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September 2, 2021

Northern Designs
93 Milroy Drive
Peterborough, ON K9H 7T2

Attn: Dennis Jenkins

Sent via email to: dennis@northerndesigns.biz

**Re: Scoped Environmental Impact Study at 912 Birchview Road,
Township of Douro-Dummer, County of Peterborough, Ontario**
Cambium Reference: 12708-001

Dear Dennis Jenkins,

Cambium Inc. (Cambium) is pleased to provide Northern Designs (the Client) with the following Scoped Environmental Impact Study (EIS; the Study) at 912 Birchview Road, Lakefield, Ontario (the Site; Figure 1). The Site is occupied by an existing residential dwelling, gravel driveway, septic, and three outbuildings (sheds). The Site has water frontage on Clear Lake and the shoreline has been hardscaped with armour stone and a stone patio.

The proposed development includes an addition to the existing dwelling, a new septic system, boathouse, and garage. Cambium was provided with notes from a pre-consultation meeting held with Township and Otonabee Region Conservation Authority (ORCA) staff on January 7, 2021 (enclosed). According to these notes, the proposed addition is within 30 m of a shoreline, and therefore a Zoning By-law Amendment (ZBA) is required. A Scoped EIS, that demonstrates no negative impacts to nearby natural features and function, must be prepared in support of the ZBA application.

Additionally, the Study must address policies of the Growth Plan for the Greater Golden Horseshoe, 2020 (GPGGH) and the Provincial Policy Statement, 2020 (PPS) relating to both hydrologic and natural heritage features/areas. The following natural heritage and/or hydrologic features are mapped on or within 120 m of the Site: Inland Lake (Clear Lake) and unevaluated wetlands. Conformity with Sections 4.2.3 and 4.2.4 of the GPGGH, and Section 2.1.6 of the PPS, is specifically addressed herein. We note that the Site is not located within a



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designated Settlement Area, as per the Township of Douro-Dummer Official Plan.

The proposed addition does not encroach further on the shoreline of Clear Lake, or its floodplain, relative to the existing dwelling (refer to enclosed Site Plan). The proposed boat house is located in the northwest corner of the Site, where an existing waterfront shed is currently located and within the regulatory floodplain. The proposed garage is located in the southeast corner of the property. The proposed garage will connect with the gravel driveway. Two additional existing outbuildings (sheds), located east of the existing dwelling, will be removed.

The Township of Douro-Dummer Comprehensive Zoning By-Law No. 2010-74 (ZBL) specifies that all provisions of Section 3 of the ZBL apply to the use of any land, buildings, or structures permitted in the 'Shore Residential Zone'. Section 3.1.6 of the ZBL specifically addresses boathouses, where:

- A maximum of one boathouse may be erected;
- Boathouses cannot exceed an area of 80 square metres;
- No decks or balconies are permitted; and,
- The minimum side yard setback is 9 m.

The *Endangered Species Act, 2007* (ESA) protects endangered and threatened species and their habitats from harm or destruction. Habitat of endangered and threatened species is also protected under provincial natural heritage policy; however, it is the landowner's responsibility to ensure that no harm to these species occurs on their property. This Study includes a habitat-based screening for species of conservation concern to determine if the Site has suitable habitat for any provincially or federally listed species at risk (SAR).

Works within and adjacent to lakes, watercourses, and other bodies of water containing fish have the potential to impact fish and/or fish habitat. As a result of amendments to the federal Fisheries Act in 2019, projects near water that could potentially impact fish or fish habitat are may require Fisheries and Oceans Canada (DFO) review. The primary purpose of the review is to determine whether harmful alteration, disruption, or destruction (HADD) of fish habitat, as



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defined by the Act, can be avoided. The DFO Fisheries Protection Program provides a Decision Framework and guidance material applicable to these reviews (available on-line at www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html). If it is determined that "HADD" may be unavoidable, the project should be submitted to DFO for review and determination of project approach and conditions of approval.

TERMS OF REFERENCE

Correspondence received from the Otonabee Region Conservation Authority (ORCA; Matt Wilkinson, Planner), dated April 27, 2021 indicated agreeance with the proposed Terms of Reference (ToR) for the Study. Relevant documentation is enclosed with this letter.

FIELD INVESTIGATION AND FINDINGS

Cambium staff conducted field investigations during a single site visit on June 22, 2021. At the time of the investigations, the weather was sunny and air temperature was 14°C. Representative photos taken during the site visit are enclosed.

SITE LOCATION AND TOPOGRAPHY

The Site is located on the southeastern shoreline of Clear Lake, approximately 3 km northeast of the narrows at the outlet to Katchewanooka Lake. The Site is accessed via a gravel laneway from Birchview Road. The eastern portion of the Site, adjacent to Birchview Road, is relatively flat. Beginning at the existing dwelling, the terrain slopes steeply (80-100%) towards Clear Lake. This slope was characterized by exposed limestone bedrock and sparse vegetative cover.

ECOLOGICAL LAND CLASSIFICATION

The Ecological Land Classification (ELC) System for Southern Ontario (Lee, 1998) was used to classify vegetation communities on the Site. Definitions of vegetation types are derived from the ELC for Southern Ontario First Approximation Field Guide (Lee, 1998) and the revised 2008 tables.



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Vegetation on the Site consists primarily of maintained lawn with sparse trees (Eastern White Cedar, Paper Birch, and Silver Maple) and ground cover. Evidence of recent tree clearing was observed at the time of the field investigation. The existing land use was generally consistent with that of the neighbouring waterfront properties. The vegetation community occupying the Site was classified as Constructed Residential (CVR; see Figure 1).

Extensive woodlands and a mapped unevaluated wetland are present on lands adjacent to the Site, east of Birchview Road. These features were not assessed due to property access limitations.

SHORELINE ASSESSMENT

Based on information obtained through the background review, Clear Lake is considered a warm to coolwater lake supporting species of fish including Black Crappie, Bluegill, Brown Bullhead, Burbot, Common Carp, Lake Whitefish, Largemouth Bass, Muskellunge, Pumpkinseed, Rock Bass, Smallmouth Bass, Walleye, White Sucker, and Yellow Perch (Government of Ontario, 2015). According to Fisheries and Oceans Canada's Aquatic Species at Risk Mapping, Clear Lake does not support previously identified Critical Habitat for aquatic SAR (Fisheries and Oceans Canada, 2018).

The entire shoreline area was hardened with armour stone and an adjoining stone patio. An area of manicured lawn approximately 15 m² in size surrounded the patio, adjacent to the shed. Several trees were observed along the northern boundary of the Site and within the steeply sloped area fronting the existing dwelling.

The nearshore area (i.e., the aquatic environment within approximately 5 m of the shoreline) was assessed for fish habitat during the site visit. Reduced water clarity and lack of safe access prohibited further assessment beyond this area. The nearshore area sloped gradually away from the shoreline and the maximum water depth was estimated to be less than 3 m. Nearshore substrates consisted of rounded cobble with some gravel. No woody debris or aquatic vegetation was observed and the shoreline lacked overhanging vegetation.



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A detailed fish species list, which includes species-specific life history information and spawning habitat preferences, is provided in Appendix A. Several species documented in Clear Lake utilize cobble substrates in water depths less than 5 m for spawning (e.g., Burbot and Lake Whitefish). There are also many other species present in Clear Lake that may use gravel substrates for spawning. Furthermore, the nearshore area provides foraging and cover habitat for a variety of native small-bodied fish. Given these considerations, fish habitat conditions present in the nearshore area fronting the Site are considered moderate to high quality, and are limited only by overhead and in-water cover.

SPECIES AT RISK AND WILDLIFE HABITAT

A background review was conducted to assemble a list of SAR that have the potential to occur at the Site. The list is then refined based on the results of field investigations. The following background sources informed this exercise:

- Natural Heritage Areas: Make-a-map (Ministry of Natural Resources and Forestry, 2020)
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2020)
- Ontario Breeding Birds Atlas (2001-2005) (Bird Studies Canada, 2005)
- The Species at Risk in Ontario List (Ontario Regulation 230/08), associated species-specific habitat information, and range maps (Government of Ontario, 2020).

Based on information gathered during the background review and conditions documented during the field investigations, the Site and adjacent lands have moderate to high habitat potential for the following SAR:

- Eastern Wood-pewee (*Contopus virens*) – Special Concern
- Midland Painted Turtle (*Chrysemys picta marginata*) – Special Concern
- Snapping Turtle (*Chelydra serpentina*) – Special Concern
- Northern Map Turtle (*Graptemys geographica*) – Special Concern



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Natural habitat on the Site is limited, given the degree of existing human disturbance. No large cavity trees suitable for bat maternity roosting or bird or small mammal nesting were observed.

The Eastern Wood-pewee lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation. The Site does not contain sufficient forest cover to sustain habitat for Eastern Wood-pewee; however, habitat for this bird species may exist on adjacent lands, east of Birchview Road.

Based on information obtained through the background review, Northern Map Turtle (provincially listed as Species of Concern) is known to occur within the general area of the Site. The hardened surfaces and steep slopes with exposed bedrock which dominate the shoreline area are not suitable for turtle nesting. Additionally, the hardened shoreline is not conducive to turtle access from the lake. However, loose fine substrates, exposed soil, and areas of manicured lawn exist throughout the property. These areas could provide suitable nesting habitat that could potentially be used by turtles. Wetland areas on adjacent lands east of Birchview Road may also provide summer aquatic habitat for certain turtle species. Therefore, the Site may be used by turtles for nesting and/or movement.

As noted above, no Critical Habitat for federally listed aquatic SAR was identified in Clear Lake. Additionally, the NHIC database did not contain occurrence records for provincially listed aquatic SAR in the vicinity of the Site.

IMPACT ASSESSMENT

The proposed development includes an addition to the existing dwelling, and a new septic system, boathouse, and garage. No further encroachment towards the shoreline of Clear Lake is proposed, with the exception of the proposed boathouse. The proposed cottage addition would include an expansion to the northeast, in an area currently maintained as lawn. The new septic would be located east of the dwelling, and north of the existing laneway (see enclosed Site Plan).



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A 30 m setback from the shoreline of Clear Lake is shown on Figure 1 (enclosed). The proposed addition and the boathouse, including the entirety of the existing dwelling, are located within the 30 m setback.

Currently, the shoreline and the associated 30 m setback consist of a terraced slope, with exposed bedrock and limited vegetation. The shoreline itself mainly consists of armour stone, with limited areas of manicured lawn. According to the GPGGH, lakes and their littoral zones require 30 m vegetation protection zones (VPZ). In order to provide a net benefit to the Site through shoreline enhancement and improve the VPZ, a Buffer Enhancement Plan/Landscape Plan is recommended. A few areas of manicured lawn were observed near the shoreline. It is recommended that mowing should cease within 5 m of the shoreline, in order to allow natural vegetation to regenerate. Trees within 5 m of the shoreline should be allowed to naturally self-sustain, providing natural cover to the shoreline as well as provide soil stabilization.

In addition, shoreline enhancement via planting of native shrubs within 10 m of the shoreline is recommended (see Figure 1). Native shrubs can be planted along the small terraces observed along the slope towards the shoreline as well as the upland area between the sloped area and the existing dwelling and proposed addition. Cambium recommends the following species and quantities:

- At least 20 shrubs plantings, with at least four of the following species:
 - Nannyberry, Pussy Willow, Choke Cherry, Purple-flowering Raspberry, Red Elderberry, and Alternate-leaved Dogwood

Additionally, another 10 shrubs should be planted surrounding the new boathouse. In particular, adjacent to the north and south walls of the structure.

Following these recommendations would further stabilize the shoreline, increase vegetation diversity, and enhance wildlife habitat, thereby improving the overall ecological function of the Site. Cambium is available to provide further details and develop the Buffer Enhancement Plan/Landscape Plan if necessary.

Given that site alteration is proposed within 30 m of Clear Lake and the steep slope in the shoreline area, there is increased potential for erosion and



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sedimentation into the lake due to the disturbance of soils during construction. Sedimentation, as a result of erosion, can impact fish habitat through changes in water temperature and clarity, nutrient contributions, and dissolved oxygen. It is essential that an Erosion and Sediment Control (ESC) Plan be prepared, and implemented during construction.

As the proposed addition is within the 30 m setback, an increase in impermeable surfaces and increased stormwater runoff is expected. The proposed addition will not encroach on the shoreline further than the existing dwelling. Eaves troughs should be directed so that they do not enter Clear Lake directly, and all flows should be slowed with the use of gravel, to allow the water to enter the soil naturally, without causing any erosion.

ESC measures should be implemented prior to the commencement of any Site alteration or development, including clearing of vegetation, grading, stockpiling, storage of equipment and materials, and other construction activities. Perimeter sediment fencing should be at least 60 cm above grade, with an additional 10-20 cm buried. In any areas where soils are too shallow to be properly bury the base, sand bags may be required to secure the bottom of the sediment fence.

Sediment fencing should be placed around the perimeter of the construction areas, as far away from the shoreline as possible, at a minimum distance of 3 m from the shoreline, to prevent sediment from entering the lake.

As per the *Fisheries Act, 2019*, fish and fish habitat are protected against the death of fish, other than by fishing, and the harmful alteration, disruption, or destruction of fish habitat (HADD). Although the boathouse is proposed to be positioned entirely above the shoreline, ground disturbance can generate sediment and increase turbidity during construction. Turbidity can negatively impact fish and fish habitat by depositing on their spawning habitat, making it difficult to see and catch prey, bury and kill eggs, and block gills and drown fish. A turbidity curtain shall be placed in Clear Lake, isolating the construction area for the boathouse. Additionally, if a boat lift or marine railway are to be installed in the water, these areas should be isolated with a turbidity curtain prior to construction. The turbidity curtain should be an approved ISO Type II marine



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turbidity curtain and should be anchored to the shoreline. When being installed, the turbidity curtain should be placed along the shoreline and moved outwards, in order to deter fish from entering the area and becoming entrapped. According to the DFO, the in-water work restriction period for this area on Clear Lake is from March 15 to May 31. No in-water work should occur throughout this time period. Assuming that in-water work occurs outside of the in-water work restriction period and turbidity curtains are in place, it is anticipated that HADD can be avoided. If a spill of any deleterious substances (fuels, hydraulics, turbidity laden water etc.) occurs in the water or on the shoreline, Ontario Spills Action Centre should be called immediately at 1-800-268-6060 to report the spill. All measures to safely stop spill and clean up the spill should be documented and completed immediately. Any spill should be documented in detail, with photographs and notes on the type, duration, and physical extent of material released.

All ESC measures should be regularly maintained and kept in good working order, until the area has been stabilized and/or successfully revegetated. All sediment fencing/curtains should be removed following construction, once exposed soils have been revegetated.

It is recommended that any disturbed areas that will not be hardened be revegetated as quickly as possible following construction. Application of a suitable native seed mixture to these areas will help limit soil erosion and establishment of invasive plant species.

Turtles are particularly vulnerable to construction-related impacts on sites adjacent to waterbodies. Construction materials and stockpiles provide potential turtle nesting habitat, including SAR that are known to inhabit the general area, as described above.

Workers should be aware of the nesting season for turtles, extends from May 15 to August 15. Sediment fencing described above can also function as wildlife exclusion fencing. In order to function as wildlife exclusion fencing should be installed around the entire perimeter of the construction area prior to the earlier of May 15 or commencement of Site preparation in order to keep turtles, snakes, and other small wildlife (frogs, etc.) from entering the construction area. This



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fencing should be made of light-duty sediment fence, staked at regular intervals, trenched-in at least 10-20 cm below ground, with an above ground height of at least 60 cm.

The sediment fence should be inspected regularly to ensure that it remains in good condition, and any downed areas, rips, or holes should be repaired or replaced immediately. The area of construction should also be actively inspected for turtles each day prior to the start of work throughout the duration of construction at the Site.

Should turtles be observed within the construction area, they should be photographed and allowed to move out of harm's way. Any photographs taken should be sent to Cambium staff to allow for accurate identification, should any further interaction with the species be required.

In-water work may be required to complete the construction of the boathouse. Due to the fish species present in Clear Lake, any in-water work should be completed outside of the in-water work restriction period, extending from March 15 to July 15.

Workers should be made aware of the potential presence of wildlife in the area, and should regularly check the construction area prior to the start of work to ensure no wildlife species are present. If encountered, wildlife should be allowed to leave the work site on their own accord.

POLICY CONFORMITY REVIEW

Based on the key natural heritage and/or hydrologic features identified on or adjacent to the Site and the findings of the field investigations detailed herein, the proposed development of the Site is in compliance with the PPS and GPGGH. Compliance with applicable natural heritage policy is summarized in Table 1, below.

Specifically, the proposed development meets Section 4.2.3.1(e, f) of the GPGGH as follows:



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- a) The proposed development is to be set back further from the water, will not expand further towards the wetland/lake or fish habitat or their minimum vegetation protection zones, and the expansion will be limited to the previously cleared area in close proximity to the existing structure.
- b) The proposed development will be directed away from protected features to the maximum extent possible (while also minimizing further encroachment into other natural features) and all potential impacts will be mitigated to the greatest extent possible.

Table 1 Policy Compliance Summary

Key Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Inland Lakes and Littoral Zones	No	Yes	GPGGH: Yes, 4.2.3 and 4.2.4
	Explanation: The proposed development meets GPGGH 4.2.3.1 (e,f) as the proposed development (addition) does not further encroach on the shoreline of Clear Lake, relative to the existing dwelling. The proposed development will be directed away from protected features to the greatest extent possible.		
Fish Habitat	No	Yes	PPS: Yes, 2.6.1
	Explanation: No impacts to fish or fish habitat including HADD are expected as a result the proposed development, assuming that all recommended mitigation measures and timing windows are implemented.		
Habitat of Endangered and Threatened Species	No	Yes	PPS: Yes, 2.7.1
	Explanation: Habitat of Endangered and Threatened Species is limited at the site. Mitigation measures provided herein will provide appropriate protection to protected species and their habitat.		





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Adjacent Lands	No	Yes	PPS: Yes, 2.8.1
	Explanation: This report details impacts expected from the proposed development. Negative impacts will be mitigated with the appropriate measures as provided herein. Negative impacts are not expected.		

SUMMARY OF RECOMMENDATIONS

In summary, the following recommendations are provided with respect to development at the Site:

1. Site Plans should show both existing and proposed structures, as is typically required for Zoning By-law Amendment applications.
2. Site Plans for the proposed development should show the Clear Lake shoreline, the 30 m shoreline setback, and the location of ESC / Wildlife Exclusion Fencing (including turbidity curtains) around the construction area perimeter.
3. Ensure all relevant permits are obtained prior to any site alteration or construction activities taking place.
4. Prior to the commencement of Site preparation activities (grading, placement of fill), ESC / Wildlife Exclusion Fencing should be installed along the perimeter of the construction area. This should consist of light-duty sediment fencing, staked at regular intervals, trenched in at least 10-20 cm (or secured with sandbags where trenching in is not possible), and with an above-ground height of at least 60 cm. These should remain in place for the duration of the development, until the Site has been successfully revegetated and/or soils have been stabilized.
5. A turbidity curtain shall be placed in Clear Lake, isolating the construction area for the boathouse. Additionally, if a boat lift or marine railway are to be installed in the water, these areas should be isolated with a turbidity curtain prior to construction. The turbidity curtain should be an approved



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- ISO Type II marine turbidity curtain and should be anchored to the shoreline. When being installed, the turbidity curtain should be placed from the shoreline and moving outwards, in order to deter fish from entering the area and becoming entrapped.
6. According to the DFO, the in-water work restriction period for this area on Clear Lake is from March 15 to May 31. No in-water work should occur throughout this time period. Assuming that in-water work occurs outside of the in-water work restriction period and the associated turbidity curtains are in place, direct impacts to HADD are not expected.
 7. If a spill of any deleterious substances (fuels, hydraulics, turbidity laden water etc.) occurs in the water or on the shoreline, Ontario Spills Action Centre should be called immediately at 1-800-268-6060 to report the spill. All matters to safely stop the spill and clean up the spill should be document and completed immediately. Photographs, locations, amount, and type of material should all be recorded.
 8. The construction area should be inspected for turtles daily prior to the beginning of work. Any turtles observed at the Site, should be photographed and allowed to move out of harm's way.
 9. Due to the nearby lake, workers should be aware of the nesting season for turtles which extends from May 15 to August 15. Should any nesting turtles be encountered, work should stop immediately and the turtle should be left to finish nesting undisturbed. The turtle should be photographed and the nest marked to ensure it is not disturbed during construction until it has hatched (late August – September). If a nest is laid in a stockpile or other area that requires disturbance, Cambium should be contacted to determine if the nest can be relocated.
 10. All stockpiled materials should be kept inside the construction area and ideally should be covered and well secured around the base to prevent turtles from nesting in the piles.



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11. Vegetation clearing should be limited to the required building/construction area in order to retain tree cover to the greatest extent possible.
12. In the event that construction is planned to proceed during the breeding season of April 1 to August 31 (as per Environment and Climate Change Canada Guidelines), the construction area should be investigated regularly for the presence of breeding birds and nests containing eggs and/or young. It should be noted that some birds nest on man-made structures/machinery or in recently cleared areas, so these areas should be checked regularly. Nests discovered on Site should be left undisturbed until young have fledged or the nest is determined to be inactive.
13. Workers should be made aware of the potential presence of wildlife in the area, and should regularly check the construction area prior to the start of work to ensure no wildlife species are present. If encountered, wildlife should be allowed to leave the work site on their own accord.
14. Construction activities that require earthworks (e.g., grading, excavation, etc.) should be scheduled to avoid dates of heavy rainfall events and times of high runoff volumes.
15. Though not identified in the field inventories, any subsequently identified SAR discovered on the property will be left undisturbed as dictated by the *Endangered Species Act, 2007*. If any SAR individuals are encountered, they should be photographed and allowed time to move out of harm's way. SAR observations should be reported to the Natural Heritage Information Centre.
16. It is recommended that the shoreline be enhanced through limitations on mowing within 5 m of the shoreline to allow for natural vegetation to regenerate, and through the planting of at least 20 native shrubs within 10 m of the shoreline and 10 native shrubs around the new boathouse, as detailed above and shown in Figure 1.



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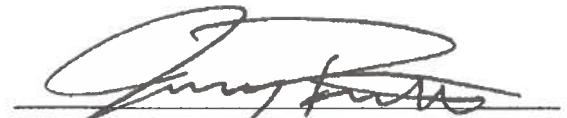
CLOSING

In conclusion, potential negative impacts associated with the proposed development can be appropriately minimized/mitigated, provided that the above recommendations are adhered to. The information presented herein demonstrates that the proposed development can be carried out in a way that will not adversely impact natural heritage or hydrologic features and functions present on or adjacent to the Site. If you have any questions regarding the contents of this letter, please contact the undersigned at your convenience.

Best regards,

Cambium Inc.


Myles Latter, Hons. B.A., Dipl.
Project Coordinator


Jeremy Prah, B.Sc., EP, Can-CISEC
Senior Ecologist / Project Manager

MOL/jpp

Encl. *Figure 1: Site Natural Heritage Features and Constraints*
Appendix A: Fish Species List and Life History Information
Site Plan
Terms of Reference
Representative Site Photos

\\camfile\Projects\12700 to 12799\12708-001 Northern Designs - EIS - 912 Birchview Road, Lakefield\Deliverables\REPORT - LTR EIS\Draft\2021-09-02 LTR
sEIS 912 Birchview Road Lakefield - DRAFT.docx

**ENVIRONMENTAL
IMPACT STUDY**
NORTHERN DESIGNS
912 Birchview Road,
Lakeland, Ontario

LEGEND

- 30m Shoreline Setback
- Confirmed Shoreline
- Buffer Enhancement/Landscape Plan
- Contour 5m Interval (Minor)
- Subject Property (0.21 ha) (approximate)

VEGETATION COMMUNITIES

CVR: Constructed Residential

Notes:
Base mapping features are © Queens Printer of Ontario, 2018. This does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government.
All measurements are in metres and can be converted to feet by dividing by 0.3048.
Canbium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map is for general information only and should not be used for any other general reference use only.



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**SITE NATURAL HERITAGE
FEATURES AND CONSTRAINTS**

Project No.:	12708-001	Date:	August 2021
Scale:	1:500	Rev.:	
Projection:	NAD 1983 UTM Zone 17N	Created by:	MAT
Checked by:	ML	Figure:	1



Spawning Habitat Preferences²

Note:

Tolerance refers to the ability of a species to adapt to environmental perturbations or anthropogenic stresses. It seems (-) measured and the species was not reported to undergo a particular adaptive strategy, cover or substrate.

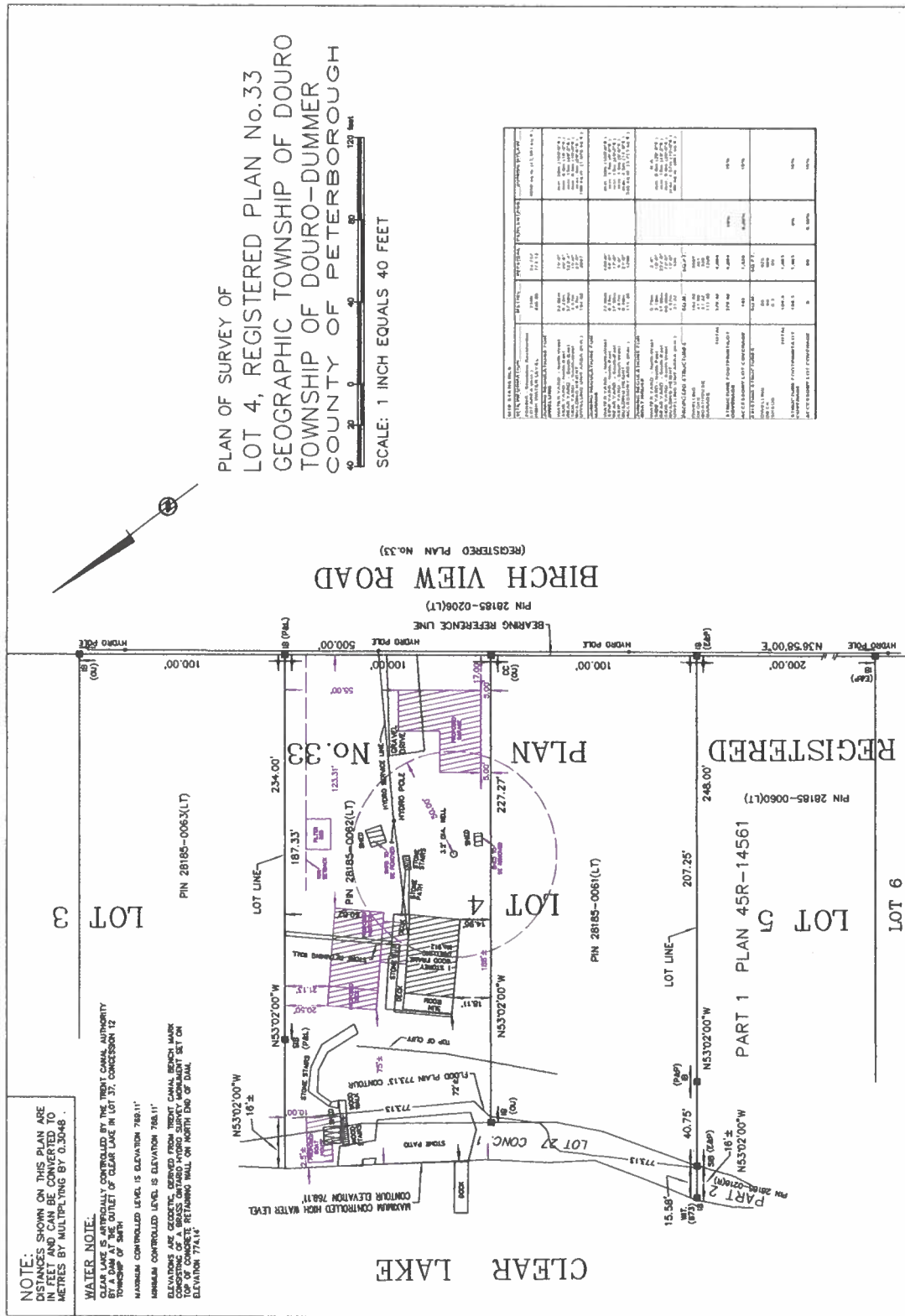
2. Jane I. A. Minns C.K. & Scott C.B. (1996) Spawning habitat characteristics of Great Lakes fishes (p. 47). Elsevier, Amsterdam.

NOTE:
DISTANCES SHOWN ON THIS PLAN ARE
IN METRES AND SHALL BE CONSIDERED
AS SUCH UNLESS OTHERWISE SPECIFIED
METRES BY MULTIPLYING BY 0.3048

WATER NOTE:

CLEAR LAKE IS ARTIFICIALLY CONTROLLED BY THE TREAT CANAL AUTHORITY
BY A DAM AT THE OUTLET OF CLEAR LAKE IN LOT 37, CONCESSION 12
TOWNSHIP OF SIMPSON
MAXIMUM CONTROLLED LEVEL IS ELEVATION 768.11'
MINIMUM CONTROLLED LEVEL IS ELEVATION 768.11'
ELEVATIONS ARE GEODETIC, DERIVED FROM TREAT CANAL BENCH MARK
CONSISTING OF A BRASS ONTARIO HYDRO SURVEY MONUMENT SET ON
TOP OF CONCRETE RETAINING WALL ON NORTH END OF DAM
ELEVATION 774.15

CLEAR LAKE



Myles Latter

From: Matt Wilkinson <mwilkinson@otonabeeconservation.com>
Sent: April 27, 2021 6:30 AM
To: Myles Latter
Cc: Jasmine Gibson; Neil MacFarlane
Subject: FW: Ecology Comments, re: PGCD-647, EIS ToR for 912 Birchview Rd.

Hi Myles,

Re: 912 Birchview Road (Roll #1522 010 001 05900) EIS ToR Review

There are no observable wetlands on or immediately adjacent to the property and provided this is a shoreline property as per address and Roll #, there are no agricultural uses either. I'm guessing you didn't mean to include the agricultural lands.

Given the focus is on mapping fish habitat, rehabilitation (planting plan) and feature avoidance where possible through appropriate mitigations, the ToR appears appropriate.
IF wetlands are present in-water or inland, the OWES protocol is appropriate.

With respect to timing of work, it is dependent upon the habitat conditions and species presence. Depending on the local fishery, fish habitat can be mapped during growing season (aquatic vegetation focus), and it may be appropriate to get on site when fish are active near the shore. There are NHIC occurrences for northern map turtle and wood thrush; June is ideal for these species, but if one assumes habitat is present mitigation measures can be provided to offset impacts given these species do not trigger the ESA and the property is already developed.

An opinion letter with a constraint map appears appropriate. The constraint map should include all natural heritage and hydrological constraints, development envelope, and mitigation measures (e.g., replanting location) discussed in the letter.

I would noted the previous correspondence included:

- Work Sequence Plan (mitigation measure re: timing of work to protect fish habitat, breeding birds, bats, etc.). Please note that federal tree clearing timing windows to protect birds and MNRF timing windows for work in and around water are applicable.
- Addressing PPS 3.1 natural hazards including flooding and erosion.
 - Flood hazard Elevation should be plotted a 235.58m GVCD28 on submitted a site plan layout.

The Boathouse will need to demonstrate why it's required (e.g., housing a boatlift, using Marnie Rail etc.) to be within the flooding hazard.

Topographical survey should illustrate the elevations at the proposed house.

- A slope stability study will be requested for the entire site and note all development and site alteration (please include walkway)
- Provide erosion hazard calculation within slope study.

Following the Planning Applications, the applicant will need to submit for an ORCA permit.

The ORCA permit application should be supported by:

- Site plan layout illustrating all development.
- The slope stability study for the house, boathouse and walkway.
- The Boathouse – should note that:
 - No habitable space, or potential
 - Structure will be anchored to either concrete pad or footings
 - All electrical works will be a minimum 0.3m above the high water elevation of 235.58m (CGVD28)

Any alteration to the shoreline should be included.

Best,
Matt



Matt Wilkinson

Planner

705-745-5791 x213

mwilkinson@otonabeeconservation.com

ARE YOU PLANNING AN UPCOMING CONSTRUCTION PROJECT ON YOUR PROPERTY? Submit a [Property Inquiry Form](#) so we can help you understand how natural hazards may affect your property.

This e-mail is confidential. If you are not an addressee named above, please immediately delete and notify the sender. Thank you.

From: Myles Latter <Myles.Latter@cambium-inc.com>
Sent: Tuesday, April 20, 2021 11:21 AM
To: Matt Wilkinson <mwilkinson@otonabeeconservation.com>
Cc: Cambium File <file@cambium-inc.com>
Subject: ToR - EIS 912 Birchview Road, Lakefield (12708-001)

Good morning Matt,

Can I please confirm the Terms of Reference with you for this project? I have attached the pre-consultation notes showing the proposed development. As per the pre-consultation meeting notes provided by the Client, the Opinion Letter will address the following:

- Buffer Enhancement Plan/Landscape Plan to vegetate disturbed areas and naturalize shoreline to protect fish habitat as per PPS Policies (2.1.6, 2.1.7, 2.1.8, and 2.2.1 e)).
- Erosion and Sediment Control Plan
- Work Sequence Plan

- Natural hazards including flooding and erosion as per PPS Policy 3.1 (flood hazard elevation should be plotted at 235.58 m GVDC28 as per pre-consultation meeting notes)

The following scope has been provided:

One Site visit in spring 2021 to document natural features on the property including:

- Delineation of wetland boundaries based on the Ontario Wetland Evaluation System (OWES) for Southern Ontario (Ministry of Natural Resources, 2013). The site visit will capture appropriate wetland delineation characteristics, including vegetation species and wetted limits.
- Classification of existing vegetation communities in the Study Area, according to the Ecological Land Classification System for Southern Ontario (Lee, et al., 1998), and evaluation of their sensitivity, rarity, and botanical quality.
- Complete a fish habitat assessment to address the Fisheries Act and mitigation measures to offset impacts from redevelopment/increase of impervious surfaces within 30m of the lake/fish habitat.
- Documentation of drainage connectivity and/or watercourse characteristics including riparian vegetation, erosion prone areas, and special habitat features.
- Record observations of wildlife occurrences and assess wildlife habitat function on the Site. Any evidence of breeding, forage, shelter or nesting sites, and/or travel corridors will be noted. A habitat-based screening for SAR and SWH will be completed for the Site.

Additionally, are there any reasons why we could not complete this in April/ early May since the proposed area is active agriculture and thus limited vegetation is expected? Please let me know if there is anything that I have missed.

Thanks and take care,



Myles Latter, B.A. Hons., Dipl.
Project Coordinator

Cambium Inc. - Peterborough

Environmental | Building Sciences | Geotechnical | Construction Monitoring

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[inc.com](http://cambium-inc.com)

Under modified work conditions in response to the current pandemic and government directives, Cambium continues to provide the professional services you have come to expect to guide good decisions. The well-being and safety of our teams, clients, and communities are a top priority. We ask for your patience and look forward to working together as we evolve into the "new normal". Stay safe. Better days are ahead.

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Check out our [video](#) - an inside look at Cambium's culture & career opportunities.



Photo 1 View of existing dwelling, June 22, 2021.



Photo 2 View of slope towards shoreline, June 22, 2021.



Photo 3 View of proposed boathouse location, June 22, 2021.



Photo 4 View of hardened landscaped shoreline, June 22, 2021.



Photo 5 General vegetation community present on Site, June 22, 2021.



Photo 6 Existing gravel laneway, June 22, 2021.