagle Lake (opening in the background of the photo). It illustrates one of the existing tent platforms and yellow food storage unit in front of the elevated platform.

Photo D (Above): was taken looking north on the peninsula where all the campsites are to be located. Some platforms already exist behind and to the left of where this photo was taken. It demonstrates the openness in the mature woodland habitat that allows the campsites to be integrated within this habitat with no impact to Eagle Lake.

	***Scoped* Environmental Impact Study (sEIS)** **Low-Impact Commercial Campsite Development** 517 Jim Young Road, South River (Eagle Lake) Part Lot 23 & 24, Concession 7 Township of Machar, District of Parry Sound	TITLE **Site Photos**
Photos Taken: February, 3, 2024	ORE Oakridge Environmental Ltd. Environmental and Hydrogeological Services	PROJECT # 23-3319 DATE April 2024 FIGURE NO. **5**
Optimized for Oakridge Environmental Ltd. printing		



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

Imagery provided by COOP (2016)

Property Boundary provided by Tullock Engineering (June 18, 2021) - (TE)

Concept Site Plan provided by Biglieri Group (April 2, 2024) - (BG)

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

Optimized for Oakridge Environmental Ltd. printing

***Scoped* Environmental Impact Study (sEIS)**
Low-Impact Commercial Campsite Development
517 Jim Young Road,
South River (Eagle Lake)
Part Lot 23 & 24, Concession 7
Township of Machar, District of Parry Sound

- Property Boundary (TE)
- Existing Road (ORE)
- Exisiting Features (BG)
- Proposed Development Features (BG)
- Wetland (ORE)
- Waterbody (Shoreline)
- Waterbody Setback (30 m)
- Riparian Setback (23 m)
- Valley/Intermittent Watercourse (ORE)
- Valley (Top of Bank)/Intermittent Watercourse Setback (15 m)
- Contour (5 m Intervals)
- Moose Feeding Habitat (ORE)
- Campsite Marker (BG)
- Existing Creek Crossing (ORE)
- Heavy-duty Silt Fence/Erosion /Sedimentation Controls

TITLE

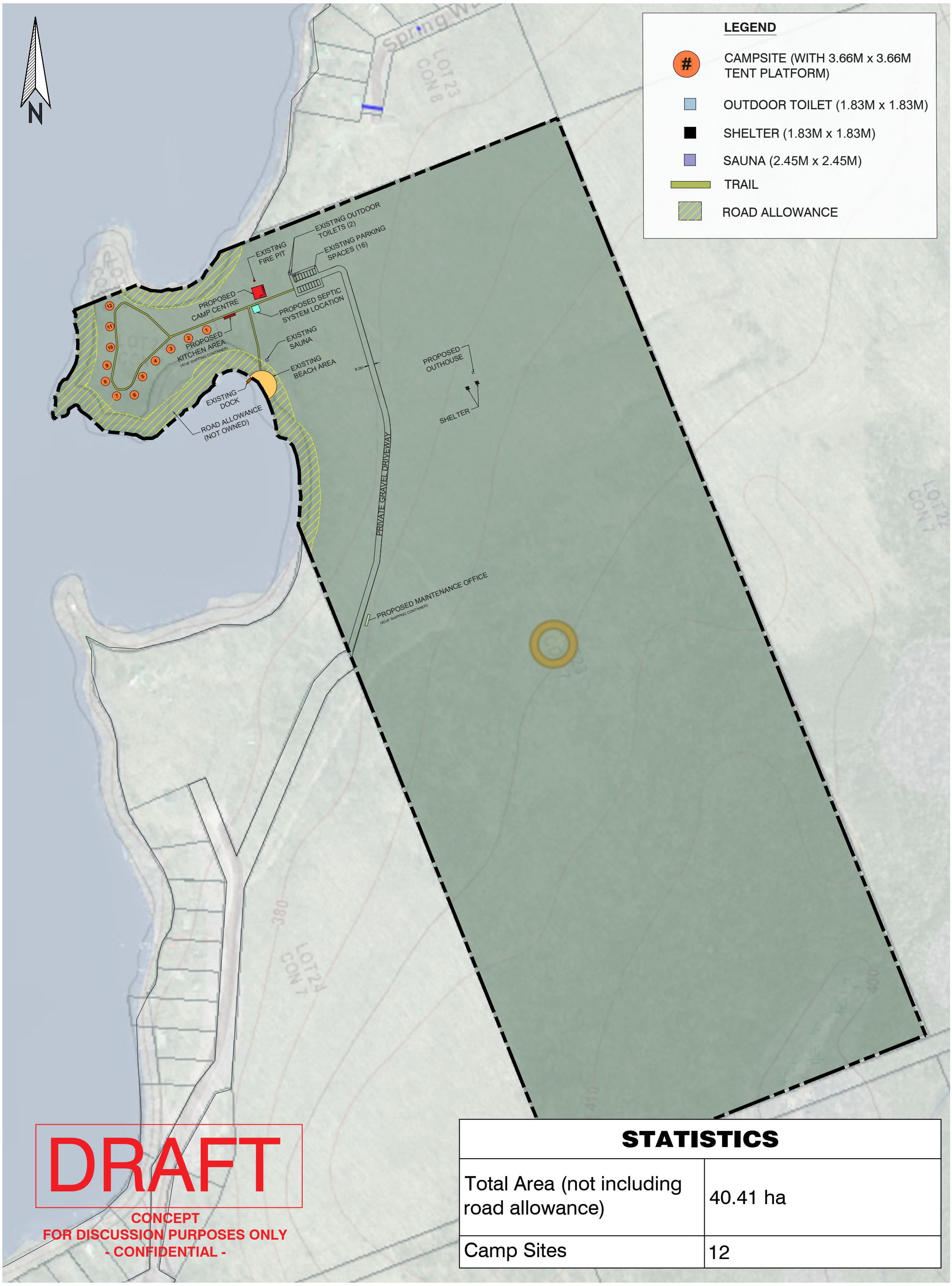
Constraints

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
23-3319	6
DATE	
April 2024	

Appendix A

Conceptual Development Plan



DRAFT

CONCEPT
FOR DISCUSSION PURPOSES ONLY
- CONFIDENTIAL -

STATISTICS	
Total Area (not including road allowance)	40.41 ha
Camp Sites	12

CONCEPT SITE PLAN

ADDRESS:
517 Jim Young Road

Project No:
22916

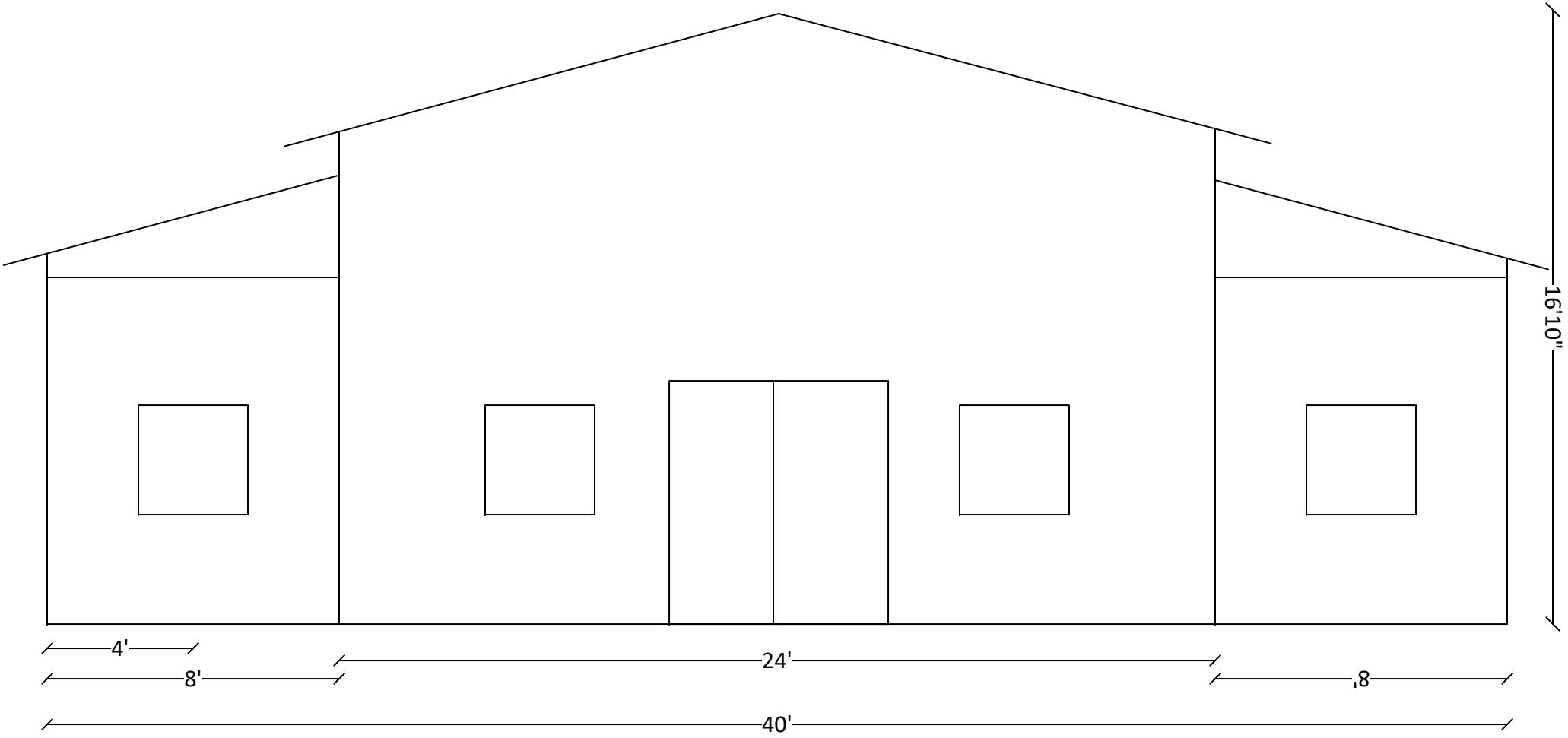
April 2, 2024

Designed By:
LLP

BIGLIERI GROUP

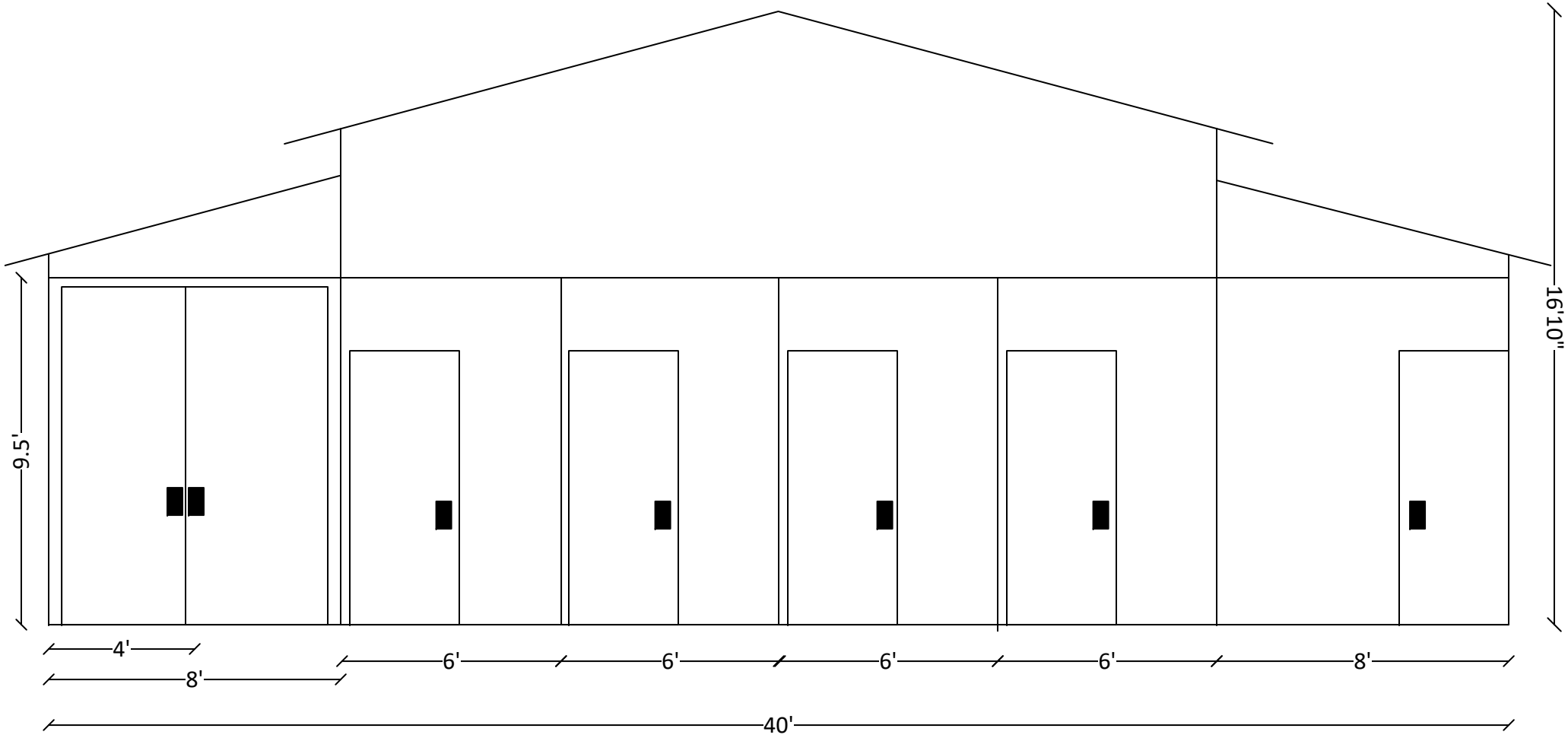
C

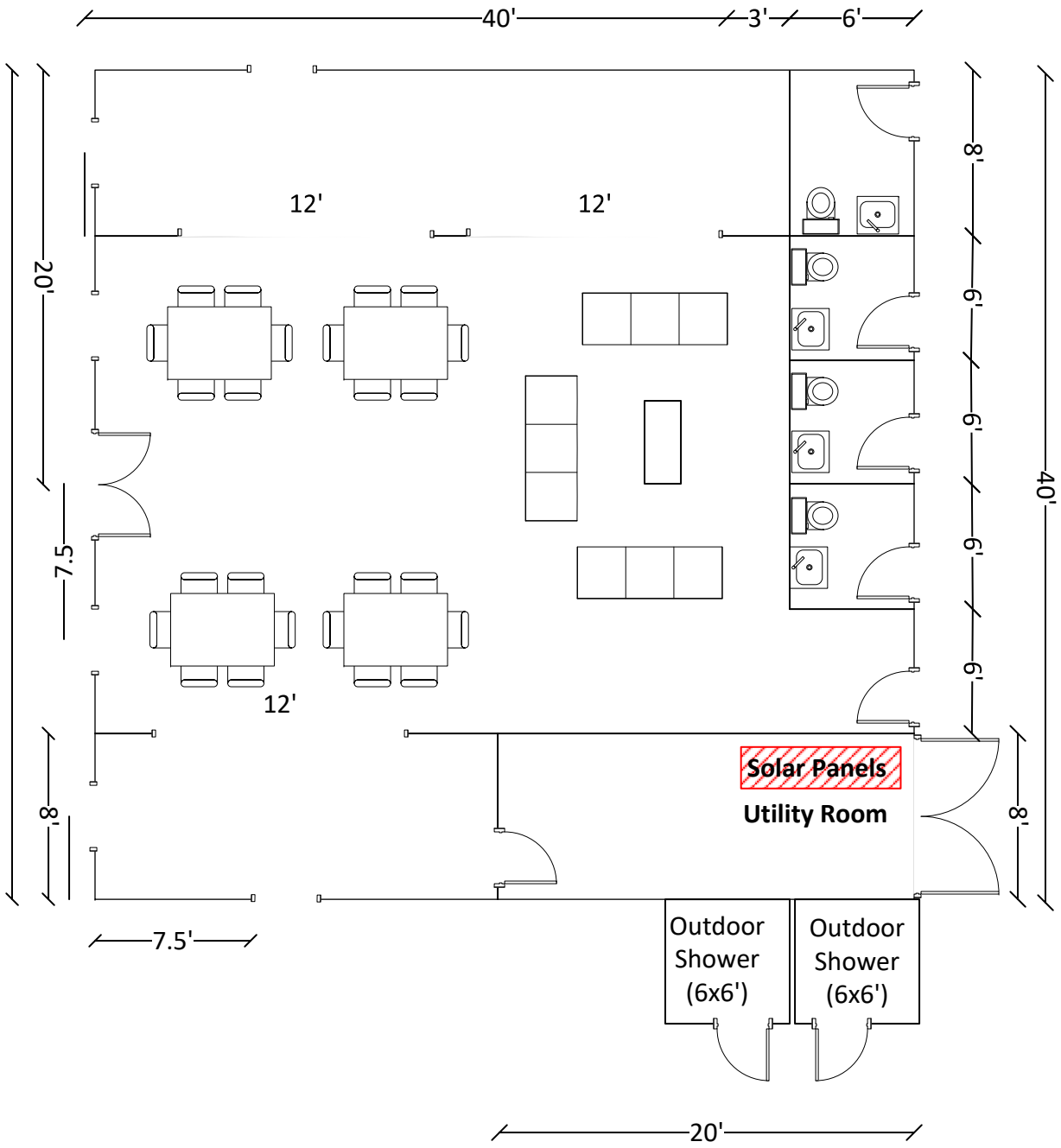
Camp Center
517 Jim Young Road, South River, Ontario.
(FRONT)



C

Camp Center
517 Jim Young Road, South River, Ontario.
(REAR)



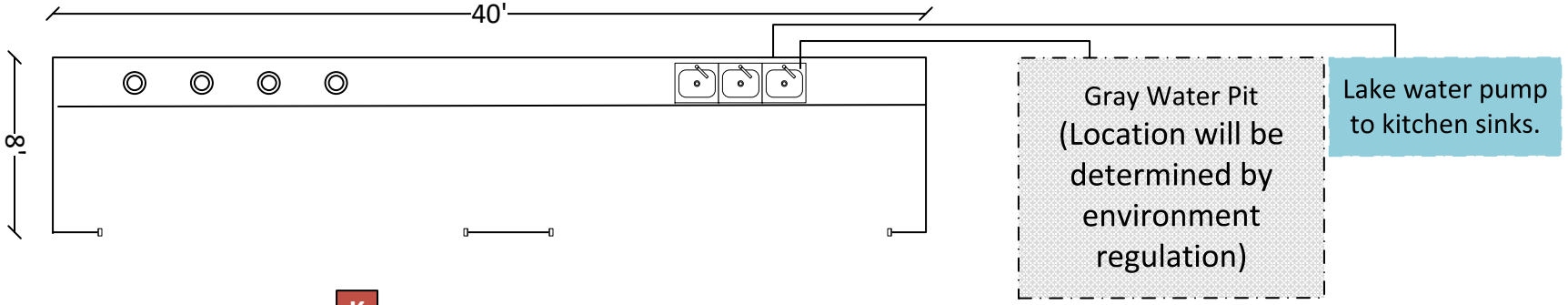


C **Camp Center**
517 Jim Young Road,
South River, Ontario.
(Interior)

Septic Tank (Located south of proposed campcentre)

Gray Water Pit (Location will be determined by environment regulation)

Note:
1. Lake water pumps from lake for showers and toilets.
2. Solar panels on shipping container's roof.



K **Kitchen Area**

517 Jim Young Road, South River, Ontario.
(40'x8' shipping container)

C

Camp Center
517 Jim Young Road, South River, Ontario.
(Illustration**)**

Appendix B

Township Policy Excerpts

Applicable Official Plan Excerpts (December 2015)

A4.5 SHORELINE
The Shoreline Designation includes all lands within 300 metres of the Township's shoreline areas adjacent to Eagle Lake, Bray Lake, Hamilton Lake and King Lake, except for areas within the Natural Heritage Protection Designation and Crown Land.

B4.6 SHORELINE COMMERCIAL DEVELOPMENT POLICIES
New commercial uses within the Shoreline designation will require an Official Plan Amendment.

The expansion of the existing commercial uses which provide accommodation may be permitted on the basis of 6 metres frontage per unit on the waterbody and a maximum density that does not exceed 10 units per hectare where a unit is defined as a rental cottage or a camp site, or a room in a hotel or lodge.

In instances where the accommodation is provided in sleeping cabins or dormitories, the expansion or development of such commercial developments may be permitted on the basis of 2 metres per person frontage on a waterbody.

Notwithstanding any other policy of this Plan to the contrary, the commercial development located in Part of Lots 31 and 32, Concession 1, shall be permitted on the basis of 0.86 metres per person frontage on Eagle Lake.

B4.9 EAGLE LAKE
B.4.9.1
No new lots for residential use shall be created in the Shoreline designation surrounding both basins of Eagle Lake, unless the creation of the lot was allowed by the passage of a By-law prior to the date of the adoption of the Official Plan by Council or in acordance with Section B5.10. However, a limited amount of second tier development in accordance with the frontage and area requirements of Sub-section B4.7.2 may be permitted.

B.4.9.2
Council may apply Site Plan Control for residential developments that do not meet the minimum lot size or areas outlined in this Plan where the waterbody is considered to be sensitive to redevelopment and redevelopment by Council and the Ministry of the Environment.

B4.10 NON IMPACT DEVELOPMENT
New development may be permitted within 300 metres of Eagle Lake only under one of the following special circumstances:

a) The tile fields on each new lot are set back at least 300 metres from the highwater mark of the lake, or such that drainage from the tile fields would flow at least 300 metres to the lake;
b) The tile fields on each new lot are located such that they would drain into the drainage basin of another waterbody, which is not at capacity;
c) To separate existing, habitable dwellings, each having a separate sewage system, provided that the land use would not change; or
d) The proposed new use, has a scale and density that is less than or equal to that which currently exists on site, and shall demonstrate a net reduction of the phosphorus loading on the lake.

B4.14 ENVIRONMENTAL IMPACT STUDY
Environmental Impact Studies shall be required for all development requiring Planning Act approval within the Shoreline designation.

B5.6 REQUIREMENTS FOR AN ENVIRONMENTAL IMPACT STUDY
Where the policies of this Plan require that an Environmental Impact Study (EIS) be prepared, such an EIS shall be prepared in accordance with the requirements of this section and as outlined in section C2.7 of this Plan.

B5.6.1 Purpose of an EIS
The purpose of an EIS is to:
a) collect and evaluate all the appropriate information in order to have a complete understanding of the boundaries, attributes and functions of relevant natural heritage feature(s);
b) make an informed decision as to whether or not a proposed use will have a negative impact on the significant natural features and ecological functions of the Township; and,
c) evaluate the existing and potential forest resources on the property and the effect of the proposed uses on those resources.
d) Where the focus of study is adjacent lands as defined by this Plan, the EIS shall evaluate the ecological function of the adjacent lands and demonstrate that there will be no negative impacts on natural features or ecological functions.

Any EIS required by this Plan must describe the significant natural features and ecological functions, identify their significance and sensitivities and describe how they could be affected by a proposed use. The EIS should give consideration to the relevant aspects and inter-relationships of various components of the natural heritage system on and off the site. In addition, the EIS must address how the proposed development will protect, maintain or restore the significant natural features and ecological functions of the natural heritage system.

Any EIS must be approved by Council, in consultation with other appropriate agencies, before a planning application that is subject to the EIS is accepted by Council.

B5.6.2 Contents of an EIS
The EIS shall include a description of:
a) the proposed undertaking;
b) the natural features and ecological functions of the area potentially affected directly and indirectly by the undertaking, and an assessment of their sensitivity to development;
c) any lands that support environmental attributes and/or functions that may qualify the lands for designation within the Natural Heritage Protection designation;
d) the direct and indirect impacts to the ecosystem that might be caused by the undertaking;
e) any environmental hazards (i.e. slope, flooding contaminants) that need to be addressed as part of the design and how they will be addressed;
f) any monitoring that may be required to ensure that mitigating measures are achieving the intended goals;
g) how the proposed use affects the possibility of linking core areas of the natural heritage system by natural corridors that may or may not be identified on the schedules to this Plan; and,
h) a Management Plan (MP) identifying how the adverse effects will be

avoided or minimized over the construction period and the life of the undertaking and how environmental features and functions will be enhanced where appropriate and describing the net effect of the undertaking after implementation of the MP. The MP shall also establish the limits or buffers and setbacks adjacent to watercourses, waterbodies, valleys, significant wetlands and vegetation to protect the natural feature and its attributes and/or function form the effects of development.

B5.6.3 What an EIS Should Demonstrate

The EIS should demonstrate that the proposed use will:

a) not discharge any substance that could harm air quality, groundwater, surface water and associated plant and animal life;
b) be supplied by an adequate supply of water and that the groundwater taking associated with the use will not harm existing water supplies, surface water features and associated plant and animal life;
c) not cause erosion or siltation of watercourses or changes to watercourse morphology;
d) not interfere with groundwater recharge to the extent that it would adversely affect groundwater supply for any use;
e) not be located where it would be subject to flooding or erosion and not cause an increase in flood or erosion potential on or off the site;
f) maintain/enhance/restore/rehabilitate the natural condition of affected watercourses, and protect/enhance/restore/rehabilitate aquatic and fish habitat;
g) not significantly affect the scenic qualities of the area;
h) enhance and restore endangered terrestrial and aquatic and fish habitat where appropriate and feasible;
i) not create noise that will have an adverse impact on the enjoyment of neighbouring properties;
j) not interfere with the function of existing or potential natural corridors;
k) not lead to a significant reduction in the forest resource or interior forest habitat in an area; and,
l) not result in development or site alteration in significant habitat of endangered or threatened species or provincially significant wetlands, and not occur within 120 metres of such areas unless it has been demonstrated that there would be no negative impacts on the natural features or their ecological functions; and,
m) not result in development or site alteration in or within 120 metres of significant wildlife habitat unless it has been demonstrated that there would be no negative impacts on the natural features or their ecological functions.

In addition, the EIS shall demonstrate that there will be no negative impacts resulting from the proposed use on the significant natural features that are identified on Schedule B to this Plan or the ecological functions for which the area is identified.

C1 GENERAL ENVIRONMENTAL POLICIES

C1.1 OBJECTIVES

It is the intent of this Plan to:

a) recognize and protect all significant rivers, streams and other bodies of water and significant natural heritage features in the Township from development that may have an impact on their function as an important component of the natural heritage system. Significant natural heritage

features include significant habitat of endangered and threatened species, provincially significant wetlands, significant wildlife habitat and fish habitat;
b) ensure that development does not occur on lands that are unstable or susceptible to flooding;
c) ensure that development does not occur on hazardous slopes;
d) protect the quality of water available for drinking water purposes;
e) identify criteria that shall be met to support an application for development in an area that is considered to be environmentally sensitive; and,
f) identify what criteria shall be met to support an application that may have an impact on the hydrogeological resources of the Township.

C1.2 ENVIRONMENTAL FEATURES NOT INCLUDED IN THE NATURAL HERITAGE PROTECTION DESIGNATION

C1.2.1 Lakes, Rivers and Streams

All of the lakes, rivers and streams in the Township as shown on the schedules to this Plan are considered to be environmentally significant since they:
a) contain fish habitat areas;
b) function as corridors for migrating wildlife habitat movement and vegetation dispersal;
c) serve to maintain the quality and quantity of surface and ground water resources; and,
d) assist in the improvement of air quality.
It is the intent of this Plan to protect all lakes, rivers and streams from incompatible development to minimize the impacts of such development on their function.

C1.2.2 Fish Habitat

Fish habitat means spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes. New development may be permitted within fish habitat if it can be demonstrated through an EIS that such development will have no negative impact on the feature and the Department of Fisheries has authorized such development or works in accordance with the Fisheries Act. Type 1 Fish Habitat is identified on the Schedules to this Official Plan, areas that are not identified as Type 1 fish habitat are of "unknown" significance; therefore applicants must consult with the appropriate authority (the Federal Department of Fisheries and Oceans) when proposing any development on lands adjacent to water. For the purpose of this section, lands adjacent to fish habitat are defined, as being within 150 metres of a fish habitat area. Any new shoreline structures will be located outside areas mapped as "Unknown" or "Type 1" fish habitat, unless a study shows that they would be located in Type 2 habitat.

Applicable Zoning By-law Excerpts (No. 45-12; August 2023)

3.32 Shoreline Structures and Facilities

a) Where an encroachment onto the bed of the waterbody is proposed, permission to construct or install the in-water and / or shoreline structure or facility shall only be permitted if approval to occupy the area has been obtained from or meets the prescriptive requirements of the authority having jurisdiction.

b) Where a boathouse or boat port is permitted, the owner shall have acquired the

Shoreline Road Allowance, where existing, prior to the construction of the boathouse or boat port.

c) No more than 10% or a maximum of 15 metres of the shoreline frontage of a lot, whichever is less, of any lot shall be occupied by in-water or shoreline structures and facilities. The remaining 90% of the shoreline area to a depth of 15 metres from the highwater mark shall be maintained as a natural vegetative buffer.

d) No shoreline structure shall project more than 22.0 metres from the shoreline into the water.

4.2 SHORELINE RESIDENTIAL ZONE (SR)

No person shall within any Shoreline Residential Zone (SR) use any land, or erect, alter or use any building or structure except in accordance with the following provisions.

4.2.1 Permitted Uses

i) A single detached dwelling

4.2.2 Regulations for Permitted Uses

	Metric	Imperial
a) Minimum Lot Area	1.0 ha	2.54 acres
b) Minimum Lot Frontage	60 m	197 ft
c) Minimum Front Yard	23 m	75.4 ft
d) Minimum Interior Side Yard	6 m	19.7 ft
e) Minimum Exterior Side Yard	7.5 m	24.6 ft
f) Minimum Rear Yard	10 m	32.8 ft
g) Maximum Lot Coverage		
i) within 60 metres from the shoreline - 10% of lot area within 60 metres of the shoreline		
ii) more than 60 metres from the shoreline - 15% of the total lot area		
h) Maximum Height	10 m	33 ft
i) Minimum Ground Floor Area	60 sq m	645.8 sq ft
j) Minimum Dwelling Unit Size	NA	NA
k) Maximum Height of Building within the front 23 metres of a lot	7 m	23 ft.

4.2.3 Exceptions

4.2.3.1 Shoreline Residential Exception One (SR-1) Zone

Notwithstanding any other provision in this By-law, the following provisions apply to land zoned Shoreline Residential Exception One (SR*1) as shown on amended Schedule “A”.

a) Minimum Lot Area	0.112 ha	0.28 acres
b) Minimum Lot Frontage	21.34 m	70 ft
c) Minimum Front Yard	20.10 m	66 ft
d) Minimum Interior Side Yard	0.91 m	3 ft

4.2.3.2 Shoreline Residential Exception Two (SR-2) Zone

Notwithstanding the regulations of Section 4.2.2 (c) and 3.1 (a), on lands located in the SR-2 Zone, described legally as Lots 2A and 3A, Plan M-177 located in Part of Lot 31, Concession 3, a detached private garage shall be permitted prior to the establishment of a principle dwelling. Furthermore, a private garage permitted in the SR-2 Zone shall have a maximum floor area of 150 m2, and the minimum front yard setback for all buildings and structures in the SR-2 Zone shall be 8 metres.

4.2.3.3 Shoreline Residential Exception (SR-3) Zone
Notwithstanding the regulations of Section 4.2.2 (c) and 3.1 (a), on lands located in the SR-3 Zone, described legally as Parts 1 and 2, Plan 42R-19180, Part B, Plan 42R-2491 and Part A, Plan RD-289 located in Part of Lot 15, Concession 10, the following provisions shall apply:
a) Minimum Lot Area – 0.5 hectares
b) Minimum Lot Frontage – 85 metres
c) Minimum Shoreline Setback – 30 metres
In addition, the following provisions shall apply to the subject lands:
d) One dock per lot shall be permitted in the area on Schedule A-1 with an asterisk (*) and no other structures or buildings shall be permitted within the Minimum Shoreline Setback.
e) Tree removal shall not be permitted within the Minimum Shoreline Setback with the exception of a pathway from the dwelling to the dock which shall be no wider than 2 metres in width.
f) The provisions of this By-law and additional site development matters shall be the subject of a Site Plan and/or Development Agreement with the Township of Machar.

4.2.3.4 Shoreline Residential Exception (SR-4) Zone
Notwithstanding the regulations of Section 4.2.2 (c) and 3.1 (a), on lands located in the SR-4 Zone, described legally as Parts 1 and 4, and Part 6, Plan 42R-19251, located in Part of Lot 12, Concession 12, the following provisions shall apply:
a) Minimum Lot Area – 3.5 hectares
b) Minimum Lot Frontage – 45 metres
c) Minimum Shoreline Setback – 23 metres
d) Minimum Shoreline Setback for a Septic System – 30 metres

In addition, the following provisions shall apply to the subject lands:
e) One dock per lot shall be permitted and no other structures or buildings shall be permitted within the Minimum Shoreline Setback.
f) Tree removal shall not be permitted within the Minimum Shoreline Setback with the exception of a pathway from the dwelling to the dock which shall be no wider than 2 metres in width.
g) The provisions of this By-law and additional site development matters shall be the subject of a Site Plan and/or Development Agreement with the Township of Machar.

4.2.3.5 Shoreline Residential Exception (SR-5) Zone
Notwithstanding the regulations of Section 4.2.2 (c) and 3.1 (a), on lands located in the EP and SR-5 Zone, described legally as Part 2, Plan 42R-2491, located in Part of Lot 15, Concession 10, the following provisions shall apply:
a) Minimum Total Lot Area – 1 hectare
b) Minimum Lot Area Above the Water's Edge – 0.89 hectares
c) Minimum Lot Frontage – 66 metres
d) Minimum Shoreline Setback – 30 metres
In addition, the following provisions shall apply to the subject lands:
e) One dock shall be permitted in the area on Schedule A labeled with an asterisk (*) and no other structures or buildings shall be permitted within the Minimum Shoreline Setback or any land located in the EP Zone.
f) Tree removal shall not be permitted within the Minimum Shoreline Setback with the exception of a pathway from the dwelling to the dock which shall be no wider than 2 metres in width.
g) Prior to any site alteration, the provisions of this By-law and additional site development matters shall be the subject of a Site Plan and/or Development Agreement with the Township of Machar.

4.16 ENVIRONMENTAL PROTECTION ZONE (EP)
No person shall within any Environmental Protection Zone (EP) use any land, or erect, alter or use any building or structure except in accordance with the following provisions:

4.16.1 Permitted Uses

i) Agriculture
ii) Resource Management Uses
iii) Marine Facilities and Boathouses subject to Section 3.1

4.16.2 Regulations for Permitted Uses

4.16.2.1 Marine Facilities

Marine facilities and boathouses may be permitted in accordance with Section 3.1 provided that they are accessory to permitted uses on the appertaining lands where such a use is permitted in the appertaining zone.

4.16.2.2 Permitted Buildings and Structures

No buildings or structures including accessory buildings or structures with the exception of marine facilities, boathouses, pumphouses and buildings or structures used for flood and erosion control are permitted in the Environmental Protection (EP) Zone.

Appendix C

Provincial Policy Statement Excerpt

The following has been copied from the 2020 Provincial Policy Statement (PPS):

"2.1 Natural Heritage

2.1.1 Natural features and areas shall be protected for the long term.

2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

2.1.3 Natural heritage systems shall be identified in Ecoregions 6E & 7E1, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.

2.1.4 Development and site alteration shall not be permitted in:
a) significant wetlands in Ecoregions 5E, 6E and 7E1; and
b) significant coastal wetlands.

2.1.5 Development and site alteration shall not be permitted in:
a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E1;
b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
d) significant wildlife habitat;
e) significant areas of natural and scientific interest; and
f) coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 2.1.4(b) unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. Ecoregions 5E, 6E and 7E are shown on Figure 1.

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

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

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

2.1.9 Nothing in policy 2.1 is intended to limit the ability of agricultural uses to continue."

Appendix D

SAR Database Excerpts

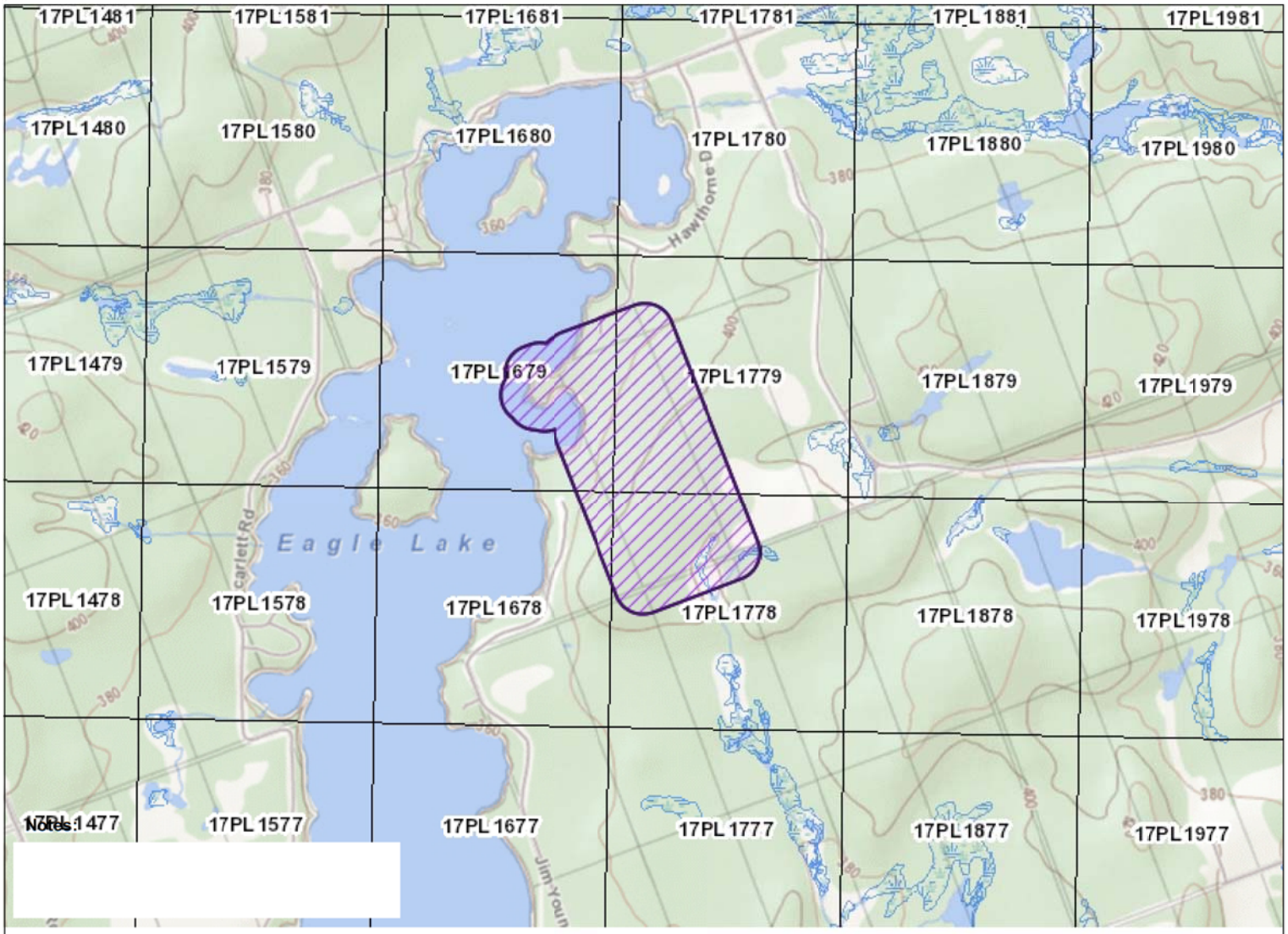
Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

NHIC Map

Map created:1/2/2024



Legend

- NHIC 1 Km Grd
- 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

Notes:

1.3 0 0.64 1.3 Kilometres

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

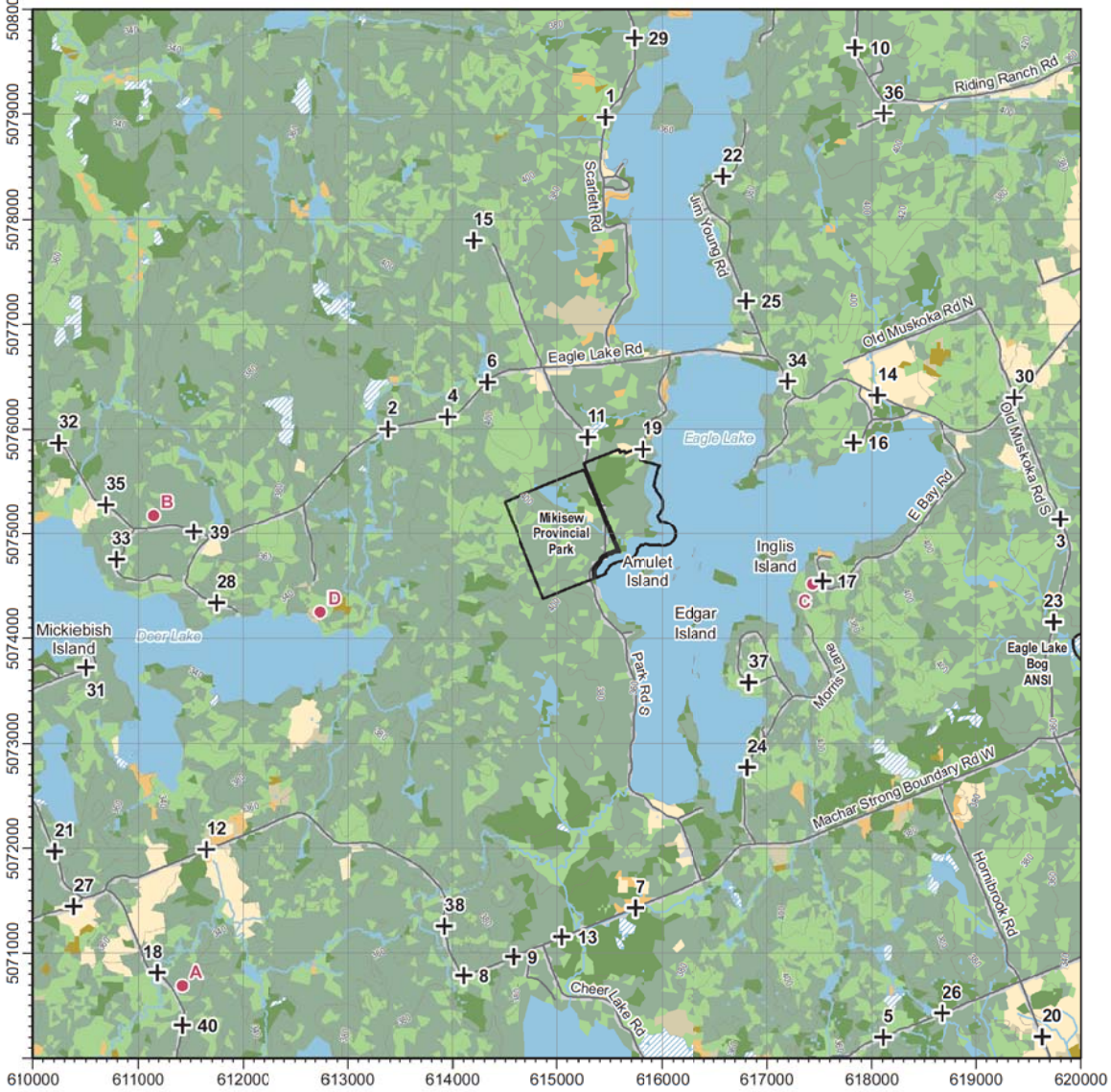
NHIC Data

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
1019902	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area	Colonial Waterbird Nesting Area	SNR			17PL1678	
1019902	SPECIES	Snapping Turtle	Chelydra serpentina	S4	SC	SC	17PL1678	
1019912	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area	Colonial Waterbird Nesting Area	SNR			17PL1778	
1019903	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area	Colonial Waterbird Nesting Area	SNR			17PL1679	
1019913	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area	Colonial Waterbird Nesting Area	SNR			17PL1779	

Region / Région: 28

Square / Parcelle: 17TPL17



Predefined point count coordinates
Coordonnées des points d'écoute prédéterminés

POINT +	EASTING UTM Est	NORTHING UTM Nord
1	615451	5078972
2	613385	5076006
3	619799	5075143
4	613955	5076121
5	618109	5070200
6	614325	5076452
7	615737	5071432
8	614105	5070790
9	614578	5070967
10	617841	5079635
11	615283	5075926
12	611647	5071989
13	615047	5071156
14	618051	5076325
15	614195	5077800
16	617825	5075878
17	617532	5074549
18	611184	5070814
19	615810	5075812
20	619624	5070203
21	610211	5071972
22	616584	5078410
23	619737	5074156
24	616817	5072770
25	616806	5077226
26	618672	5070427
27	610387	5071445
28	611746	5074340
29	615730	5079727
30	619363	5076303
31	610504	5073721
32	610244	5075873
33	610792	5074755
34	617199	5076459
35	610693	5075283
36	618112	5079007
37	616827	5073582
38	613924	5071259
39	611535	5075020
40	611425	5070316

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 21	Forêt de feuillus
Coniferous forest 7	Forêt de conifères
Mixed forest 50	Forêt mixte
Shrubland 1	Milieu arbustif
Grassland	Prairie
Barren	Dénudé
Wetland 1	Milieu humide
Agriculture 2	Milieu agricole
Water 14	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/

17TPL17

Parry Sound

Region / Région: 28

BIRDS CANADA
OISEAUX CANADA

Square Summary (17TPL17) [change]

	#species				#hours		#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	57	5	11	73	18.4	15.1	20	5
Prev.	35	40	31	106	134	—	23	

Region summary (#28: Parry Sound, ON)

#squares	#sq with data	#species	#squares (pc)	
			target	compl.
85	77	161	85	15
85	85	182	0	64

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, 02, 03, 04, 06, 07, 08, 09, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22]

SPECIES	Prev.	Code	%
Canada Goose	FY	FY	80
Mute Swan ‡			0
Trumpeter Swan ‡			0
Wood Duck	H	FY	53
Blue-winged Teal ‡			1
Northern Shoveler ‡			0
Gadwall ‡			0
American Wigeon ‡			0
Mallard	FY	FY	61
American Black Duck	T		15
Northern Pintail ‡			0
Green-winged Teal			3
Ring-necked Duck			14
Lesser Scaup ‡			0
Common Goldeneye ‡			0
Hooded Merganser		FY	23
Common Merganser	FY		38
Red-breasted Merganser ‡			2
Ruddy Duck ‡			0
Wild Turkey			33
Ruffed Grouse	NU	S	63
Spruce Grouse ‡			0
Pied-billed Grebe			2
Rock Pigeon (Feral Pigeon)	T		32
Mourning Dove	T	S	49
Yellow-billed Cuckoo ‡			16
Black-billed Cuckoo			46
Common Nighthawk §			6
Eastern Whip-poor-will §			19
Chimney Swift §	H		12
Ruby-throated Hummingbird	P	H	71
Virginia Rail			14
Sora		S	11

SPECIES	Prev.	Code	%
Common Gallinule §			0
American Coot §			0
Sandhill Crane		H	67
Killdeer §	T		41
Upland Sandpiper †			0
American Woodcock	T		20
Wilson's Snipe	T		36
Spotted Sandpiper	T		24
Ring-billed Gull §			10
Herring Gull §	NE	AE	28
Great Black-backed Gull †			0
Caspian Tern ‡			5
Black Tern †			0
Common Tern §			10
Common Loon	T		58
Double-crested Cormorant §			19
American Bittern	P		45
Least Bittern †			2
Great Blue Heron §	H		49
Green Heron ‡			5
Black-crowned Night-Heron †			3
Turkey Vulture	H		61
Osprey		H	16
Northern Harrier			9
Sharp-shinned Hawk	NY		9
Cooper's Hawk ‡			1
Northern Goshawk §			0
Bald Eagle §			15
Red-shouldered Hawk	FY		16
Broad-winged Hawk	FY	NY	75
Red-tailed Hawk	FY		16
Great Horned Owl			5
Barred Owl	A	S	46

SPECIES	Prev.	Code	%
Long-eared Owl ‡			1
Northern Saw-whet Owl			7
Belted Kingfisher	AE		54
Yellow-bellied Sapsucker	NY	S	77
Red-headed Woodpecker †			5
Red-bellied Woodpecker ‡			2
Black-backed Woodpecker			7
Downy Woodpecker	AE	S	50
Hairy Woodpecker	AE	S	75
Pileated Woodpecker	H	S	62
Northern Flicker	FY	S	79
American Kestrel §	H		40
Merlin	AE	H	24
Olive-sided Flycatcher §	T		11
Eastern Wood-Pewee §	S	S	71
Yellow-bellied Flycatcher	H	S	19
Alder Flycatcher	T	S	76
Willow Flycatcher ‡			0
Least Flycatcher	T	S	75
Eastern Phoebe	CF	S	74
Great Crested Flycatcher	T	S	79
Eastern Kingbird	V		54
Yellow-throated Vireo ‡			14
Blue-headed Vireo	S	S	71
Philadelphia Vireo ‡			0
Warbling Vireo	S		37
Red-eyed Vireo	CF	A	96
Canada Jay	H		5
Blue Jay	FY	S	90
American Crow	AE	S	75
Common Raven	AE	FY	79
Black-capped Chickadee	FY	S	84
Boreal Chickadee ‡	S		0

SPECIES	Prev.	Code	%
Horned Lark ‡			0
Northern Rough-winged Swallow ‡	H		0
Purple Martin ‡			1
Tree Swallow	T		70
Bank Swallow §	H		6
Barn Swallow §	NY		55
Cliff Swallow §	AE		12
Ruby-crowned Kinglet	T	S	44
Golden-crowned Kinglet	S	S	53
Red-breasted Nuthatch	S	S	83
White-breasted Nuthatch	S		49
Brown Creeper	S	S	54
House Wren			50
Winter Wren	T	M	84
Sedge Wren ‡			5
Marsh Wren ‡	H		2
European Starling	H	NY	53
Gray Catbird			62
Brown Thrasher			58
Northern Mockingbird ‡			0
Eastern Bluebird			31
Veery	T	S	81
Swainson's Thrush	S		24
Hermit Thrush	S	S	80
Wood Thrush §	CF	S	50
American Robin	CF	CF	92
Cedar Waxwing	CF	H	89
House Sparrow	P		5
Evening Grosbeak §	P		11
House Finch ‡			0
Purple Finch	T	S	68
Red Crossbill §			11
White-winged Crossbill	P		3

SPECIES	Prev.	Code	%
Pine Siskin §			7
American Goldfinch	T	S	71
Chipping Sparrow	CF	S	84
Clay-colored Sparrow ‡			0
Field Sparrow ‡			2
Dark-eyed Junco	T	S	14
White-throated Sparrow	CF	M	87
Vesper Sparrow			1
LeConte's Sparrow ‡			0
Savannah Sparrow	T	S	44
Song Sparrow	V	CF	96
Lincoln's Sparrow	T		9
Swamp Sparrow	P	M	79
Eastern Towhee §			19
Bobolink §	T	S	40
Eastern Meadowlark §	T	S	29
Baltimore Oriole		S	31
Red-winged Blackbird	T	S	89
Brown-headed Cowbird	H		31
Rusty Blackbird ‡			1
Brewer's Blackbird ‡	H		0
Common Grackle	CF	CF	87
Ovenbird	T	M	93
Northern Waterthrush	S	S	53
Golden-winged Warbler †			2
Black-and-white Warbler	S	S	92
Tennessee Warbler ‡			2
Nashville Warbler	S	S	75
Mourning Warbler	S		51
Common Yellowthroat	A	S	93
American Redstart	P	S	94
Cape May Warbler			18
Northern Parula	S	S	49

SPECIES	Prev.	Code	%
Magnolia Warbler	DD	S	67
Bay-breasted Warbler ‡			1
Blackburnian Warbler	S	S	75
Yellow Warbler	H	S	83
Chestnut-sided Warbler	S	S	88
Black-throated Blue Warbler	S	S	68
Pine Warbler	S	S	75
Yellow-rumped Warbler	CF	S	88
Prairie Warbler †			11
Black-throated Green Warbler	S	S	83
Canada Warbler §	T	S	57
Wilson's Warbler ‡			1
Scarlet Tanager	T	S	62
Northern Cardinal ‡			0
Rose-breasted Grosbeak	T	S	72
Indigo Bunting	T		62

This list includes all breeding species expected in the region #28 (Parry Sound). Underlined species are those that you should try to add to this square (17TPL17). 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 17TPL17 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TPL17 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 #28). 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=17TPL17&lang=EN Data current as of **1/01/2024 17:54**.

Mikisew Provincial Park

Parry Sound County (/region/CA-ON-PS?yr=all&m=),
Ontario (/region/CA-ON?yr=all&m=), CA (/region/CA?yr=all&m=)

Map(/hotspots?hs=L1807300&yr=all&m=)

Directions(https://www.google.com/maps/search/?api=1&query=45.8201011,-79.515638)

Hotspot navigation

Overview (/hotspot/L1807300?yr=all&m=)

Illustrated Checklist (/hotspot/L1807300/media?yr=all&m=)

VIEW MY...

My eBird (/myebird/L1807300)

Life List (/lifelist/L1807300)

Target Species (/targets?r1=L1807300&bmo=1&emo=12)

Checklists (/mychecklists/L1807300)

EXPLORE...

Hotspot Map (/hotspots?hs=L1807300&yr=all&m=)

Bar Charts (/barchart?r=L1807300&yr=all&m=)

Media (https://ebird.org/media/catalog?regionCode=L1807300)

Printable Checklist (/printableList?regionCode=L1807300&yr=all&m=)

116
Species observed
(/hotspot/L1807300?yr=all&m=)

71
Complete checklists
(/hotspot/L1807300/activity?yr=all&m=)

1.	**Blue Jay**	12	6 Oct 2023	Matt Iles
2.	**American Crow**	1	6 Oct 2023	Matt Iles
3.	**Ruby-crowned Kinglet**	6	6 Oct 2023	Matt Iles
4.	**Golden-crowned Kinglet**	6	6 Oct 2023	Matt Iles
5.	**White-breasted Nuthatch**	1	6 Oct 2023	Matt Iles
6.	**Red-breasted Nuthatch**	3	6 Oct 2023	Matt Iles
7.	**American Robin**	15	6 Oct 2023	Matt Iles
8.	**Dark-eyed Junco**	2	6 Oct 2023	Matt Iles
9.	**White-throated Sparrow**	6	6 Oct 2023	Matt Iles
10.	**Song Sparrow**	2	6 Oct 2023	Matt Iles
11.	**Swamp Sparrow**	1	6 Oct 2023	Matt Iles
12.	**Ruffed Grouse**	1	17 Sep 2023	Jelissa Kollaard
13.	**Hairy Woodpecker**	1	17 Sep 2023	Jelissa Kollaard
14.	**Pileated Woodpecker**	1	17 Sep 2023	Jelissa Kollaard
15.	**Common Raven**	1	17 Sep 2023	Jelissa Kollaard
16.	**Black-capped Chickadee**	1	17 Sep 2023	Jelissa Kollaard
17.	**Yellow-rumped Warbler**	1	17 Sep 2023	Jelissa Kollaard
18.	**Mallard**	2	16 Sep 2023	Jelissa Kollaard
19.	**Ring-billed Gull**	1	16 Sep 2023	Jelissa Kollaard
20.	**Northern Flicker**	1	16 Sep 2023	Jelissa Kollaard
21.	**Hooded Merganser**	3	16 Sep 2023	Jelissa Kollaard
22.	**Great Blue Heron**	1	16 Sep 2023	Jelissa Kollaard
23.	**Blue-headed Vireo**	2	16 Sep 2023	Jelissa Kollaard
24.	**Warbling Vireo**	1	16 Sep 2023	Jelissa Kollaard
25.	**Winter Wren**	1	16 Sep 2023	Jelissa Kollaard

26.	**Swainson's Thrush**	2	16 Sep 2023	Jelissa Kollaard
27.	**Black-and-white Warbler**	1	16 Sep 2023	Jelissa Kollaard
28.	**Northern Parula**	1	16 Sep 2023	Jelissa Kollaard
29.	**Blackburnian Warbler**	1	16 Sep 2023	Jelissa Kollaard
30.	**Yellow-bellied Sapsucker**	1	16 Sep 2023	Jelissa Kollaard
31.	**Chipping Sparrow**	1	16 Sep 2023	Jelissa Kollaard
32.	**Barred Owl**	1	16 Sep 2023	Jelissa Kollaard
33.	**Common Loon**	2	6 Aug 2023	Rachel Kostic
34.	**Northern Harrier**	1	6 Aug 2023	Rachel Kostic
35.	**Downy Woodpecker**	1	6 Aug 2023	Rachel Kostic
36.	**Merlin**	1	6 Aug 2023	Rachel Kostic
37.	**Eastern Wood-Pewee**	2	6 Aug 2023	Rachel Kostic
38.	**Red-eyed Vireo**	4	6 Aug 2023	Rachel Kostic
39.	**Brown Creeper**	2	6 Aug 2023	Rachel Kostic
40.	**Hermit Thrush**	1	6 Aug 2023	Rachel Kostic
41.	**Wood Thrush**	1	6 Aug 2023	Rachel Kostic
42.	**Cedar Waxwing**	2	6 Aug 2023	Rachel Kostic
43.	**Evening Grosbeak**	5	6 Aug 2023	Rachel Kostic
44.	**Purple Finch**	1	6 Aug 2023	Rachel Kostic
45.	**American Redstart**	2	6 Aug 2023	Rachel Kostic
46.	**Northern Cardinal**	1	6 Aug 2023	Rachel Kostic
47.	**Canada Goose**	5	5 Aug 2023	Rachel Kostic
48.	**Gray Catbird**	1	5 Aug 2023	Rachel Kostic
49.	**Common Grackle**	3	5 Aug 2023	Rachel Kostic
50.	**Great Horned Owl**	1	5 Aug 2023	Rachel Kostic

51.	**Common Tern**	1	4 Aug 2023	Rachel Kostic
52.	**Bald Eagle**	1	4 Aug 2023	Rachel Kostic
53.	**Eastern Phoebe**	2	4 Aug 2023	Rachel Kostic
54.	**Tree Swallow**	3	4 Aug 2023	Rachel Kostic
55.	**Wood Duck**	2	4 Aug 2023	Rachel Kostic
56.	**Red Crossbill**	3	4 Aug 2023	Rachel Kostic
57.	**Spotted Sandpiper**	1	21 Jul 2023	Bonnie Carmichael
58.	**Caspian Tern**	1	21 Jul 2023	Bonnie Carmichael
59.	**Turkey Vulture**	2	21 Jul 2023	Bonnie Carmichael
60.	**Sharp-shinned Hawk**	1	21 Jul 2023	Bonnie Carmichael
61.	**Broad-winged Hawk**	1	21 Jul 2023	Bonnie Carmichael
62.	**Belted Kingfisher**	1	21 Jul 2023	Bonnie Carmichael
63.	**Least Flycatcher**	2	21 Jul 2023	Bonnie Carmichael
64.	**American Goldfinch**	2	21 Jul 2023	Bonnie Carmichael
65.	**Red-winged Blackbird**	3	21 Jul 2023	Bonnie Carmichael
66.	**Ovenbird**	1	21 Jul 2023	Bonnie Carmichael
67.	**Northern Waterthrush**	2	21 Jul 2023	Bonnie Carmichael
68.	**Common Yellowthroat**	1	21 Jul 2023	Bonnie Carmichael
69.	**Yellow Warbler**	1	21 Jul 2023	Bonnie Carmichael
70.	**Black-throated Blue Warbler**	2	21 Jul 2023	Bonnie Carmichael
71.	**Herring Gull**	5	16 Jul 2023	Carol Speck
72.	**Eastern Kingbird**	1	16 Jul 2023	Carol Speck
73.	**Magnolia Warbler**	2	16 Jul 2023	Carol Speck
74.	**Pine Warbler**	2	16 Jul 2023	Carol Speck
75.	**Black-throated Green Warbler**	2	16 Jul 2023	Carol Speck

76.	**Scarlet Tanager**		1	16 Jul 2023	Carol Speck
77.	**Rose-breasted Grosbeak**		1	16 Jul 2023	Carol Speck
78.	**Common Goldeneye**		3	23 Apr 2023	Peter Demakos
79.	**Common Merganser**		2	23 Apr 2023	Peter Demakos
80.	**White-crowned Sparrow**		2	7 Oct 2022	David Trochanowski
81.	**Nashville Warbler**		2	31 Aug 2022	kelly caughlin
82.	**Bay-breasted Warbler**		3	31 Aug 2022	kelly caughlin
83.	**Blackpoll Warbler**		1	31 Aug 2022	kelly caughlin
84.	**Ruby-throated Hummingbird**		1	28 Jul 2022	Kendra Naidoo
85.	**Chestnut-sided Warbler**		1	21 May 2022	Andrea Kingsley
86.	**Snow Bunting**		2	23 Oct 2021	Katelyn Luff
87.	**Bufflehead**		3	22 Oct 2021	Katelyn Luff
88.	**American Tree Sparrow**		3	22 Oct 2021	Katelyn Luff
89.	**Fox Sparrow**		1	22 Oct 2021	Katelyn Luff
90.	**Baltimore Oriole**		1	4 Sep 2021	Ben Taylor
91.	**Osprey**		1	25 Aug 2021	Jesse Hughes
92.	**European Starling**	*	15	25 Aug 2021	Jesse Hughes
93.	**Cooper's Hawk**		1	5 Aug 2021	Tom Knowles
94.	**Marsh Wren**		1	5 Aug 2021	Tom Knowles
95.	**Brown-headed Cowbird**		1	4 Aug 2021	Tom Knowles
96.	**American Black Duck**		2	26 Jun 2021	Kory Renaud
97.	**Veery**		1	26 Jun 2021	Kory Renaud
98.	**Cape May Warbler**		1	29 May 2021	Susan Gratton
99.	**Pine Siskin**		3	12 Apr 2021	Susan Gratton
100.	**Black-backed Woodpecker**		1	22 Aug 2020	James McKittrick

101.	**Black-billed Cuckoo**	1	14 Aug 2020	James McKittrick
102.	**Blue-winged Teal**	3	25 Jul 2011	James Coldwell
103.	**Mourning Dove**	3	25 Jul 2011	James Coldwell
104.	**Killdeer**	9	25 Jul 2011	James Coldwell
105.	**Lesser Yellowlegs**	1	25 Jul 2011	James Coldwell
106.	**Greater Yellowlegs**	2	25 Jul 2011	James Coldwell
107.	**Least Sandpiper**	7	25 Jul 2011	James Coldwell
108.	**Bank Swallow**	40	25 Jul 2011	James Coldwell
109.	**Savannah Sparrow**	2	25 Jul 2011	James Coldwell
110.	**American Pipit**	X	25 Sep 2006	Burke Korol
111.	**Great Crested Flycatcher**	1	25 May 2006	Burke Korol
112.	**Redhead**	1	9 Oct 2000	Martin Parker
113.	**Lesser Scaup**	2	9 Oct 2000	Martin Parker
114.	**Philadelphia Vireo**	1	14 May 2000	Martin Parker
115.	**Lincoln's Sparrow**	2	7 Sep 1999	Martin Parker
116.	**Barn Swallow**	X	21 Jun 1983	Bill Crins

Appendix E

Species List

Species List

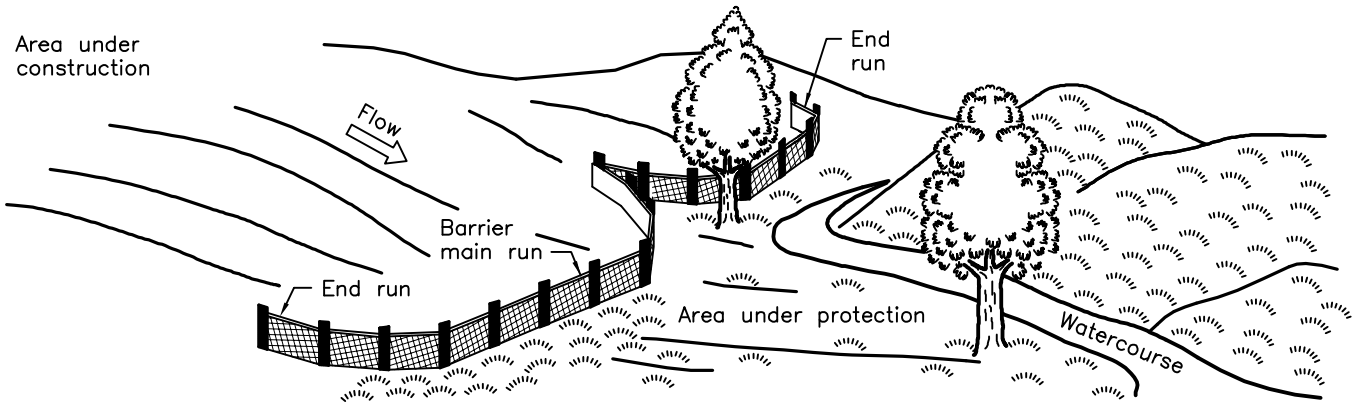
KINGDOM	Common Name	Scientific Name	SARO	SARA
Animalia				
	American Crow	Corvus brachyrhynchos		
	American Goldfinch	Spinus tristis		
	American Robin	Turdus migratorius		
	Black-backed Woodpecker	Picoides arcticus		
	Black-capped Chickadee	Poecile atricapillus		
	Blue Jay	Cyanocitta cristata		
	Common Raven	Corvus corax		
	Hairy Woodpecker	Dryobates villosus		
	Moose	Alces alces		
	Northern Cardinal	Cardinalis cardinalis		
	Northern Flicker	Colaptes auratus		
	Northern Raccoon	Procyon lotor		
	Pileated Woodpecker	Dryocopus pileatus		
	Red-bellied Woodpecker	Melanerpes carolinus		
	White-breasted Nuthatch	Sitta carolinensis		
	White-tailed Deer	Odocoileus virginianus		
	White-tailed Jack Rabbit	Lepus townsendii		
	Yellow-bellied Sapsucker	Sphyrapicus varius		
Plantae				
	Allegheny Blackberry	Rubus allegheniensis		
	American Beech	Fagus grandifolia		
	Basswood	Tilia americana		
	Black Ash	Fraxinus nigra	END	
	Black Cherry	Prunus serotina		
	Broad-leaved Arrowhead	Sagittaria latifolia		
	Bull Thistle	Cirsium vulgare		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Butter-and-eggs	Linaria vulgaris		
	Calico Aster	Symphyotrichum lateriflorum		
	Canada Rush	Juncus canadensis		
	Common Burdock	Arctium minus		
	Common Evening-primrose	Oenothera biennis		
	Common Juniper	Juniperus communis		
	Common Morning Glory	Ipomoea purpurea		
	Common Mullein	Verbascum thapsus		
	Common St. John's-wort	Hypericum perforatum		
	Common Viper's Bugloss	Echium vulgare		
	Eastern Bracken Fern	Pteridium aquilinum ssp. latiusculum		
	Eastern Hemlock	Tsuga canadensis		
	Eastern Hop-hornbeam	Ostrya virginiana		
	Eastern White Cedar	Thuja occidentalis		
	Eastern White Pine	Pinus strobus		
	Flat-branched Tree-clubmoss	Dendrolycopodium obscurum		
	Large False Solomon's Seal	Maianthemum racemosum		
	Large-leaved Aster	Eurybia macrophylla		
	Large-toothed Aspen	Populus grandidentata		
	Maple-leaved Viburnum	Viburnum acerifolium		
	Meadow Willow	Salix petiolaris		
	Northern Bush-honeysuckle	Diervilla lonicera		
	Northern Red Oak	Quercus rubra		
	Paper Birch	Betula papyrifera		
	Pussy Willow	Salix discolor		
	Red-osier Dogwood	Cornus sericea		
	Spinulose Wood Fern	Dryopteris carthusiana		
	Striped Maple	Acer pensylvanicum		
	Sugar Maple	Acer saccharum		
	Sweet-fern	Comptonia peregrina		

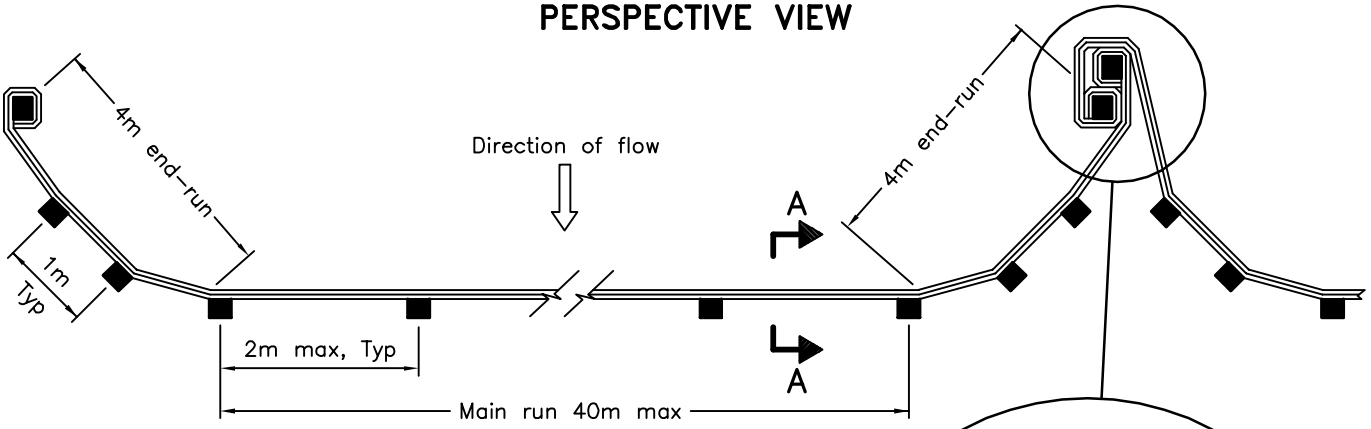
KINGDOM	Common Name	Scientific Name	SARO	SARA
	Tatarian Honeysuckle	Lonicera tatarica		
	White Ash	Fraxinus americana		
	White Elm	Ulmus americana		
	White Meadowsweet	Spiraea alba		
	White Trillium	Trillium grandiflorum		
	Wild Carrot	Daucus carota		
	Wild Chicory	Cichorium intybus		
	Wild Raisin	Viburnum cassinoides		
	Wild Sarsaparilla	Aralia nudicaulis		
	Yellow Clintonia	Clintonia borealis		
	Zigzag Goldenrod	Solidago flexicaulis		

Appendix F

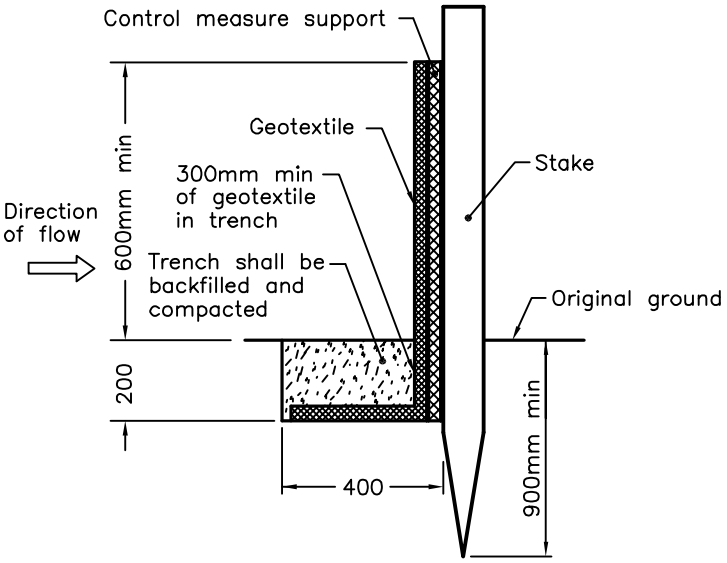
OPSD Heavy-duty Silt Fence



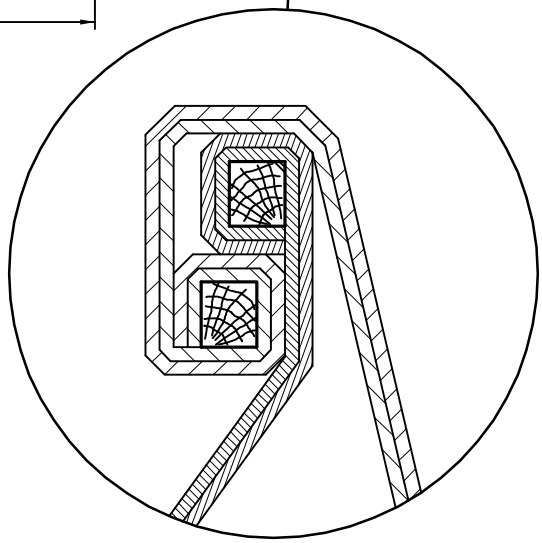
PERSPECTIVE VIEW



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		