

**Scoped Environmental Impact Study (sEIS)  
Proposed Cottage Rebuild  
1604 Julia's Creek Road West, Stony Lake  
Part Lot 32, Concession 10 (Dummer)  
Township of Douro-Dummer,  
County of Peterborough**

**Prepared For:**

Kevin Cowie  
151 Macpherson Avenue  
Toronto, Ontario  
M5R 1W9  
Project #: 23-3285

**June 2023**



**ORE**  
**Oakridge Environmental Ltd.**  
Environmental and Hydrogeological Services

June 15<sup>th</sup>, 2023

151 Macpherson Avenue  
Toronto, Ontario  
M5R 1W9

Attention: **Kevin Cowie**

Re: *Scoped Environmental Impact Study (sEIS)*  
Proposed Cottage Rebuild  
1604 Julia's Creek Road West, Stony Lake  
Part Lot 32, Concession 10 (Dummer)  
Township of Douro-Dummer, County of Peterborough  
ORE File No. 23-3285

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We are pleased to provide this *scoped* Environmental Impact Study (sEIS) for the above referenced property. Our report has been completed in support of your application for a cottage rebuild/renovation on Stony Lake.

Based on our review of the site conditions, Stony Lake appears to be the main environmental receptor. Provided the recommendations outlined in this report are adhered to, any potential adverse impacts to this feature should be mitigated.

ORE staff observed several Barn Swallows (a Species at Risk avian) on a small island, well outside the area of influence of the subject property. Therefore, the Barn Swallows would not be impacted by the proposed development.

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, HBSoc.  
Senior Ecologist

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County of Peterborough**

## **1.0 Introduction**

Oakridge Environmental Ltd. is pleased to present this *scoped* Environmental Impact Study (sEIS) in support of your application for a cottage redevelopment on Stony Lake.

It is understood that the property is already developed with a small cottage, boathouse and small cabin. However, the proponent is proposing to tear down the cottage and replace it with a structure having a similar footprint. The site is located on the south shoreline of Stony Lake, therefore, an sEIS is required to support the development application and to demonstrate that the development will not result in any impacts to nearby Key Natural Heritage Features (KNHF).

This sEIS was determined by Township staff as a requirement for a complete Minor Variance application through a pre-submission consultation meeting that was facilitated on January 19<sup>th</sup>, 2023. A Terms of Reference (ToR) was not provided for the study. However, similar to other applications, this report assumes that a *scoped* EIS will be acceptable, and that a single site inspection focussing on KNHF will be acceptable - with the main focus being any sensitive hydrological features.

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

## **2.0 Site Location and Description**

The site is located at 1604 Julia's Creek Road West (along the southern shoreline of Stony Lake), north of Norwood, within Part Lot 32, Concession 10 (Dummer), Township of Douro-Dummer, and has an approximate area of 0.85 acres (Figures 1 and 2).

The property is accessed from County Road 6, by turning north onto Julia's Creek Road, proceeding northward to Julia Shore Road West, then west onto Julia's Creek Road West.

The lot currently possesses a cottage, a boathouse and a small cabin. Bedrock conditions were observed directly offshore of the site. However, the majority of the shoreline has been hardened with either concrete or limestone slabs. There are a series of existing cottages/residences on either side of the subject property on the surrounding lands. The subject property contains Stratum 2 - Deer Wintering Habitat as per Figure 2.

### **3.0 Proposed Development / Site Alteration**

The current owner would like to tear down the existing cottage and rebuild a 2-storey cottage with a similar footprint. The small cabin will be demolished, and the boathouse will be renovated. It is understood that the existing septic system location will remain, as it is currently functional.

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

### **4.0 Policy**

According to the information provided, the requirement for this study was triggered due to the proposed development occurring within 30 m of Stony Lake. As such, this EIS has been *scoped* specifically to address any associated hydrological issues and has been formatted in accordance with the Township requirements.

In addition, the applicant indicated that a single site inspection would satisfy the Township for purposes of the sEIS. A Terms of Reference, however, was not sought by the proponent to determine the study requirements with the agencies.

### **5.0 Topography and Drainage**

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

There are no wetlands or other channelized watercourses mapped within or immediately adjacent to the site. However, several small unevaluated wetlands occur east of the site, connected by a small creek that conveys flows to the lake. These wetlands may be related to the Pine Island South Wetland (Provincially Significant) to the south.

The preponderance of wetlands in the site area that occur at similar elevations may be indicative of a shallow water table condition.

## 6.0 Geological Setting

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

As illustrated by Figure 3, the subject site is completely underlain by glaciofluvial deposits. In general, these are highly permeable and layered sandy soils.

Immediately to the southwest, extensive deposits of stony, carbonate-rich silt and sand till occur. This till is part of the Dummer Complex. Dummer Complex sediments have a sandy matrix supporting a coarse stony component. The coarse component is typically composed of large and angular (broken) blocks of Paleozoic bedrock limestone. The stone composition primarily reflects the underlying bedrock lithology, although can contain some granitic materials. The Dummer Complex exhibits scattered, pitted hummocks of blocky, angular debris extending as a broad belt from Lake Simcoe to northeast of Kingston.

Figure 3 also indicates that there is an area of stone-poor till that occurs south of the site. This is an occurrence of the Newmarket Till, which is extensive further south where it is commonly drumlinized. The Newmarket Till is widely recognized as a regional aquitard.

While both tills have similar compositions, the Newmarket Till is more commonly a very dense and low-permeability substrate in comparison to till of the Dummer Complex. However, the upper part of the Newmarket Till can exhibit enhanced permeability due to weathering and fissuring. The Newmarket Till may underlie the Dummer Till in some areas.

The thickness of the above soils cannot be determined from the mapping. However, from perusal of Ministry of the Environment, Conservation and Parks (MECP) well record database for the site area, we note that nearby well No. 7151163 (at 1606 Julia's Creek Road) encountered 0.9 m of "brown sand" till above the granite bedrock. That well reportedly had a static water level of 5.4 m (below ground surface in the bedrock), despite the well being drilled to a depth of 171.3 m (562 ft). Most other nearby wells penetrated through a minimal thickness of soil before encountering the bedrock.

## **7.0 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.

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 vegetation community lists.

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

In addition to identifying and mapping the ELC 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.

## **8.0 Site Inspection Data**

### **8.1 Site Inspections**

ORE staff attended the site to observe fauna and determine the vegetation communities, as indicated below.

<u>Date of Inspection</u>	<u>Temp. °C</u>	<u>Beaufort (Wind) Scale</u>	<u>Conditions Reason for Inspections</u>
April 20, 2023	14	3 - Gentle Breeze	15% Cloud cover. Relatively warm spring day but breeze from north was cool. Observe vegetation/existing site conditions, ELC mapping, species list, habitat review.

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

## 8.2 Ecological Land Classification (ELC)

Based on our site observations, we have determined that there are two (2) upland communities/habitats on-site, and one (1) aquatic community associated with Stony Lake. Assessments were made as per the Ecological Land Classification for Southern Ontario (FG-02), 1998.

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 Figures 5 and 6. Descriptions of the communities are provided below.

### *Upland Community:*

#### 1. Rural Property (CVR\_4)

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

This community includes the development footprint associated with the existing cottage and outbuildings on the subject property, the circular driveway/parking, and the maintained lawn areas surrounding them. The vegetation in this ELC type contains mainly lawn area and some mature White Pine (*Pinus strobus*). It is similar to a rural or urban park-like setting.

This community encompasses the area where the cottage redevelopment is proposed to occur.



## 2. Dry - Fresh White Cedar Coniferous Forest (FOC2-2)

The Dry - Fresh White Cedar Coniferous Forest (FOC2-2) possesses a dry to fresh moisture regime and is therefore dominated by Eastern White Cedar (*Thuja occidentalis*) and possesses very little understory species. The ELC characterizes the community as possessing 75% or more canopy cover.

This community is a small wooded area situated west of the Rural Property development footprint. The predominant coniferous species is Eastern White Cedar (*Thuja occidentalis*), with lesser amounts of Balsam Fir (*Abies balsamea*), White Pine, Paper Birch (*Betula papyrifera*), White Ash (*Fraxinus americana*), and White Elm (*Ulmus americana*).

*Wetland / Aquatic Community:*

## 3. Open Aquatic (OAO)

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

This ecosite represents the open water/offshore habitat of Stony Lake, which occurs across the entire northwestern edge of the subject property. The lake bottom substrate along the shoreline is comprised of blocky limestone bedrock and round-cobble that was placed into the lake to harden the shoreline. The shoreline lacks sediments, therefore, is considered to be a relatively poor fisheries spawning habitat.

ORE staff did not observe any aquatic plant species in the near-shore environment.

## 8.3 Fauna

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

Due to the shoreline area being predominantly comprised of hard materials, there was little to no spawning areas in the littoral zone/offshore area.

Although ORE staff did not observe any turtles in the area of the subject property, there is the potential for turtles to access the lawn areas and to use these areas for nesting. The property owner/contractor should install measures to prevent all turtle

species from entering the construction area/work zone.

Similar to the turtles, ORE staff did not see any fish species in the near-shore environment during the inspection.

Several Barn Swallows were observed on an island 400 m north of the subject property. Barn Swallows (*Hirundo rustica*) are a Threatened species in Ontario). Both the Barn Swallows and the nesting boxes are well outside the area of influence (120 m adjacent lands) of the habitat. Therefore, the Barn Swallows will not be addressed in the following sections regarding impact and recommendations.

According to the mapping on Figure 2, the subject site contains Stratum 2 - Deer Wintering Habitat. ORE staff inspected the subject site for deer use under leaf-off conditions. ORE staff did not observe deer concentration trails nor did we observe any browsed vegetation on the subject site. The tall pines and lawn type setting is also not indicative of deer wintering habitat. Therefore, the subject property does not appear to contain deer wintering habitat and the Stratum 2 mapped boundary is therefore incorrect. No mitigation is necessary with respect to the Stratum 2 - Deer Wintering Habitat, and consequently not addressed in the following sections.

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

## **9.0 Impact Assessment**

### **9.1 General Considerations**

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

- 1) Potential degradation/alteration of the upland vegetation communities and/or existing CVR\_4 residential area that could impact Stony Lake, resulting in sedimentation and water quality deterioration.
- 2) Potential impacts related to construction activities (e.g., vegetation removal, etc.), including destabilisation and denuding of the lawn areas by track/tire equipment accessing the building construction site.
- 3) Potential impacts related to post-construction occupation and stabilizing of bare or disturbed/altered surficial soils.

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

## 9.2 Development Envelope

Our field investigations have confirmed that the main concern with respect to the proposed cottage rebuild is the location relative to the lakeshore (as illustrated on Figure 7). The removal/demolition of the cottage could result in a relatively large area of bare soils around the existing cottage being exposed adjacent to the lakeshore. That being said, it is expected that the majority of the construction zone will not expand significantly beyond the existing cottage footprint and driveway/parking areas. As such, the construction can be mostly confined to the existing area of disturbance on the lot.

Overall, the gradient down to the shoreline from the existing cottage is relatively gentle in the potential area of disturbance. As such, the majority of runoff will be slowed in the area of the existing cottage, making it more manageable during the construction and post construction phase.

ORE staff noted the Rural Property area contains individual mature trees sporadically interspersed within the lawn areas and there is very little groundcover vegetation within this community, similar to a park-like setting. The mature trees are mainly comprised of Eastern White Pine. Any natural vegetation occurs in the periphery of the cottage view (Rural Property ELC limits). The site contains grassed lawn to the edge of the waterfront with little to no shrubbery along the shoreline. Although the former practice of clearing vegetation and/or filling to the edge of the lake was considered a reasonable approach (especially to obtain vistas of the lake), the minimal shoreline vegetation can negatively affect the water quality of the lake, as the shoreline buffering capacity is diminished, especially with respect to on-site attenuation of runoff and septic effluent in the shallow flow zone.

Similarly, increasing the impermeable surfaces on the lot and hardening the lakeshore can also exacerbate potentially existing poor quality runoff conditions, as the impermeable surfaces could concentrate runoff and direct the flows toward the lake, with minimal attenuation by the sporadic mature trees and shallow-rooted lawn cover.

Based on these findings, the lack of vegetation between the lake and the existing cottage, and the increased impermeable surface area near the lakeshore may be resulting in undesirable effects, especially with respect to the overall water quality of Stony Lake.

Recommendations are provided in a following section for mitigation of impacts on the watercourse features.

### 9.3 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 existing dwelling which could result in tree mature removal) - it should be possible to avoid tree removal and use the existing lawn openings to access the existing cottage footprint;
- erosion and sediment generated by exposed and/or disturbed soils while operating equipment in the area of the existing dwelling;
- presence of construction debris and waste materials;
- fauna such as turtles entering the work area;
- permanent stabilization of the construction area in the post construction era; and
- sensitivity of the site with respect to imported fill materials and stockpiling of these materials during construction.

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

## 10.0 Recommendations

### 10.1 Development Envelopes and Constraints

- The proposed cottage rebuild should generally fit over the footprint of the existing dwelling, as illustrated by Figure 7, which also indicates the approximate limit of the *disturbance / construction area* defined by the yellow dashed line.
- As illustrated, the majority of the disturbance and alteration should be confined to the general area of the southwestern and southern edge of the existing cottage and the access trail to the cottage.
- Provided the authorities are in agreement with the proposal, the cottage rebuild can proceed with very little additional disturbed area occurring, other than some

machinery impacts. With respect to machinery, the small addition on the southwest side of the building can be accessed for construction from the southern side of the building. It should be possible to replace the existing dwelling, while avoiding any nearby trees. If any trees have to be removed, ORE staff recommend planting three (3) new native trees/shrubs along the shoreline to offset the tree loss. Certain shrubs can be planted without resulting in any significant reduction to the lake vistas. The shrubs will also enhance the shoreline with respect to erosion-stabilization while improving the buffering capacity for runoff and/or potential shallow groundwater zone.

- ORE staff did not observe any other watercourses or wetlands in the area of the subject property, other than Stony Lake. Therefore, this Key Hydrologic Feature appears to be the only sensitive receptor in the area. There are two (2) areas of unevaluated wetland, one south and one southeast of the subject property, however, these appear to be in a different drainage basin and they are also greater than 120 m from the subject site. Therefore, there are no recommendations in regards to these other local KHF's. Recommendations regarding Stony Lake are provided below.
- To ensure the development does not advance any closer to Stony Lake, a 6 m wide setback/buffer should be applied to the dwelling and demarcated on-site by installing a heavy-duty silt fence, as illustrated by Figure 7. This will prevent the construction crew from unnecessarily increasing the overall disturbance footprint in the area of the dwelling, especially when the use of heavy equipment is necessary. The heavy-duty silt fencing will ensure that any loose/unconsolidated materials will not migrate beyond this limit, thereby protecting Stony Lake (considered a sensitive hydrological feature).
- As there is a potential for turtles to occur within Stony Lake (e.g., Snapping Turtle), the heavy-duty silt fence will serve as a turtle exclusion fence, as recommended by Ministry of Northern Development Mines, Natural Resources and Forestry (MNDMNR). The heavy-duty fence prevents turtles from entering the work area. Light-duty fence is not considered an exclusion fence material, as large turtles such as Snapping Turtle, could dig beneath the fence or potentially push the fence over.
- To prevent machinery from unnecessarily advancing toward the waterfront area, the heavy duty silt fence should extend off the 6 m shoreline to the north and encapsulate the existing dwelling. In doing so, this will provide a clear construction limit on-site while cordoning off the entire work area. By installing the fence and applying the 6 m work zone setback off the dwelling, it will ensure the work area is contained around the existing cottage.

- To reduce wear and tear on the lawn areas, the contractor should use mud mats in areas where machinery must access the area outlined by the heavy-duty silt fence. This will reduce the amount of mud/soils from leaving the disturbance area. The machinery should also be cleaned according to the provincial protocols to prevent transportation of invasive/exotic species to and from the subject site<sup>1</sup>.
- Considering the majority of the waterfront area has minimal vegetation, it is our recommendation that a mixture of ten (10) bare-root whip native shrubs be planted along the shoreline to improve the runoff quality from the cottage site. Once established, these will also help to stabilize the shoreline area by reinstating a moderately wider vegetated buffer between the new cottage and the shoreline. The trees and/or shrubs could be planted so as not to obscure the view and the trees can be planted toward the property edge to provide privacy and shade. The trees/shrubs would help shade the water's edge and improve spawning conditions for fish in the offshore environment. These plantings would be in addition to those prescribed above as mitigation in the event that any other trees/shrubs must be removed in the general location of the existing cottage. If it is possible to not remove any mature trees as part of the rebuild, then this recommendation is not required. However, it is in the best interest of the lakeshore to install the shrubbery and somewhat naturalize the shoreline, in any case.
- The smaller stock should be obtained from a reputable nursery and cannot be transplanted from the nearby woodland habitats. The native shrub species should be low-maintenance types that can be trimmed by hand or with a hedge trimmer so as not to obscure the view of the lake. There are a variety of colourful native trees and shrubs that can be planted. ORE staff can provide recommendations in this regard. The plantings are not meant to obscure the vistas of the lake, but rather improve, protect and beautify the shoreline area. Shorelines that are predominantly devoid of vegetation (i.e., only grass) tend to contribute more nutrient laden runoff to the lake, resulting in a deterioration of water quality. Considering the lake is used for recreational purposes, such as fishing, boating and swimming, any minor improvements to the shoreline to improve the water quality of the lake would be beneficial.
- Grass seed and/or sod should also be applied to any exposed/bare soils resulting from site preparation and construction activities, in addition to the recommended shrub/tree planting. The recommended shrub and/or tree plantings

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<sup>1</sup> Clean Equipment Protocol for Industry - Inspecting and cleaning equipment for the purposes of invasive species prevention

downgradient of the residence should be included on the Site Plan drawing.

## 10.2 General Design Considerations

- The design/layout plan for the rebuild should demonstrate that the work can be completed within the 6 m wide work zone illustrated on Figure 7 (Constraints). The site plan should illustrate which native shrubs will be planted on-site to improve the shoreline conditions. It may be possible to direct a few of the native plantings in the disturbed area associated with the newly renovated cottage for shade purpose or to reduce lawn areas on the property. The planted trees/shrubs can become part of the landscaping plan.
- All recommended erosion controls should be installed prior to commencing any work on the property to ensure the sensitive hydrological features are not impacted. The prescribed trees/shrubs to be planted on the property will help stabilize the soils between the cottage and the shoreline and reduce shoreline erosion effects. Vegetation/seed/sod must be established on any/all bare soil areas at the end of the construction. The works cannot be considered complete until all surfaces are stable. The Site Plan should illustrate how all surfaces/grades will be stabilized/finished.
- Passive stormwater management controls should be incorporated into the development design of the new roof area. Examples include roof leaders being directed to an area where the flows will not gouge or destabilize soils over time. The warm flows from the roof leaders should be infiltrated into the ground, so as to reduce thermal impacts to Stony Lake. If the soils are sandy in the area of the cottage, it may be possible to outlet the roof leaders onto the grass surface. Gravel can also be introduced at the end of the leaders (there are also plastic flow dissipaters that can be purchased at most hardware/landscaping retailers) to create an apron that dissipates the energy of the flows, distributing them over a larger area to enhance infiltration.

## 10.3 Construction Mitigation

- Proper erosion/sedimentation controls will be required at all times while heavy equipment operates at the site. Heavy-duty silt fence should be installed around the 6 m work zone setback limit, as illustrated by Figure 7 (Appendix C). Construction should not continue during heavy precipitation events. After these events, the fence should be checked to ensure their effectiveness.

- The heavy-duty silt fence provides a solution to mitigate sheet runoff, not concentrated flows. Therefore, if a concentrated flow results from construction (not anticipated), another type of erosion/sedimentation control, such as a rock check dam that incorporates stone and geotextile filter cloth to prevent sediment laden runoff from entering the sensitive watercourse features, should be utilized. The contractor or owner should illustrate any such controls on their Site Plan.
- Only clean fill should be imported to the site. The fill should not contain organic materials such as plant debris or topsoil that may contain exotic or invasive species that could out-compete native species along the lakeshore. If imported topsoil is required, screened topsoil should be the only material applied to top-dress the fill. Any imported materials that are stockpiled on-site should be surrounded by heavy-duty silt fence until the materials are applied. The fence will prevent species such as turtles from leaving the lakeshore to nest within the loose unconsolidated materials during construction.
- To reduce potential post-construction sedimentation, the site should be quickly seeded or sodded to re-establish the root structure within the upper soils where areas have been disturbed and soils are exposed. Planting of native trees/shrubs, ten (10) to be planted between the cottage and shoreline/wetland, is encouraged at this stage. Once the seeding or sodding is determined to be a success and the soils are stable, the erosion/sedimentation controls can be removed.
- Absolutely no construction equipment should be operated beyond the 6 m work zone setback limitation, nor should equipment grade any new swales or other drainage works on-site to direct water toward the lake. All equipment must remain within the area designated for construction (to be outlined by the heavy-duty silt fence).

#### 10.4 Closing Remarks

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



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

**\*\*End of *Scoped* EIS Report\*\***

Yours truly,  
**Oakridge Environmental Limited**

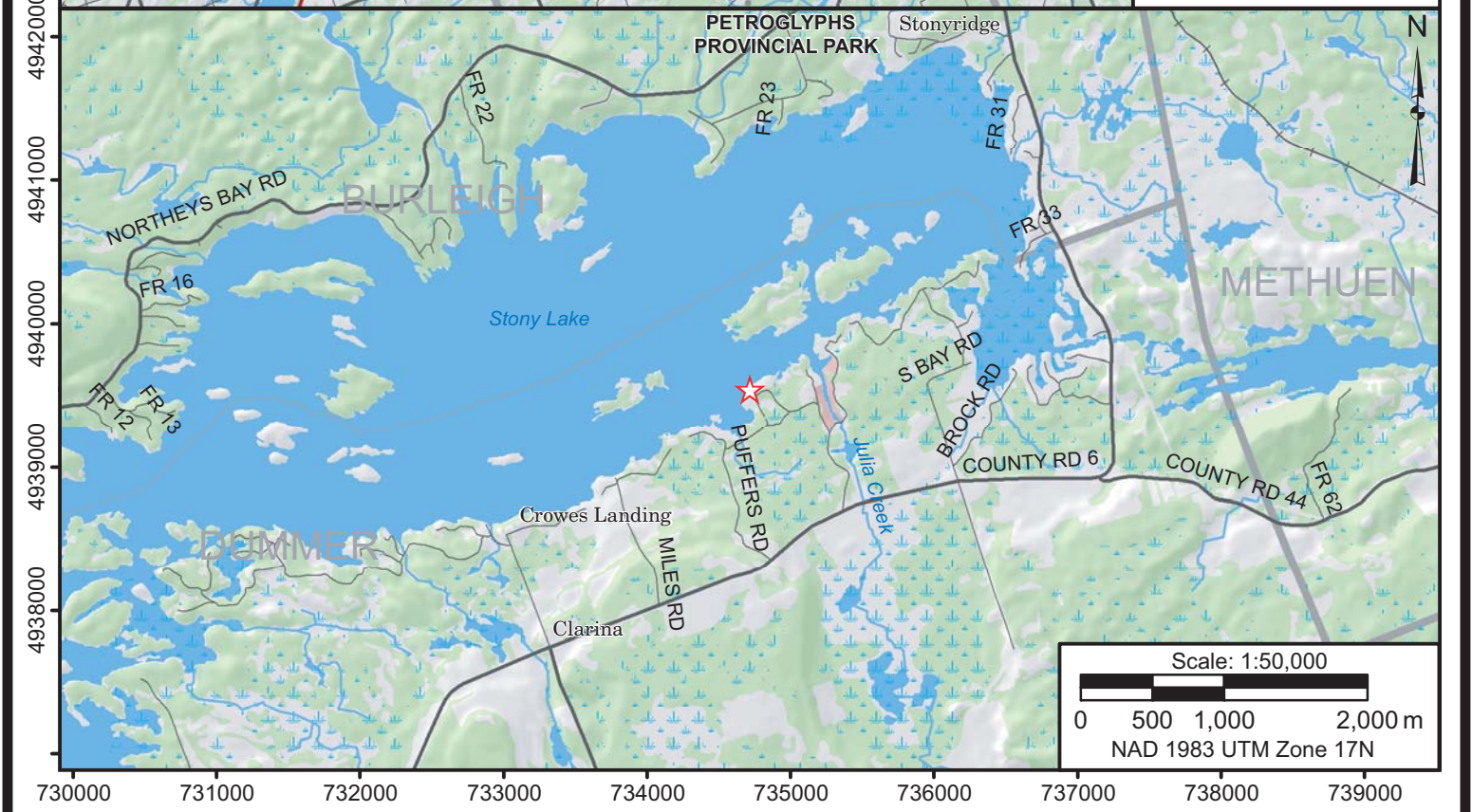
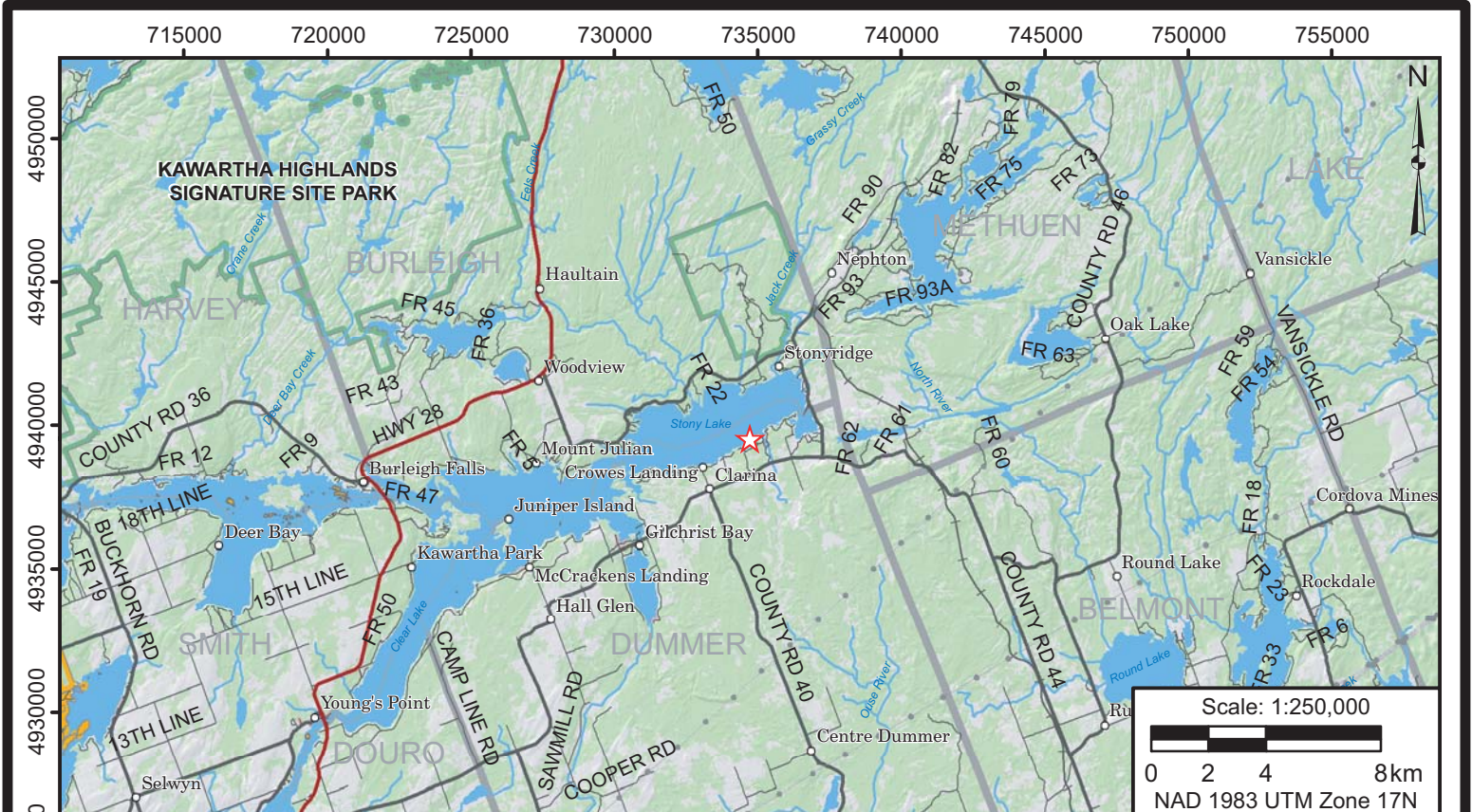


Rob West, HBSc.  
Senior Ecologist

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## **Figures**



★ Approximate Site Location

**Scoped Environmental Impact Study (sEIS)  
Proposed Cottage Rebuild**  
1604 Julia's Creek Road West, Stony Lake  
Part Lot 32, Concession 10 (Dummer)  
Township of Douro-Dummer,  
County of Peterborough

North American Datum (NAD) 1983

TITLE  
**General Location**

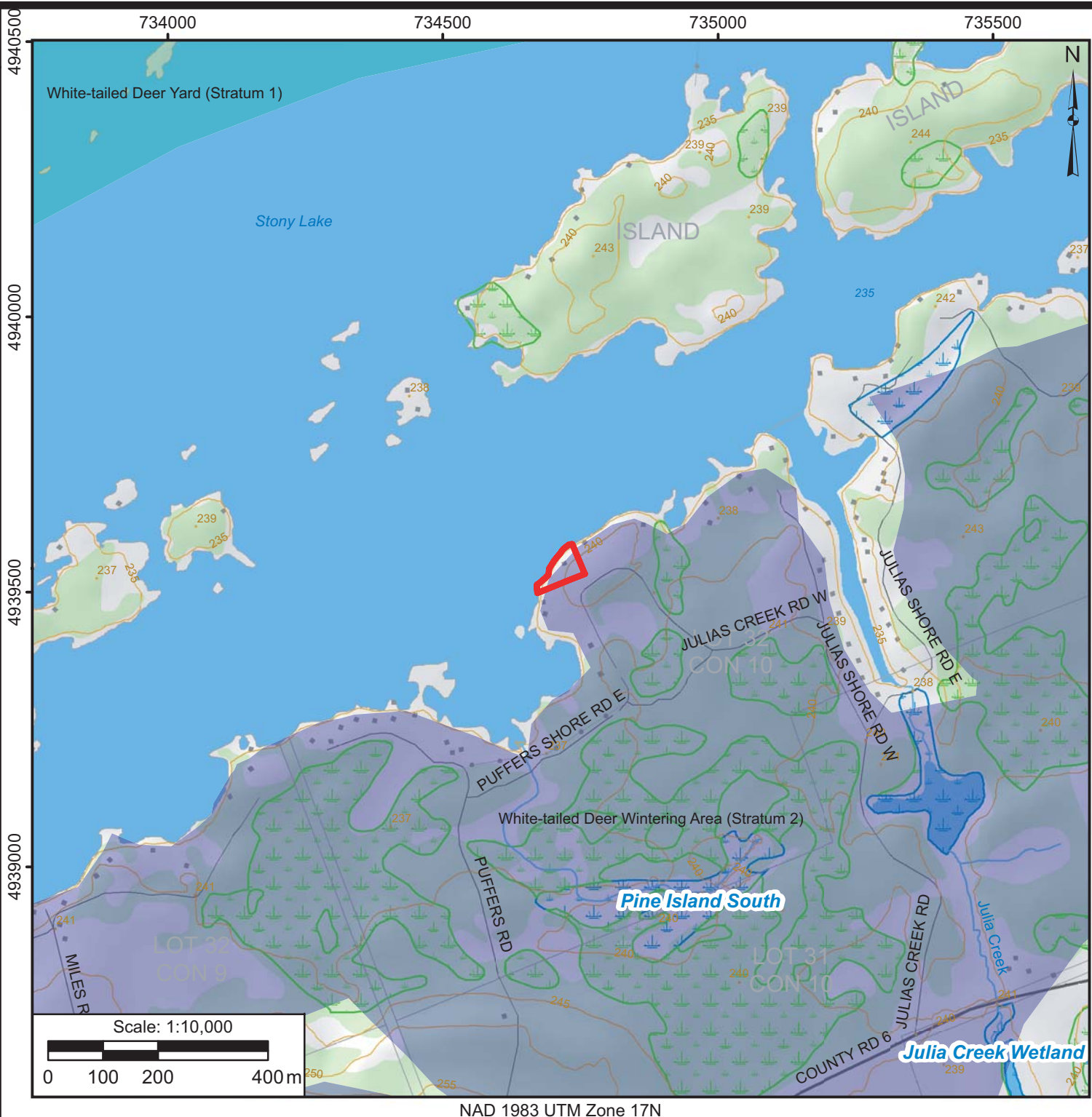


PROJECT #  
23-3285  
DATE  
June 2023

FIGURE NO.  
**1**

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

Optimized for Oakridge Environmental Ltd. printing



**Scoped Environmental Impact Study (sEIS)**  
**Proposed Cottage Rebuild**  
 1604 Julia's Creek Road West, Stony Lake  
 Part Lot 32, Concession 10 (Dummer)  
 Township of Douro-Dummer,  
 County of Peterborough

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

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

Optimized for Oakridge Environmental Ltd. printing

TITLE  
**Topography and Drainage**

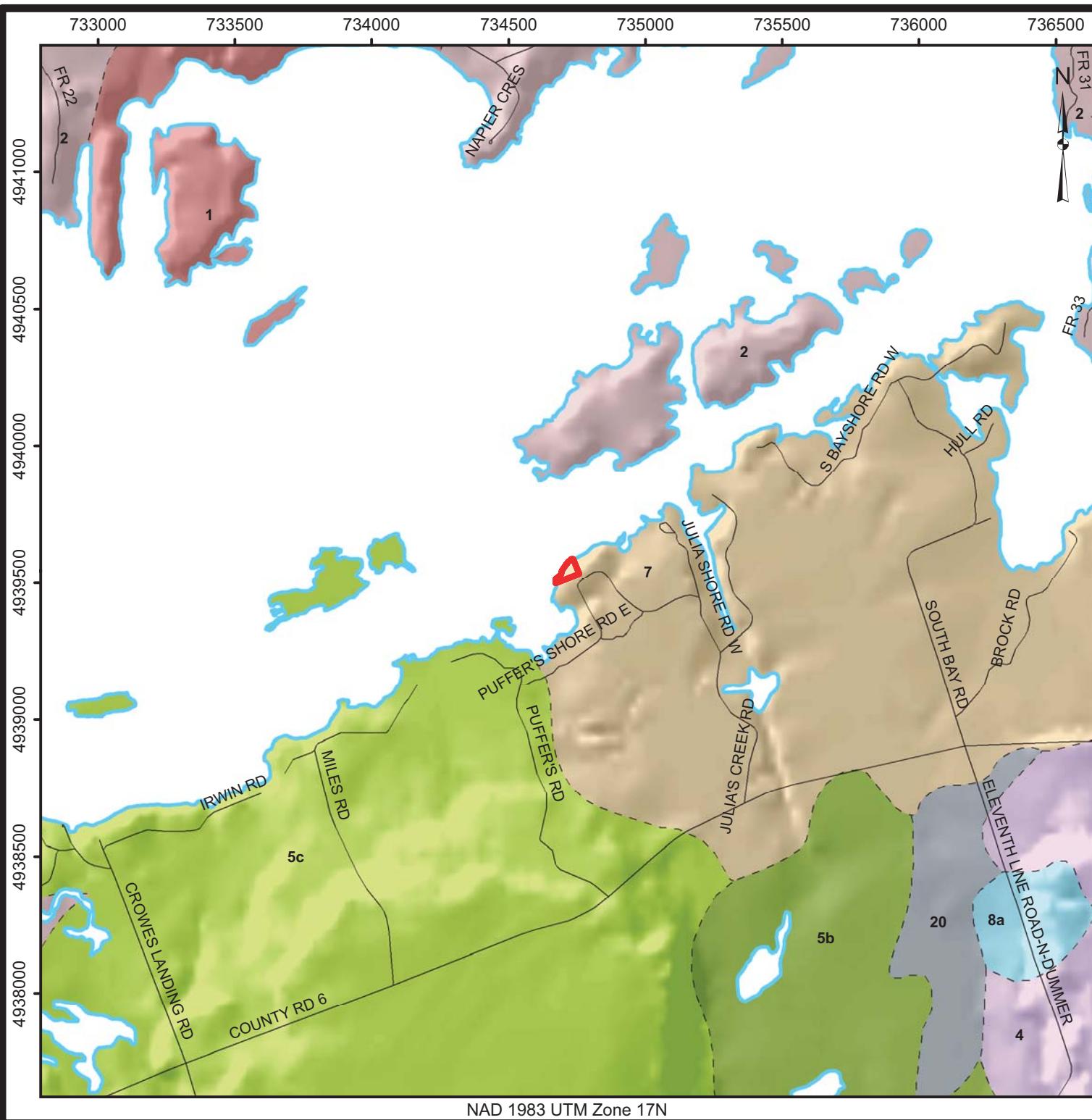


PROJECT #  
23-3285

FIGURE NO.  
**2**

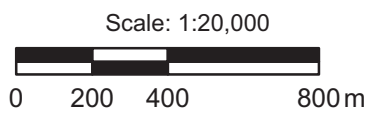
DATE  
June 2023

NAD 1983 UTM Zone 17N



**Scoped Environmental Impact Study (sEIS)**  
**Proposed Cottage Rebuild**  
 1604 Julia's Creek Road West, Stony Lake  
 Part Lot 32, Concession 10 (Dummer)  
 Township of Douro-Dummer,  
 County of Peterborough

- Approximate Property Boundary
- Lake
- Contact (approximate/assumed)
- 1** Precambrian bedrock
- 2** Precambrian bedrock-drift complex
- 4** Paleozoic bedrock-drift complex
- 5b** Glacial Deposits (Till): Stone-poor, carbonate-derived silty to sandy till
- 5c** Glacial Deposits (Till): Stony, carbonate-derived silty to sandy till
- 7** Glaciofluvial deposits
- 8a** Fine-textured glaciolacustrine deposits: Massive-well laminated
- 20** Organic deposits



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

Optimized for Oakridge Environmental Ltd. printing

TITLE  
**Surficial Geology**



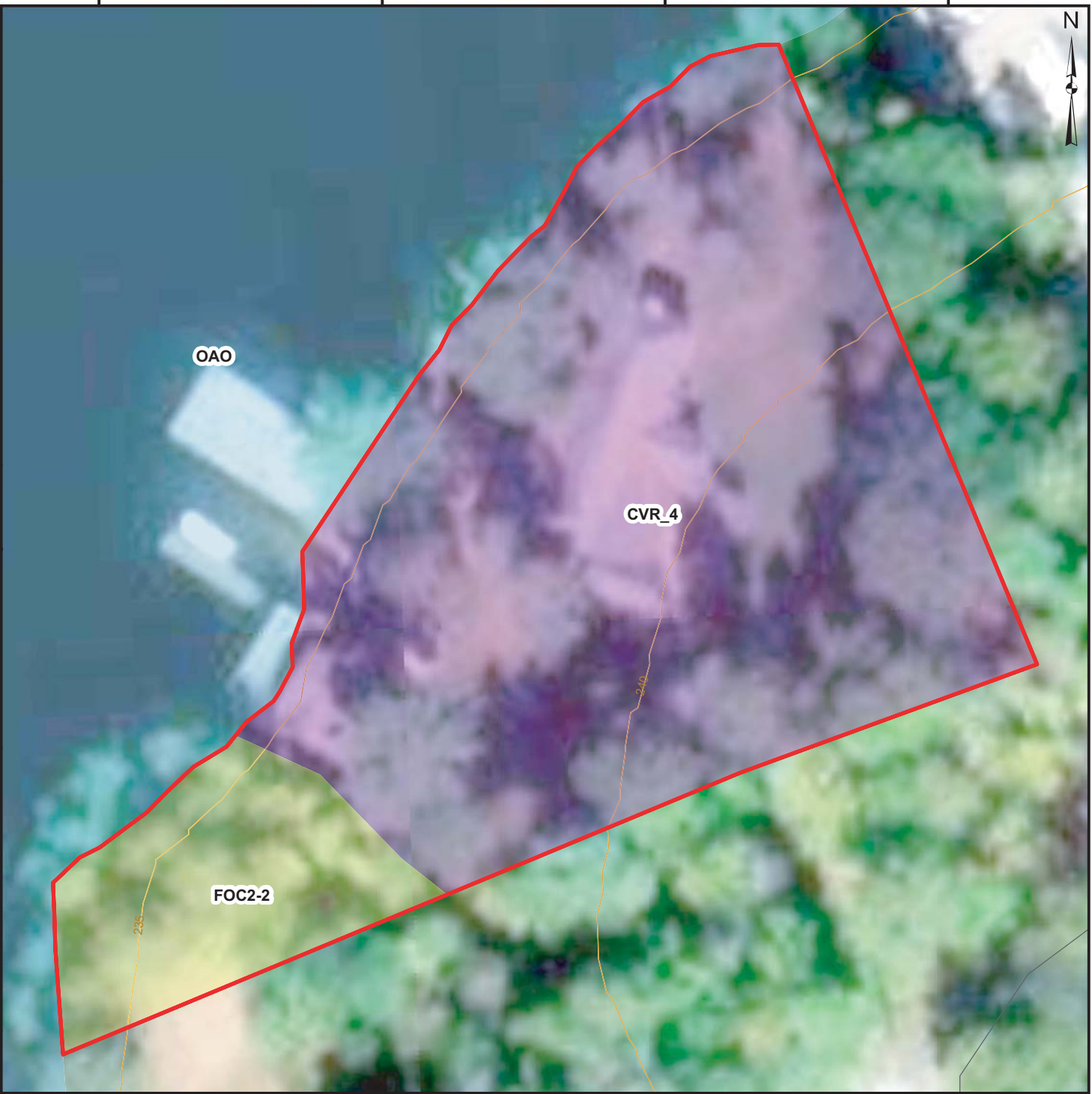
PROJECT #  
23-3285

DATE  
June 2023

FIGURE NO.  
**3**

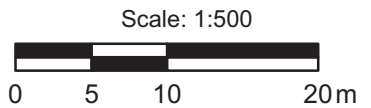
734675 734700 734725 734750

4939575  
4939550  
4939525  
4939500



**Scoped Environmental Impact Study (sEIS)**  
**Proposed Cottage Rebuild**  
 1604 Julia's Creek Road West, Stony Lake  
 Part Lot 32, Concession 10 (Dummer)  
 Township of Douro-Dummer,  
 County of Peterborough

- Approximate Property Boundary
- Dry - Fresh White Cedar Coniferous Forest (FOC2-2)
- Open Aquatic (OAO)
- Rural Property (CVR\_4)
- Road
- Contour (5 m Intervals)



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

Imagery provided by ERSI (2017)

Optimized for Oakridge Environmental Ltd. printing

TITLE	<b>Vegetation</b>
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PROJECT # 23-3285	FIGURE NO. <b>4</b>
DATE June 2023	

NAD 1983 UTM Zone 17N



Photo A (Above): was taken looking north from the driveway toward the lakefront (in the background) at the existing cottage on the property.



Photo B (Above): was taken from the driveway looking south towards the adjacent lot.



Photo C (Above): was taken looking southwest from the neighboring property to the south which is part of the property owner's land holdings in the area.



Photo D (Above): was taken along the southern edge of the subject property's limit looking west. The coniferous woodland habitat on the left side of the photo corresponds to the upland woodland habitat described in the Vegetation section of the report.


<p>Photos Taken: April 20, 2023</p>	<p><b>Scoped Environmental Impact Study (sEIS) Proposed Cottage Rebuild</b> 1604 Julia's Creek Road West, Stony Lake Part Lot 32, Concession 10 (Dummer) Township of Douro-Dummer, County of Peterborough</p>	<p>TITLE</p>	
	<p><b>Site Photos</b></p>		
<p>Optimized for Oakridge Environmental Ltd. printing</p>		<p>PROJECT # 23-3285</p>	<p>FIGURE NO. <b>5</b></p>
		<p>DATE June 2023</p>	





Photo A (Above): was taken looking south across Julia's Creek Road towards the upland deciduous woodland. An unevaluated wetland is visible in the background of the photo which is dominated by coniferous species.




Photo B (Above): was taken looking east along the property boundary between the subject lot and the lot directly south of the subject lot. This lot is owned by proponent and illustrates the upland coniferous woodland on the right side of the photo that occurs on the subject lot.

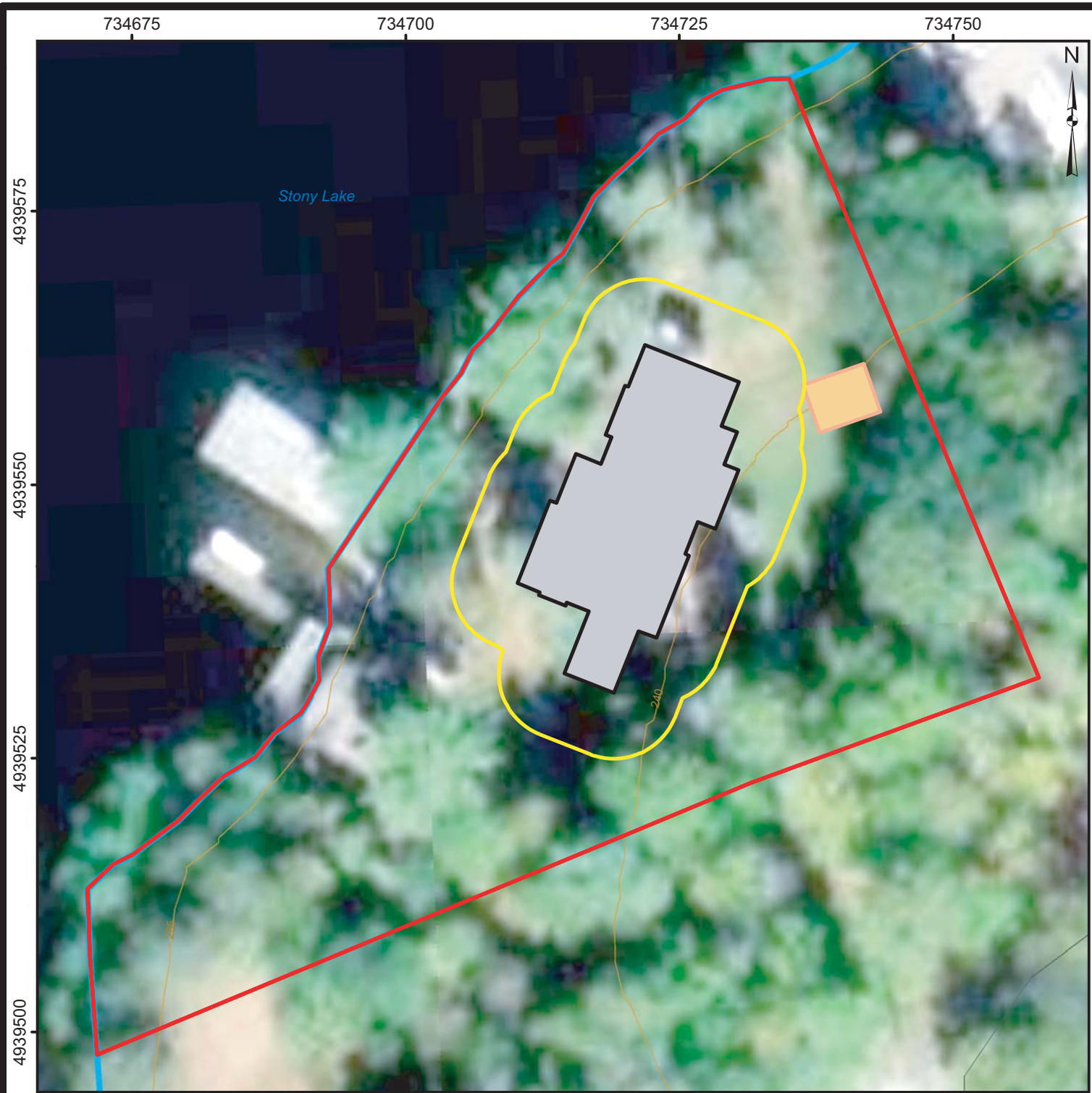


Photo C (Above): was taken along the waterfront looking north towards Stony Lake. The existing boathouse is on the left side of the photo. The existing cottage is just outside the photo on the right.



Photo D (Above): was taken from the dock looking east along the lakeshore. Note: the gravel/cobble materials dumped by a previous owner years ago to harden the bottom and shoreline. The existing cottage is just outside the view of this photo on the right.

<p>Photos Taken: April 20, 2023</p>	<p><b>Scoped Environmental Impact Study (sEIS) Proposed Cottage Rebuild</b> 1604 Julia's Creek Road West, Stony Lake Part Lot 32, Concession 10 (Dummer) Township of Douro-Dummer, County of Peterborough</p>	<p>TITLE</p>	
	<p><b>Site Photos</b></p>		
<p>Optimized for Oakridge Environmental Ltd. printing</p>		<p>PROJECT # 23-3285</p>	<p>FIGURE NO.</p>
		<p>DATE June 2023</p>	<p><b>6</b></p>



734675      734700      734725      734750

4939575

4939550

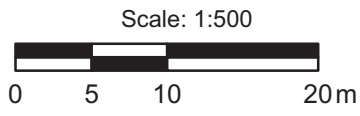
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**Scoped Environmental Impact Study (sEIS)**  
**Proposed Cottage Rebuild**  
 1604 Julia's Creek Road West, Stony Lake  
 Part Lot 32, Concession 10 (Dummer)  
 Township of Douro-Dummer,  
 County of Peterborough

- Approximate Property Boundary
- Proposed Development
- Existing Septic
- Shoreline
- Road
- Contour (5 m Intervals)
- Heavy-duty Silt Fence (6 m)



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

*Imagery provided by ERSI (2017)*

*Optimized for Oakridge Environmental Ltd. printing*

TITLE	<b>Constraints</b>
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PROJECT #  
23-3285

FIGURE NO.  
**7**

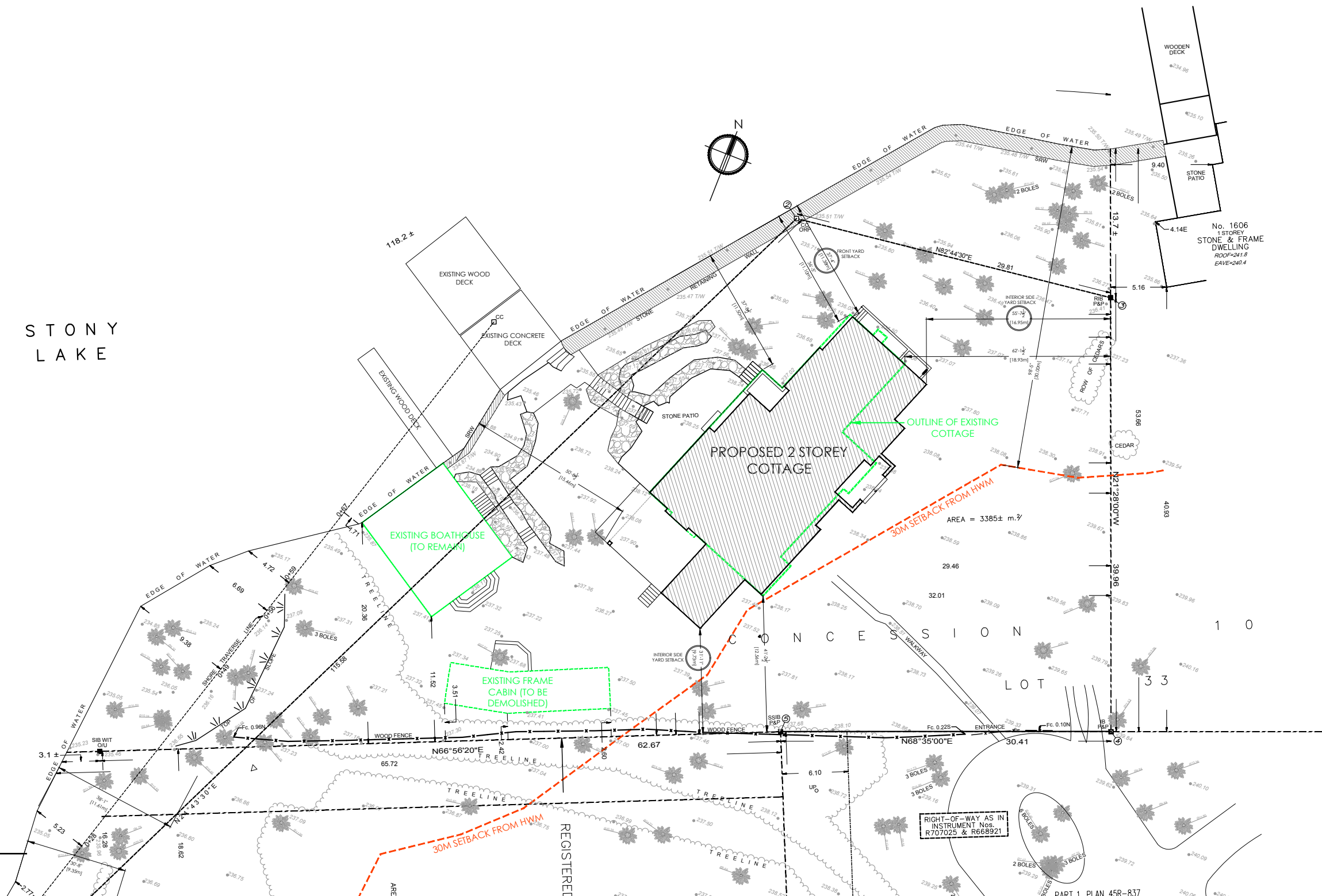
DATE  
June 2023

NAD 1983 UTM Zone 17N

# **Appendix A**

Conceptual Development Plan

STONY  
LAKE

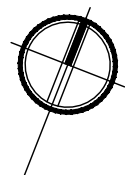


**SITE PLAN**

SCALE: 1:400

**COWIE RESIDENCE**

1604 JULIA'S CREEK ROAD  
LAKEFIELD, ONTARIO  
JUNE 07, 2023  
PROJECT NO. 2213



SANDRA GAVA  
ARCHITECT

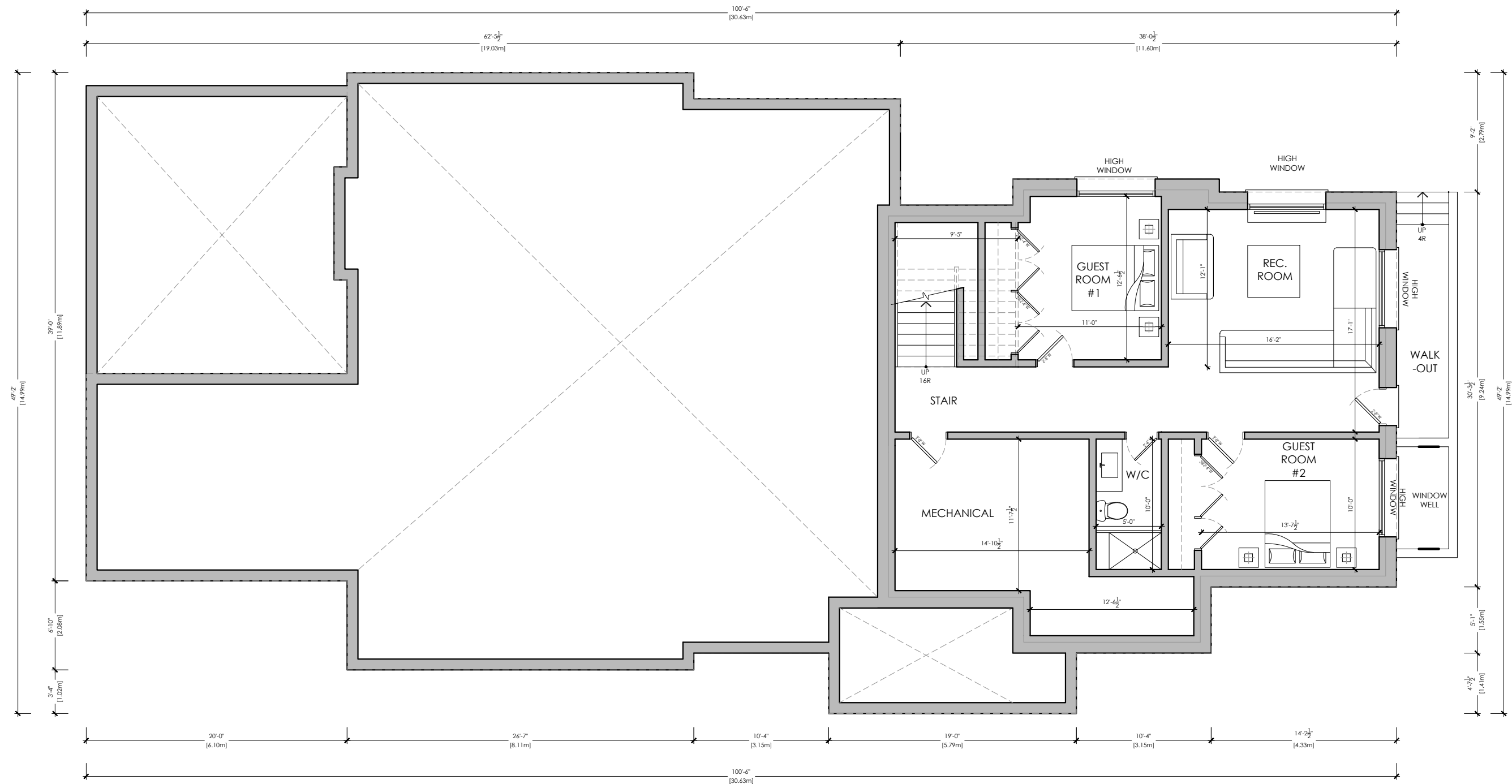
# 1604 JULIA'S CREEK ROAD

LOT AREA:		5688 SQ.M (61, 225 SQ.FT.)
BYLAW:	PERMITTED	PROPOSED
COVERAGE:		
MAIN COTTAGE	15% - 853.2 SQ.M. (9183.77 SQ.FT)	371.24 SQ.M. (6.53%)
ACCESSORY BUILDINGS:		
EXISTING BOATHOUSE TO BE RENOVATED		99.49 SQ.M. (1.75%)
TOTAL		470.73 SQ.M. (8.28%)
SETBACKS:		
FRONT YARD (WATER YARD)	30.0 M	11.38 M.
INTERIOR SIDE YARD - SOUTH	6.0 M	9.73 M.
INTERIOR SIDE YARD - EAST	6.0 M	16.95 M.
FLOOR AREA:		
GROUND FLOOR		320.33 SQ. M.
SECOND FLOOR		118.92 SQ.M.
TOTAL		439.25 SQ.M.
BUILDING HEIGHT:	9.0 M	8.48 M

## STATISTICS

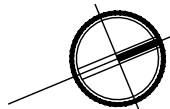
### COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213



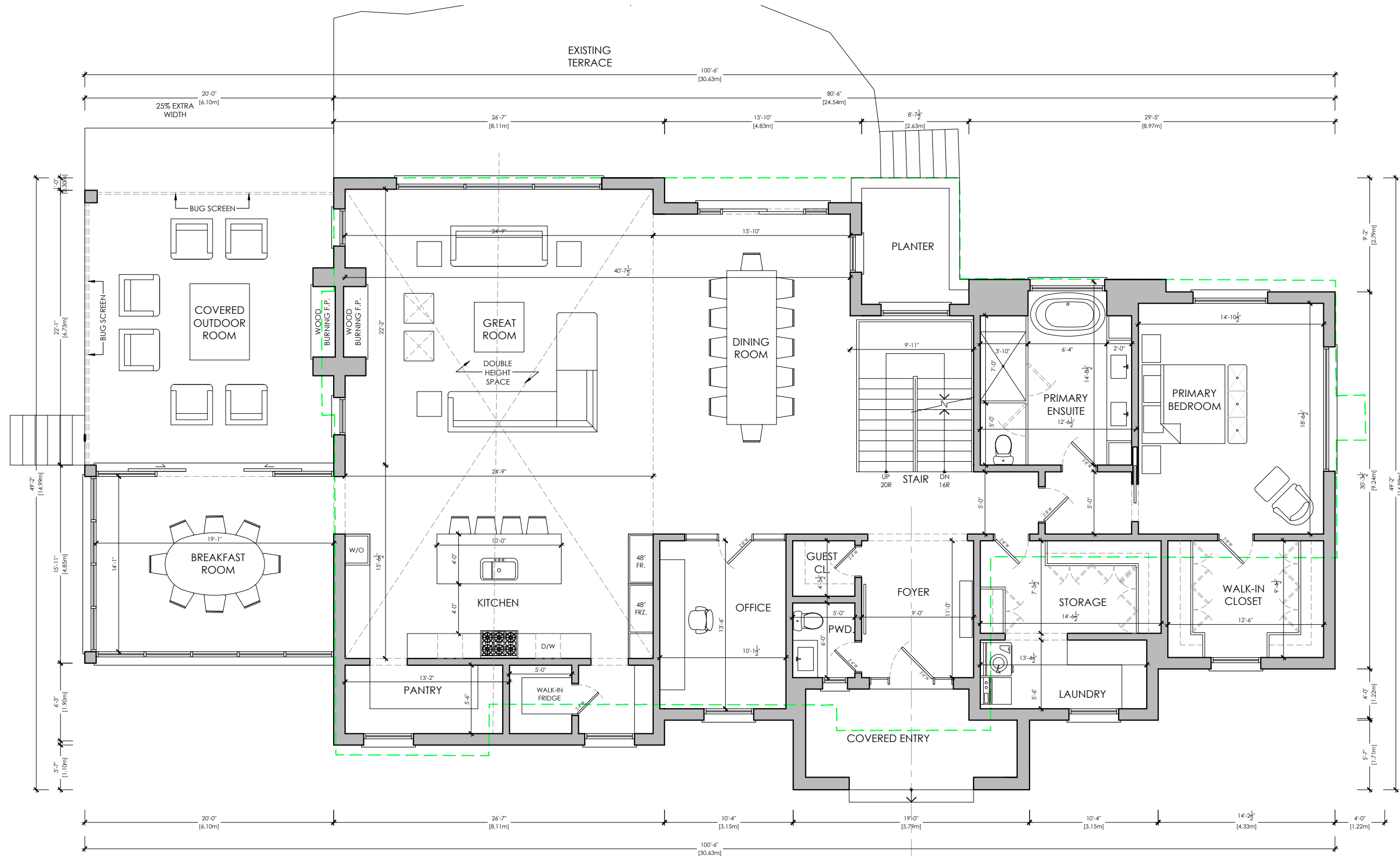
COTTAGE BASEMENT FLOOR PLAN

SCALE: 1:100



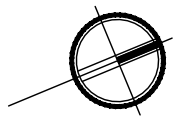
COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213



COTTAGE GROUND FLOOR PLAN

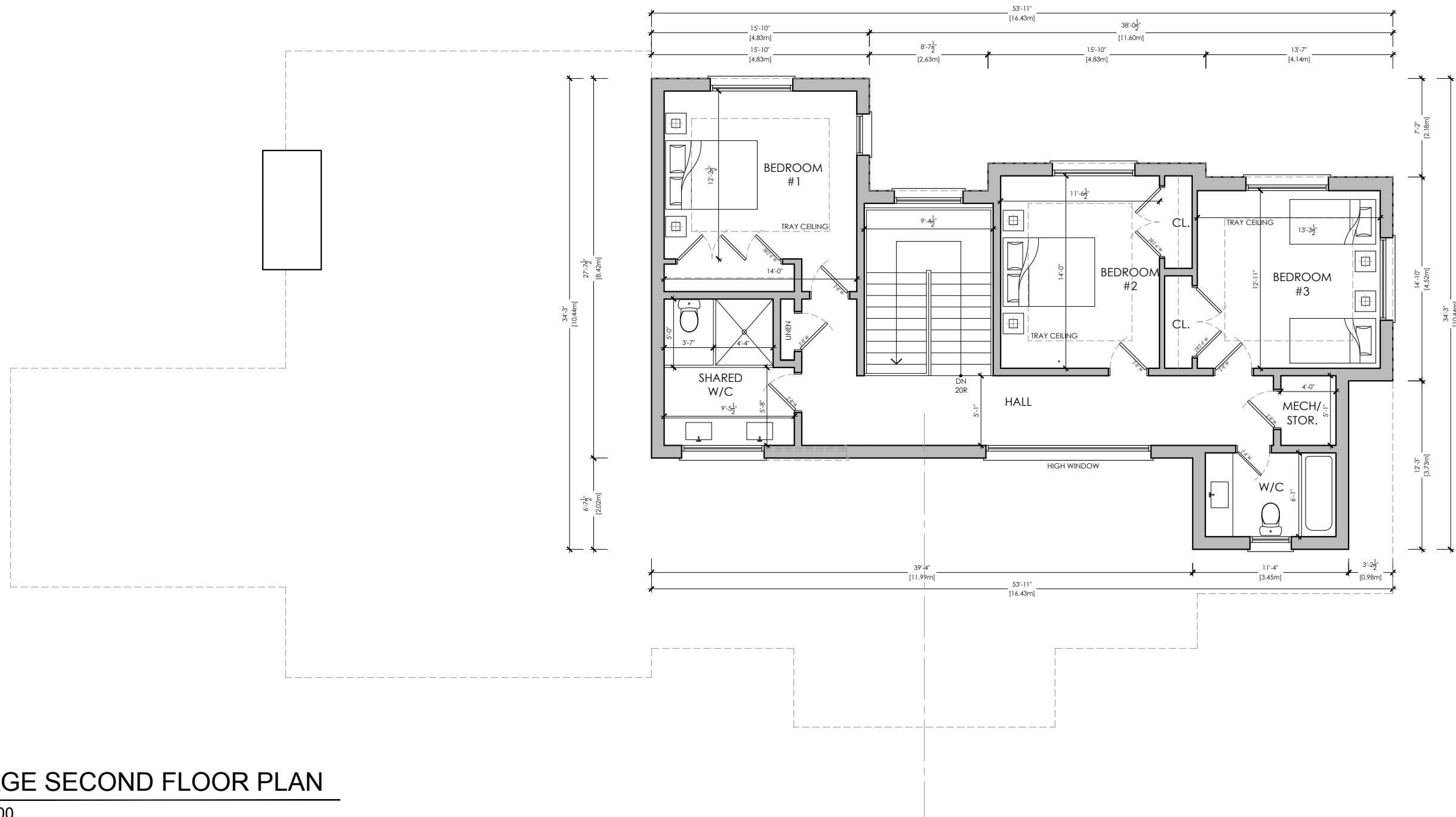
SCALE: 1:100



COWIE RESIDENCE

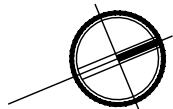
1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213





COTTAGE SECOND FLOOR PLAN

SCALE: 1:100

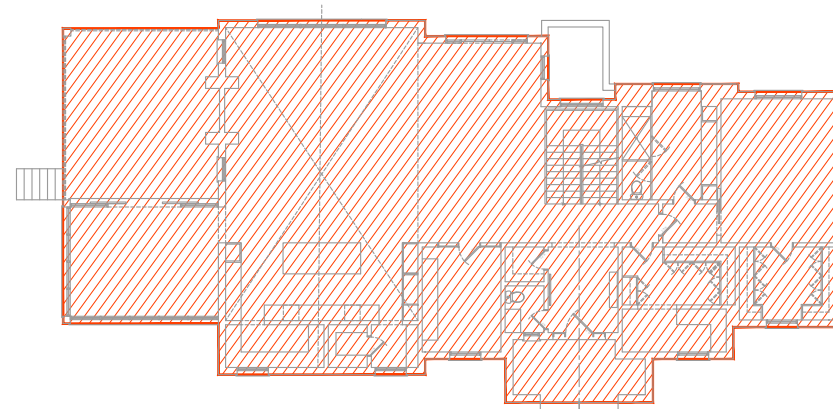


COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213



COVERAGES CALCULATION:

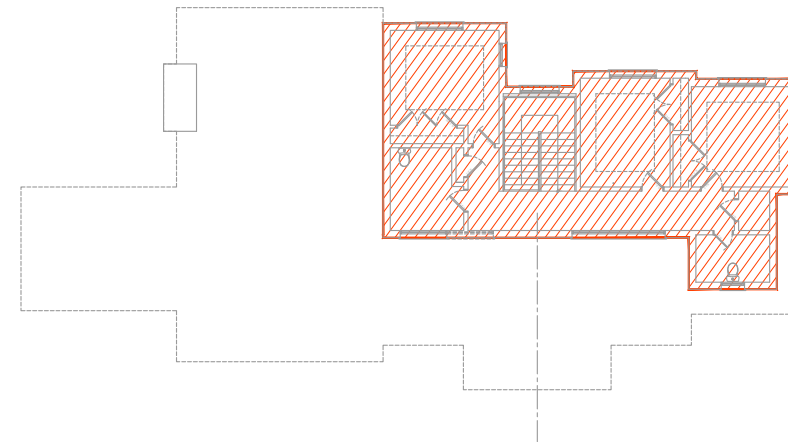


COVERAGES AREA:  
3996 SQ.FT.  
(371.24 SQ.M.)

GROSS FLOOR AREA  
CALCULATION:



GROUND FLOOR  
PLAN: 3448 SQ.FT.  
(320.33 SQ.M.)



SECOND FLOOR  
PLAN: 1280 SQ.FT.  
(118.92 SQ.M.)

TOTAL MAIN  
COTTAGE: 4728 SQ.FT.

AREA CALCULATIONS

N.T.S.

COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
LAKEFIELD, ONTARIO  
JUNE 07, 2023  
PROJECT NO. 2213



SANDRA GAVA  
ARCHITECT



FRONT ELEVATION

SCALE: 1:100

COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213



SANDRA GAVA  
 ARCHITECT



## NORTH-EAST ELEVATION

SCALE: 1:100

### COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213



## LAKE SIDE ELEVATION

SCALE: 1:100

## COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213

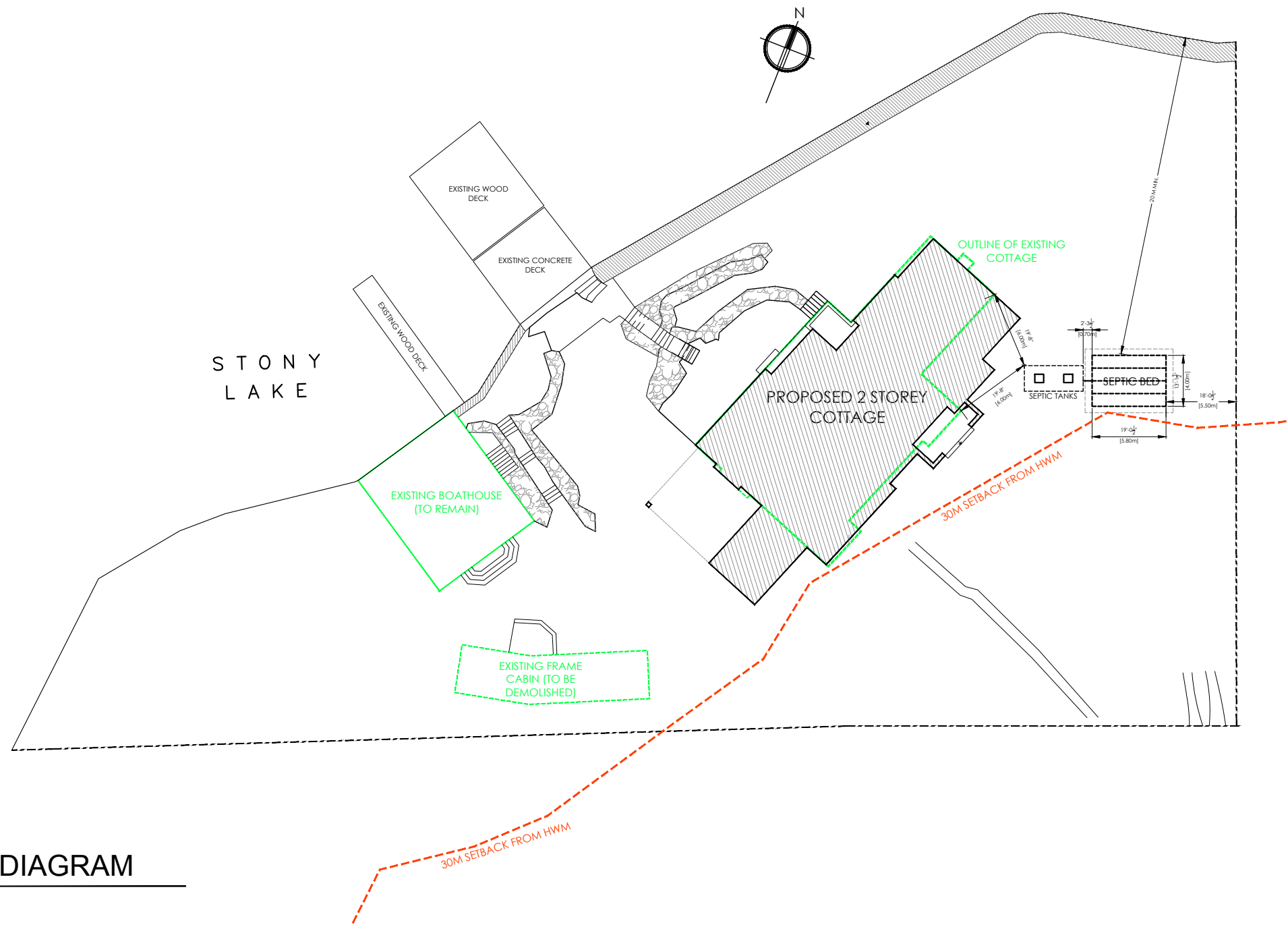


SOUTH-WEST ELEVATION

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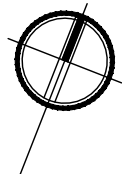
COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213



CONCEPTUAL SEPTIC DIAGRAM

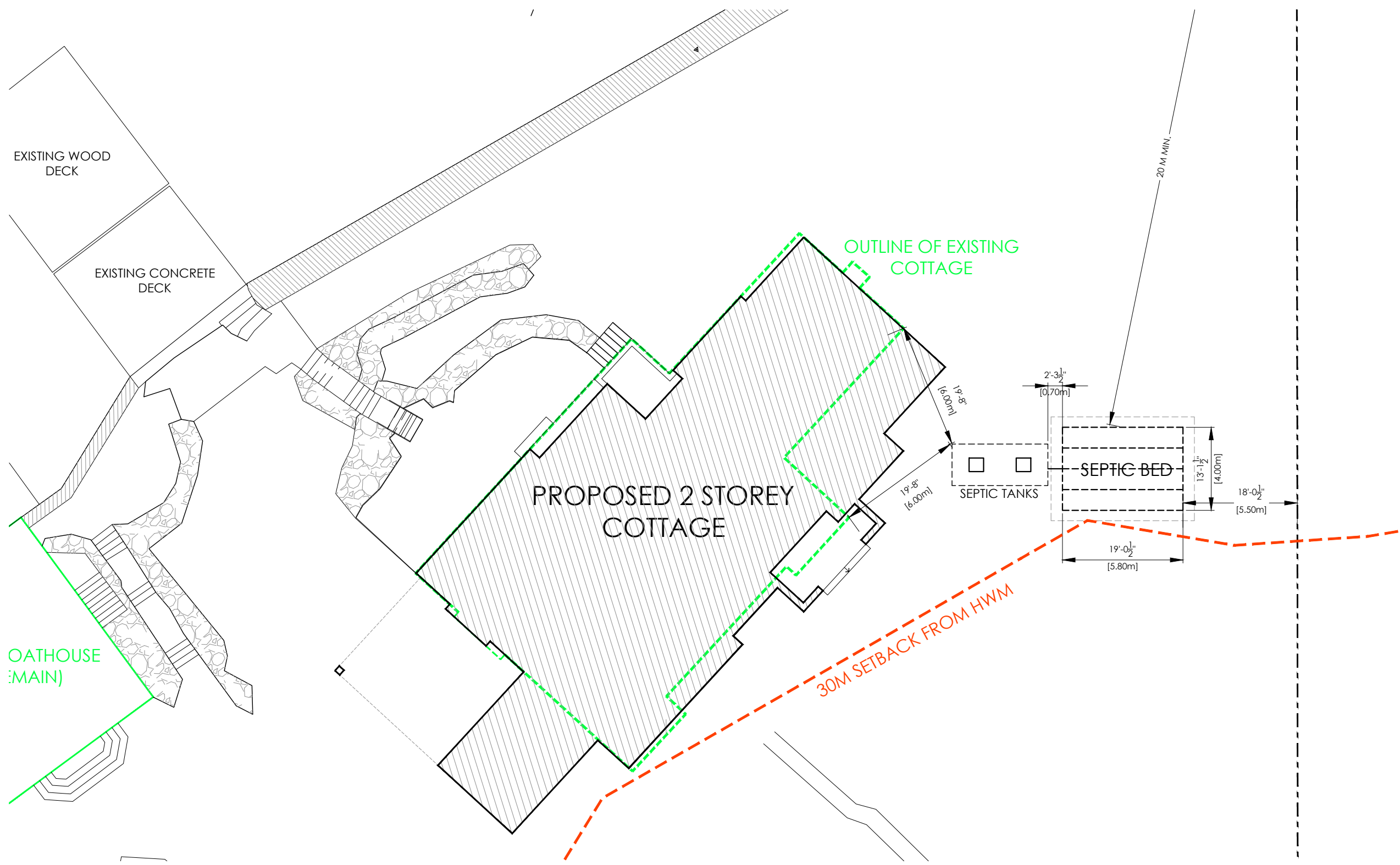
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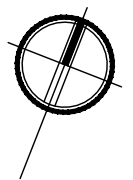
COWIE RESIDENCE

1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213





CONCEPTUAL SEPTIC DIAGRAM - CLOSEUP  
 SCALE: 1:200



**COWIE RESIDENCE**  
 1604 JULIA'S CREEK ROAD  
 LAKEFIELD, ONTARIO  
 JUNE 07, 2023  
 PROJECT NO. 2213



# **Appendix B**

Species List



# Observed Species List

KINGDOM	Common Name	Scientific Name	SARO	SARA
<b>Animalia</b>	American Crow	Corvus brachyrhynchos		
	American Goldfinch	Spinus tristis		
	American Redstart	Setophaga ruticilla		
	American Robin	Turdus migratorius		
	Baltimore Oriole	Icterus galbula		
	Barn Swallow	Hirundo rustica	THR	Threatened/Menacée
	Black-capped Chickadee	Poecile atricapillus		
	Blue Jay	Cyanocitta cristata		
	Bluegill	Lepomis macrochirus		
	Cedar Waxwing	Bombycilla cedrorum		
	Common Grackle	Quiscalus quiscula		
	Common Loon	Gavia immer	NAR	
	Common Merganser	Mergus merganser		
	Eastern Chipmunk	Tamias striatus		
	Eastern Cottontail	Sylvilagus floridanus		
	Eastern Elliptio	Elliptio complanata		
	Eastern Kingbird	Tyrannus tyrannus		
	Eastern Phoebe	Sayornis phoebe		
	European Starling	Sturnus vulgaris		
	Gray Catbird	Dumetella carolinensis		
	Great Crested Flycatcher	Myiarchus crinitus		
	Least Flycatcher	Empidonax minimus		
	Northern Cardinal	Cardinalis cardinalis		
	Northern Flicker	Colaptes auratus		
	Northern Flying Squirrel	Glaucomys sabrinus		

<b>KINGDOM</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>SARO</b>	<b>SARA</b>
	Northern Pearly-Eye	Lethe anhedon		
	Northern Raccoon	Procyon lotor		
	Northern Waterthrush	Parkesia noveboracensis		
	Pine Warbler	Setophaga pinus		
	Red-eyed Vireo	Vireo olivaceus		
	Red-winged Blackbird	Agelaius phoeniceus		
	Song Sparrow	Melospiza melodia		
	Warbling Vireo	Vireo gilvus		
	White-tailed Deer	Odocoileus virginianus		
	White-throated Sparrow	Zonotrichia albicollis		
	Winter Wren	Troglodytes hiemalis		
	Yellow Perch	Perca flavescens		
	Yellow Warbler	Setophaga petechia		
	Yellow-bellied Sapsucker	Sphyrapicus varius		

**Plantae**

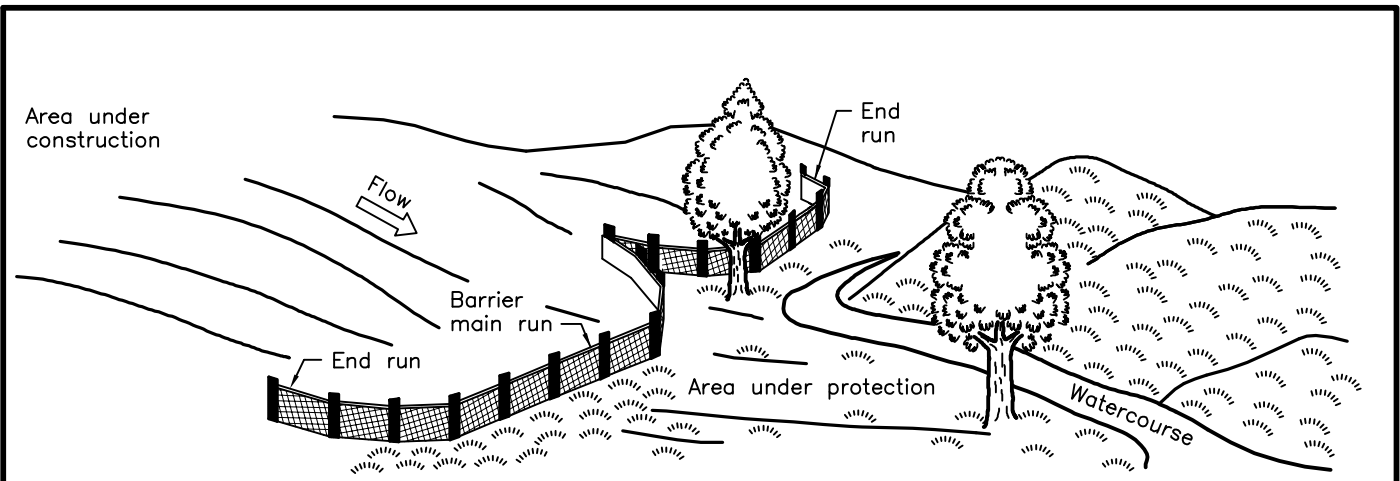
Basswood	Tilia americana
Blue-stemmed Goldenrod	Solidago caesia
Canada Goldenrod	Solidago canadensis
Common Bugloss	Anchusa officinalis
Common Burdock	Arctium minus
Common Daffodil	Narcissus pseudonarcissus
Common Dandelion	Taraxacum officinale
Common Elderberry	Sambucus canadensis
Common Hop	Humulus lupulus
Common Juniper	Juniperus communis
Common Lilac	Syringa vulgaris
Common Mullein	Verbascum thapsus
Common Prickly-ash	Zanthoxylum americanum
Common Self-heal	Prunella vulgaris

<b>KINGDOM</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>SARO</b>	<b>SARA</b>
	Common St. John's-wort	Hypericum perforatum		
	Common Yarrow	Achillea millefolium		
	Eastern Bracken Fern	Pteridium aquilinum ssp. latiusculum		
	Eastern Hemlock	Tsuga canadensis		
	Eastern Hop-hornbeam	Ostrya virginiana		
	Eastern Red Maple	Acer rubrum var. rubrum		
	Eastern Star Sedge	Carex radiata		
	Eastern White Cedar	Thuja occidentalis		
	Eastern White Pine	Pinus strobus		
	Grey-stemmed Goldenrod	Solidago nemoralis		
	Jack Pine	Pinus banksiana		
	Kentucky Bluegrass	Poa pratensis		
	Large-leaved Aster	Eurybia macrophylla		
	New England Aster	Symphotrichum novae-angliae		
	Northern Dewberry	Rubus flagellaris		
	Northern Red Oak	Quercus rubra		
	Northern Willowherb	Epilobium ciliatum		
	Panicled Aster	Symphotrichum lanceolatum		
	Poison Ivy	Toxicodendron radicans		
	Purple-stemmed Aster	Symphotrichum puniceum		
	Red Pine	Pinus resinosa		
	Scots Pine	Pinus sylvestris		
	Smooth Serviceberry	Amelanchier laevis		
	Speckled Alder	Alnus incana ssp. rugosa		
	Staghorn Sumac	Rhus typhina		
	Sugar Maple	Acer saccharum		
	White Elm	Ulmus americana		
	Wild Carrot	Daucus carota		
	Wild Lily-of-the-valley	Maianthemum canadense		

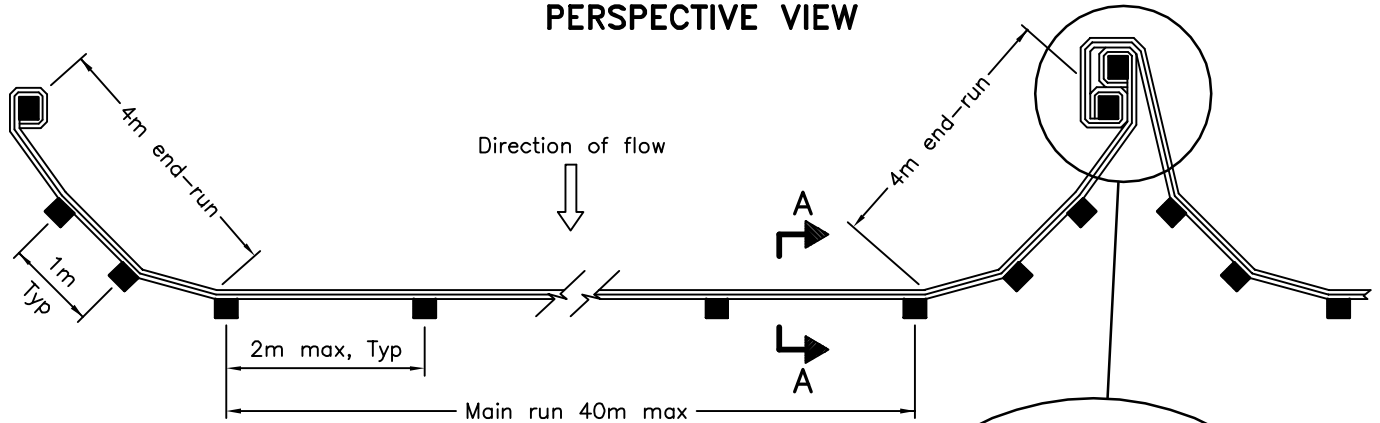
<b>KINGDOM</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>SARO</b>	<b>SARA</b>
	Wild Sarsaparilla	Aralia nudicaulis		
	Wild Tulip	Tulipa sylvestris		
	Woodland Sedge	Carex blanda		
	Zigzag Goldenrod	Solidago flexicaulis		

## **Appendix C**

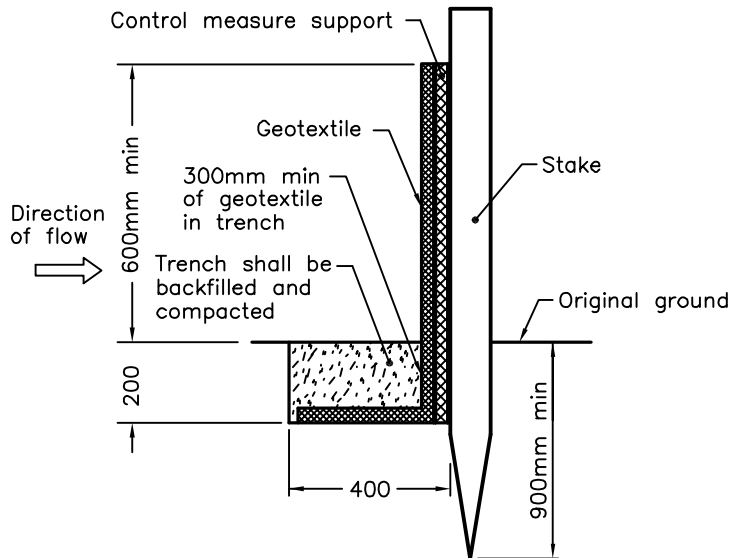
OPSD Heavy-duty Silt Fence



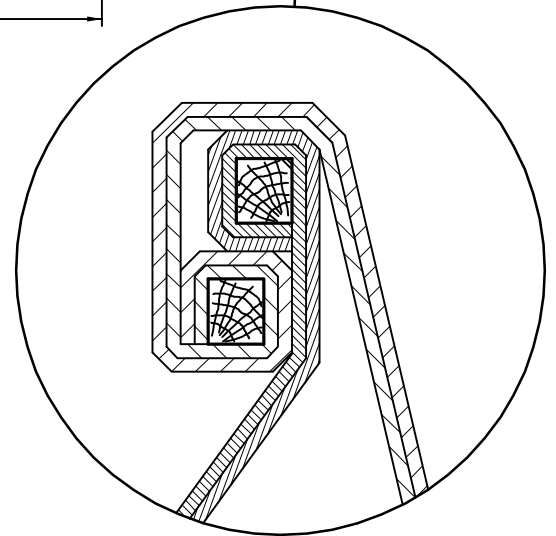
**PERSPECTIVE VIEW**



**PLAN**



**SECTION A-A**



**JOINT DETAIL**

**NOTE:**

A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING		Nov 2015	Rev 2	
<h1>HEAVY-DUTY SILT FENCE BARRIER</h1>		-----		
		-----		
			OPSD 219.130	