



REGIONAL DISTRICT OF ALBERNI-CLAYOQUOT  
**NOTICE OF APPLICATION FOR  
DEVELOPMENT VARIANCE PERMIT**  
ELECTORAL AREA 'D' – SPROAT LAKE

**DVD20012 – 1077514 BC LTD – SPROAT HIGHLAND ESTATES LTD, PROPERTY OWNER**

On August 25, 2021, the Regional District of Alberni-Clayoquot (ACRD) will consider issuing the following development variance permit to vary the provisions of the ACRD Zoning Bylaw No. 15, pursuant to Section 498 of the *Local Government Act*:

**Vary Section 6.2(4)(a) to reduce the watercourse setback from 30.48 m (100 ft) to 15 m (49.21 ft) for future development within the proposed subdivision.**

**Subject Property:** Parcel A Lot 197 Katherine Drive, Port Alberni

**Legal Description:** PARCEL A (DD 11574N) OF LOT 197 ALBERNI DISTRICT PLAN 1860 EXCEPT PARTS IN PLANS 29218, 34905 AND EPP49002 **PID:** 006-768-831

A copy of the permit and supporting documents are available for public review on our website at <https://www.acrd.bc.ca/events/25-8-2021/>.

The Regional Board made a preliminary review of this proposal on July 28, 2021 and resolved to consider it further. It is anticipated that the Regional Board will make a final decision on the permit at the Board Meeting on August 25, 2021 beginning at 1:30 pm.

Prior to issuing such a permit, the Board is required to notify owners and occupants of properties within 100 metres of the subject property. **Please accept this correspondence as fulfilling this obligation.**

Providing an opportunity for public input is a top priority for the ACRD. Consider written submissions as an effective means to do so.

Correspondence must be received by the ACRD by **10:00 am on Wednesday, August 25, 2021** and can be submitted by one of the following methods:

- Hard copy to the ACRD office drop slot or by mail to the Planning Department at the address below.
- Email sent to [planning@acrd.bc.ca](mailto:planning@acrd.bc.ca). Email correspondence will only be considered received if receipt confirmation is provided by ACRD staff.
- Fax sent to 250-723-1327. Fax correspondence will only be considered received if receipt confirmation is provided by ACRD staff.

Alternatively, if you wish to present your views to the Board in person, please contact Wendy Thomson, General Manager of Administrative Services, before 4:30 pm on August 18, 2021 at [wthomson@acrd.bc.ca](mailto:wthomson@acrd.bc.ca) or phone 250-720-2700.

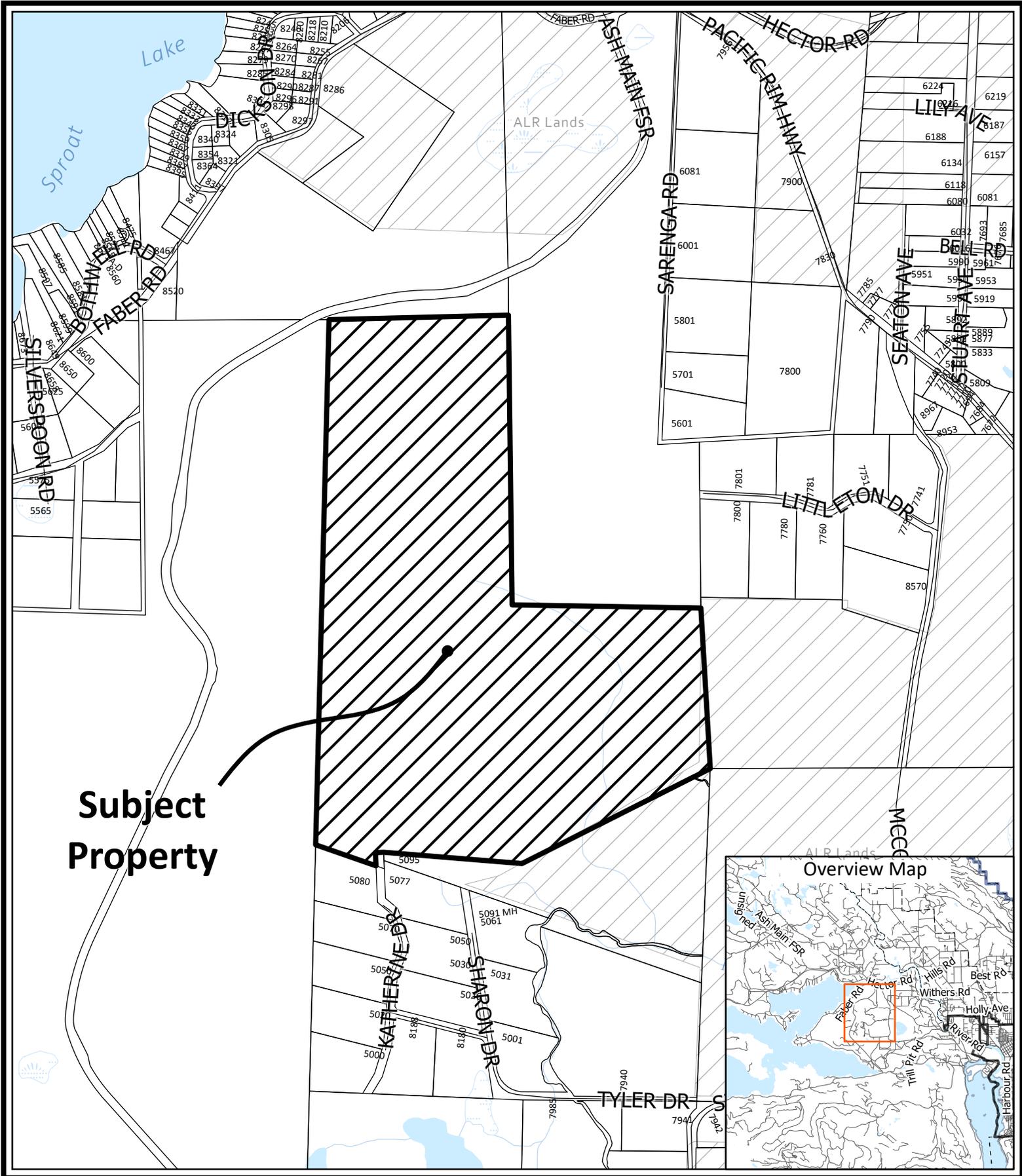
Questions? Please contact the Planning Department during regular office hours: Monday to Friday, excluding statutory holidays, from 8:00 am until 4:30 pm.

**PLANNING DEPARTMENT**

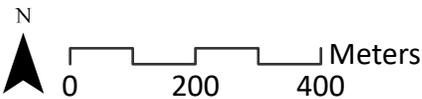
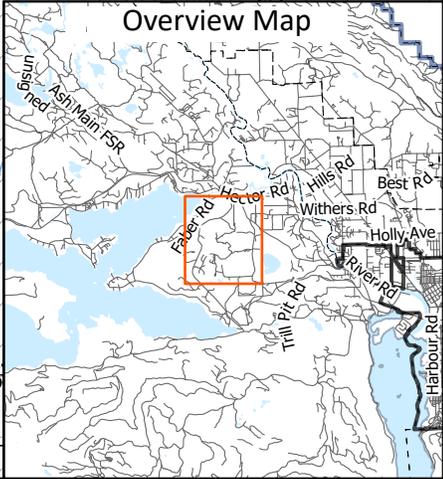
Regional District of Alberni-Clayoquot  
3008 Fifth Avenue  
Port Alberni, BC V9Y 2E3

Email: [planning@acrd.bc.ca](mailto:planning@acrd.bc.ca)  
Telephone: 250-720-2700  
Fax: 250-723-1327

**Date of Notice: August 4, 2021**



**Subject  
Property**



Legal Description: PARCEL A (DD 11574N) OF LOT 197 ALBERNI DISTRICT PLAN 1860 EXCEPT PARTS IN PLANS 29218, 34905 AND EPP49002



# ALBERNI-CLAYOQUOT REGIONAL DISTRICT

3008 Fifth Avenue, Port Alberni BC, CANADA V9Y 2E3 Telephone (250) 720-2700 Fax (250) 723-1327

## Development Variance Application

**MEETING DATE:** July 28, 2021

**ACRD FILE NO.:** DVD20012

**APPLICANT:** 1077514 BC Ltd - Sproat Highland Estates Ltd.

**AGENT:** Helen Sims, Fern Road Consulting

**LEGAL DESCRIPTION:** PARCEL A (DD 11574N) OF LOT 197 ALBERNI DISTRICT PLAN 1860 EXCEPT PARTS IN PLANS 29218, 34905 AND EPP49002

**LOCATION:** Parcel A Lot 197 Katherine Drive, Port Alberni

**ELECTORAL AREA:** "D" Sproat Lake

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**APPLICANT'S INTENTION:** The applicant has applied for a development variance permit to reduce the required watercourse setback from 30.48 m (100 ft) to 15 m (49.21 ft) for future development within the proposed subdivision.

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**Recommendation:** *THAT the Board of Directors consider issuing development variance permit DVD20012, subject to neighbouring properties being notified as per Local Government Act s.499.*

### Development Variance DVD20012:

- i. Development variance of Section 6.2(4)(a) to reduce the watercourse setback from 30.48 m (100 ft) to 15 m (49.21 ft) for future development within the proposed subdivision

**Procedure:** Prior to the issuance of a development variance permit, the Board must first pass a resolution to consider issuing the permit. Staff then notify neighbouring property owners and tenants to afford them the opportunity to make written or verbal submissions to the Board. At a subsequent meeting, the Board issues or denies the development variance permit.

**Sproat Lake Advisory Planning Commission (APC) Recommendation:** The Sproat Lake APC considered the application at their July 19, 2021 meeting where they passed a resolution to concur with the staff recommendation and support the development variance application as presented.

## DVD20012

**Observations:****i. Status of Property:**

The subject property is 86 hectares (213 acres) and is accessed from Katherine Drive. In 2017 the property was rezoned from Forest Rural (A3) District to Rural (A2) District in order to facilitate subdivision into 5 acre parcels. The property is undeveloped rural land with no improvements and varying topography throughout. Much of the property includes impervious bedrock and rocky outcroppings.

A number of wetland areas and tributaries to Nook Creek have been identified on the site plan and assessed in the biologist report prepared by Toth and Associates Environmental Services, dated November 18, 2020. Approximately two-thirds of the property has been selectively logged, including some of the riparian areas surrounding the streams and wetlands.

The property is bounded by private forest lands to the north and west, a 13-lot subdivision to the south, and pasture farm land to the east.

**ii. Services:**

- a. Sewage Disposal:** Onsite sewage disposal.
- b. Water Supply:** On-site water system.
- c. Fire Protection:** Sproat Lake Volunteer Fire Department.
- d. Access:** The property is accessed from Katherine Drive.

**iii. Existing Planning Policies Affecting the Site:**

- a. Agricultural Land Reserve:** Not within the Agricultural Land Reserve.
- b. Official Community Plan:** The Sproat Lake Official Community Plan (OCP) designates the property as "Rural Use". The objective of the Rural Use designation is to maintain the predominantly rural character of the area (Objective 9.1.1). The Rural Use designation supports a minimum lot size of 2 hectares (4.94 acres) for subdivision.

The property is impacted by Development Permit Area I – Riparian Areas Protection (DPA I). DPA I is used to ensure that the ecological values of riparian and wetland habitats have been considered prior to development and that measures will be taken to limit or avoid damage to these ecosystems. DPA I applies to all lands within 15 m (49.21 ft) of Sproat Lake and minor streams.

A development permit was issued in August 2019 to install engineered culverts for two stream crossings; and another in May 2021 to address impacts of the subdivision on the watercourses and wetlands and their associated riparian areas.

**The active subdivision application and current use of the property complies with the Sproat Lake Official Community Plan. Required development permits have been issued. This reduction of the watercourse setback is aligned with the 15 m DPA I.**

**DVD20012**

c. **Zoning:** The property is zoned Rural (A2) District.

Building Setbacks		
A2 - Single Family Dwellings	Required	Proposed
Front lot line setback:	15.24 m (50 ft)	-
Rear yard setback:	9.14 m (30 ft)	-
Side yard setback:	4.57 m (15 ft)	-
A2 - Accessory Buildings		-
Front lot line setback:	15.24 m (50 ft)	-
Rear yard setback:	4.57 m (15 ft)	-
Side yard setback:	4.57 m (15 ft)	-
<b>Section 6.2(4)(a) - Watercourse</b>	30.48 m (100 ft)	<b>15 m (49.21 ft)</b>

**The active subdivision application complies with lot size and width requirements of the Rural (A2) District zone. No variance of A2-specific zoning setback requirements has been requested.**

**Comments:**

In order to increase flexibility for construction and development of the proposed 5-acre+ lots impacted by watercourses, the applicant has applied to reduce the watercourse setback to be aligned with the recommendations of the biologist report (attached) and the Sproat Lake Official Community Plan Development Permit Area I – Riparian Areas Protection.

Section 3, page 10, of the biologist report recommends “watercourse setbacks of 15 m from high water mark of the streams and wetlands on the property, with the exception of the isolated wetlands on proposed Lots 20, and the east end of Lot 24 where we recommend 10 m setbacks.” The applicant has applied for 15 m setbacks for all.

Staff are supportive of the variance request and recommend that the Board of Directors consider the application and proceed with neighbour notification.

Submitted by:



Charity Hallberg Dodds, Planning Technician

Reviewed by:



Alex Dyer, MCIP, RPP, Planning Manager

**DVD20012**



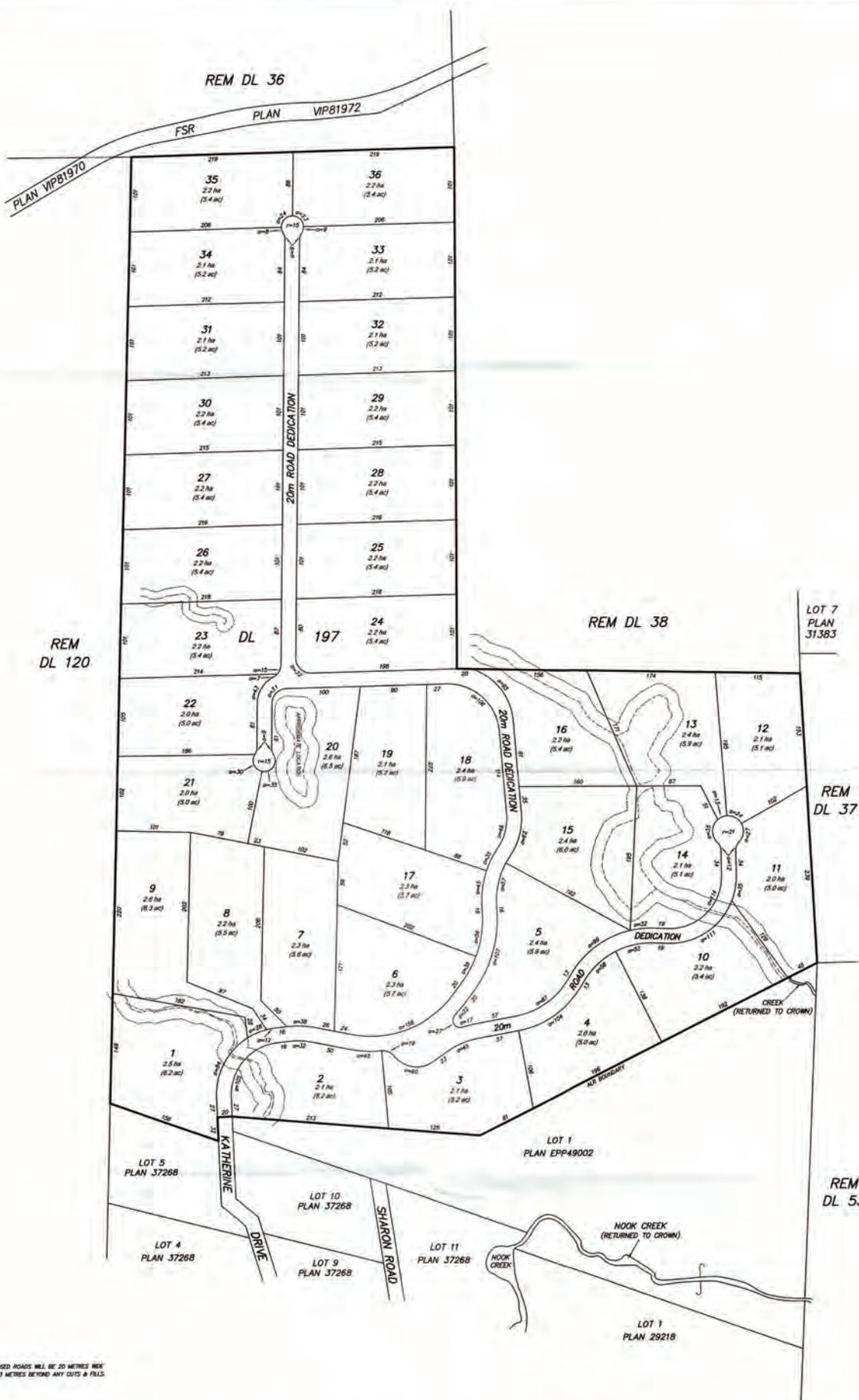
Reviewed by:

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Douglas Holmes, BBA, CPA, CA, Chief Administrative Officer

**DVD20012**

Members: City of Port Alberni, District of Ucluelet, District of Tofino, Yuułu?it?ath Government, Huu-ay-aht First Nations, Uchucklesaht Tribe, Toquaht Nation  
Electoral Areas "A" (Bamfield), "B" (Beaufort), "C" (Long Beach), "D" (Sproat Lake), "E" (Beaver Creek) and "F" (Cherry Creek)



NOTE:  
PROPOSED ROADS WILL BE 20 METRES WIDE  
PLUS 3 METRES BEYOND ANY CUTS & FILLS.

**PROPOSED SUBDIVISION PLAN OF PARCEL A (DD11574N)  
OF LOT 197, ALBERNI DISTRICT, PLAN 1860,  
EXCEPT PARTS IN PLANS 29218, 34905 AND EPP49002.**

SCALE 1:2500



**LEGEND**

ALL DISTANCES ARE IN METRES AND DECIMALS THEREOF  
ALL DISTANCES ALONG CURVES ARE ARC DISTANCES  
ALL DIMENSIONS AND AREAS SUBJECT TO FINAL SURVEY

DL DENOTES DISTRICT LOT  
RMA DENOTES REMAINDER  
ac DENOTES ACRES  
m DENOTES METRES  
as FLAGGED BY TOPI & ASSOCIATES  
--- DENOTES INTERCOURSE HIGH WATERMARK  
--- DENOTES SPECA SETBACK

No.	DATE	REVISION
1.3	2019/04/16	INITIAL PROPOSAL
1.4	2019/05/03	RENUMBER LOTS
1.5	2019/06/19	CHANGE NUMBERS LOTS 8-17, ADD PHASE B01'S
1.6	2019/07/04	REMOVE PREVIOUS LOTS 1-2, RENUMBER REMAINING LOTS
1.7	2019/07/05	CHANGE PHASE 1 & 2 BOUNDARY, RENUMBER LOTS
1.8	2020/07/23	CHANGE PHASE 1 & 2 BOUNDARY
1.9	2020/03/30	ADD MODIFIED ROAD DESIGN, REVISE LOTS 2-7, 11-20
2.0	2020/03/12	REVISE SPECA SETBACKS, PHASE BOUNDARY, RENUMBER LOTS 7-17
2.1	2020/03/19	ADD MODIFIED ROAD DESIGN, REVISE LOTS 1-18
2.2	2020/03/21	REMOVE ONE-DE-SIDE IN PHASES 1 & 2, WOOLLY LOTS 1, 7-8, 11-18
2.3	2020/04/27	WOOLLY PHASE 1 & PHASE 2 BOUNDARY
2.4	2020/12/14	REMOVE ONE-DE-SIDE IN LOTS 1, 5, 8 AND 9

**SIMS ASSOCIATES**  
LAND SURVEYING LTD.  
223 FEIN ROAD W.  
QUALICUM BEACH, B.C. V9K 1S4  
PHONE: 250-752-9121  
FAX: 250-752-9241  
TOLL NUMBER: 18-129-S  
DRAWING NUMBER: 18-129 P2.4(hg)  
DATE: 2020/12/14



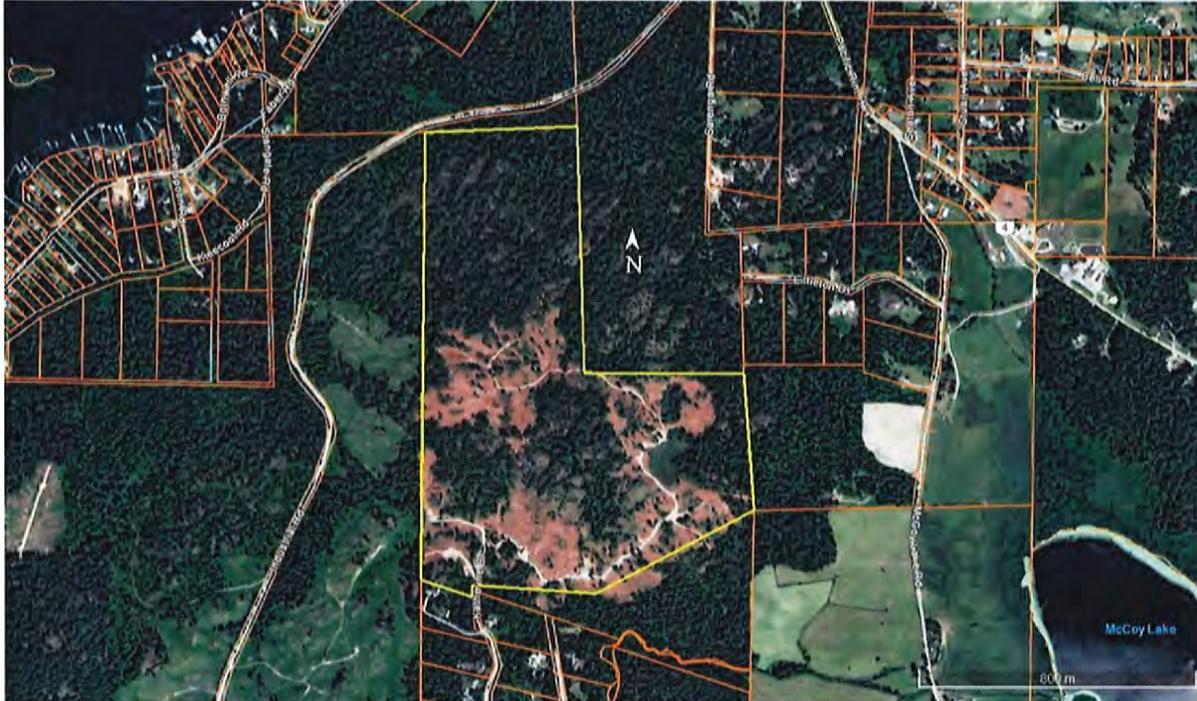
## **Toth and Associates Environmental Services**

6821 Harwood Drive, Lantzville, B.C. V0R 2H0

Tel: (250) 390-7602

E-mail: stoth@shaw.ca

### **Assessment of Watercourses on Parcel A (DD11574N) of Lot 197 Alberni District, Plan 1860 except parts in Plans 29218, 34905 and EPP490002 (PID: 006-768-831), Port Alberni**



*Prepared for:*  
**1077514 BC Ltd**

*Prepared by:*  
**Steve Toth, R.P.Bio, AScT**  
Toth and Associates Environmental Services  
6821 Harwood Drive,  
Lantzville, B.C. V0R-2H0

November 18, 2020

## PROJECT SUMMARY INFORMATION

### Qualified Environmental Professional (QEP) Information

First Name	Steve		
Last Name	Toth		
Designation	R.P.Bio, ASCT	Registration #	1788, 20057
Company	Toth and Associates Environmental Services		
Address	6821 Harwood Drive	Email:	<a href="mailto:stoth@shaw.ca">stoth@shaw.ca</a>
City	Lantzville	Postal/Zip:	V0R 2H0
Prov/state	BC	Country:	Canada
		Phone #	250-390-7602

### Developer Information

Contact Name	Jason Heywood / Ian Rayner		
Company	1077514 BC Ltd.		
Phone #	250-731-4310	Email	<a href="mailto:ecolog7@gmail.com">ecolog7@gmail.com</a> / <a href="mailto:rayner@abtimber.ca">rayner@abtimber.ca</a>
Address			
City	Port Alberni	Postal/Zip:	
Prov/state	BC	Country:	Canada

### Development & Property Information

Development Type	Subdivision: 36 lots, minimum 2.0 ha		
Lot Area (ha)	84.94	Nature of Development	New
Proposed Start Date	2020-05-01	Proposed End Date	2020-12-31
Civic Address	NA		
Local Government	Alberni-Clayoquot Regional District	City:	Port Alberni
Legal Description (PID)	PID# 006-768-831		
Latitude	48	25	11
Longitude	124	01	28

### Watershed Information

Stream Name	Nook Creek tributaries	Fish-bearing	Yes
Stream/River Type	Stream & Wetlands	Fish on property	Yes, lower reaches
Watershed Code	930-137400-50300-94200		
Fish Species	Coho salmon, cutthroat trout & possibly steelhead		

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## 1.0 INTRODUCTION

Toth and Associates Environmental Services conducted an assessment of surface drainages located on the approximate 84.94 ha subject property on September 10, 18, and October 13, 2018. The Alberni Clayoquot Regional District's (ACRD) mapping indicates that the subject property contains Riparian Areas Development Permit Area (DPA) watercourses (Figure 1).

The proposed development plan includes subdivision of the subject property into 36 lots with a minimum lot size of 2.0 ha (Figure 2). The ACRD issued Development Permit #DPD19010 to 1077514 BC Ltd in August 2019 to allow installation of two new culvert crossings. The culvert crossing on a tributary to Nook Creek in the southwest corner of the property was completed in summer 2020.

## 1.2 Background Review

### 1.2.1 Sproat Lake Official Community Plan Bylaw No. P1310, Schedule A, June 11, 2014

The Sproat Lake OCP designates riparian areas along streams, as defined by the provincial *Riparian Areas Regulation* (RAR) as DPA 1 areas. DPA 1 areas include all lands within 30 metres of major streams and within 15 metres of Sproat Lake and minor streams. "Setbacks will be calculated as follows":

- a) for a river or major stream, a 30-metre strip on both sides of the stream measured from the high water mark;
- b) for a minor stream, a 15-metre strip on both sides of the stream measured from the high water mark;
- c) for a ravine less than 60 metres wide, a strip on both sides of the stream measured from the high water mark to a point that is 30 metres beyond the top of the ravine bank; and
- d) for a ravine 60 metres wide or greater, a strip on both sides of the stream measured from the high water mark to a point that is 10 metres beyond the top of the ravine bank.

Our discussion with the ACRD's Planning Department indicated that the use of the word "Setbacks" with regard to DPA 1 areas is a grammatical error, and that the correct terminology should state that "*The Development Permit Area* will be calculated as follows:".

The Sproat Lake OCP indicates that "*For purposes of clarity, the above descriptions should be relied upon rather than the riparian areas shown on Map No. 3. The latter is intended as a visual aid only to help locate these areas*". The Riparian Areas DPA includes all lands within (in this case) 15 metres of the high water mark of streams and wetlands, except where these features are located in ravines, in which case the DPA is 30 m beyond top of ravine bank for ravines < 60 m wide and 10 m from top of ravine bank for ravines that are > 60 m wide.

"Ravine", "top of ravine bank", and "streams" are not defined within the Sproat Lake Official Community Plan. While the provincial RAR does not apply within the ACRD area, it is our interpretation of the wording contained with the Sproat Lake OCP that these features would have the same meaning as the definitions provided in the RAR.

### 1.2.2 Alberni-Clayoquot Regional District Zoning Bylaw 1971

The subject property is zoned A2 (Rural District) according to the ACRD's Maps F8 and E8. This District provides for the conservation of agricultural and non-urban land by the holding of land in large

parcels, and for the protection of public health, safety and welfare in areas which being subject to periodic floods and overflow are unsuitable for urban-type uses and intensive development.

Permitted uses include:

- 1) Single family dwellings, provided that where the area of a lot is 4.046 hectares [10 acres] or greater not more than two such dwellings may be located on one lot. Such dwellings may be located on the same lot as any other use permitted in this district, excepting those listed in (4) and (7) below.
- 2) Where a lot 4.046 hectares [10 acres] or greater in area is classified as farm land in accordance with the provisions of the Taxation Act, the following uses shall be permitted provided they are demonstrated to be essential to the operation of the farm.
  - a) More than one single family dwelling, provided that in no case shall a density of one dwelling to 2.438 hectares [5 acres] be exceeded;
  - b) Temporary accommodation in the form of mobile-homes, provided that where more than one mobile-home is placed on the farm, the requirements of the Mobile Home Parks Regulations, 1967 pursuant to the Health Act be adhered to;
  - c) Not more than two dormitory units.

Where such uses cease to be essential to the operation of a farm, such as by the disestablishment of the farm, the Building Inspector may require their removal.

- 3) Home occupations.
- 4) Airfields, airports, enterprises engaged in Air Transport, and Services Incidental to Air Transport.
- 5) Arboreta, botanical gardens, wildlife refuges and similar uses.
- 6) Farming, feed and hay dealing, truck gardening, orchard or nursery cultivation, greenhouses, and other similar enterprises and uses including the incidental direct sale of farm produce to the consumer.
- 7) Golf courses.
- 8) Grazing livestock, but excluding abnormally intensive livestock feeding operations.
- 9) Mushroom growing, provided that such use is located at a distance of not less than 30.48 meters [100 feet] from all street or lot lines.
- 10) Parks and playgrounds.
- 11) Accessory buildings and uses.
- 12) Upland aquaculture (fish farming) including all activities incidental to such operations such as hatchery and nursery facilities, grow out ponds, storage and processing aquatic organisms cultivated, reared and harvested on the lots.
- 13) Radio Transmission Towers.
  - a) Wineries and Cideries provided that a vineyard or orchard at least 2 hectares (5 acres) in area is under continuous cultivation on the same farm or legal parcel.
  - b) Sales of wine and cider produced on the farm and related products, provided that the retail area does not exceed 500 square feet or 5 percent of the floor area of the winery, whichever is more; winery and cidery tours, as ancillary uses to a winery or cidery.
- 14) Medical Marihuana Facilities provided that the facilities are located on a lot that is 2.43 hectares (6 acres) or greater in area and that the facilities are located a minimum of 30.48 metres (100 feet) from all lot lines.

#### Lot Area Requirements

Where Section D(2)(g) of By-law No. 476 (East Sproat Lake Official Settlement Plan) applies, no lot shall be less than 1.7 hectares (4.25 acres) in lot area.

*Note: Apparently the East Sproat Lake Official Settlement Plan preceded the current Sproat Lake OCP. We could not find any link to the old Official Settlement Plan.*

Section 6.2 of the ACRD's Zoning Bylaw indicates that "Notwithstanding anything else contained in this By-law, except where relief is granted by the Water Resources Service of the Department of Lands, Forests and Water Resources, no building shall be constructed:

- Within 7.62 meters [25 feet] of the natural boundary of a lake or within 30.48 meters [100 feet] of the natural boundary of any other natural water course or source of water supply (other than a well, which is governed by the Sanitary Regulations, 1917)"

According to provincial records, this department has not existed since 1975. The ACRD's Zoning Bylaw does not appear to provide a definition for "watercourse" or "stream".

### 1.2.3 BC Water Sustainability Act

The provincial *Water Sustainability Act* (WSA) defines a stream as:

- a) a natural watercourse, including a natural glacier course, or a natural body of water, whether or not the stream channel of the stream has been modified, or
- b) a natural source of water supply,

including, without limitation, a lake, pond, river, creek, spring, ravine, gulch, wetland or glacier, whether or not usually containing water, including ice, but does not include an aquifer.

### 1.2.4 Watercourses

Based on the Alberni-Clayoquot Regional District's mapping, there are two surface drainages located in the southwest corner and east side of the subject property that form part of the Nook Creek drainage system (Watershed Code: 930-137400-50300-94200), and an unnamed surface drainage on the west side of the property that flows to Sproat Lake (Figure 1). The provincial Habitat Wizard and Fisheries Inventory Data Queries (FIDQ) information indicate that Nook Creek supports populations of coho salmon and cutthroat trout. The upstream limit of fish distribution in the Nook Creek system is not indicated.

## **1.3 Field survey methods**

As a definition of "watercourse" is not provided by the Zoning Bylaw or Sproat Lake OCP, for the purposes of delineating watercourses on the subject property we used the definition of "stream" provided by the provincial *Riparian Areas Regulation* (RAR).

The RAR defines a stream "as any of the following that provides fish habitat:

- a) a watercourse, whether it usually contains water or not;
- b) a pond, lake, river, creek or brook;
- c) a ditch, spring or wetland that is connected by surface flow to something referred to in paragraph (a) or (b);"

While the Regulation itself does not expand upon the explanation of what constitutes a "watercourse", Section 1.4.2 of the RAR Assessment Methods indicates that "The Riparian Areas Regulation defines a stream as any watercourse – natural or human-made – that provides fish habitat that contains water on a perennial or seasonal basis, is scoured by water or contains observable deposits of mineral alluvium, or has a continuous channel bed including a watercourse that is obscured by overhanging or bridging vegetation or soil mats".

Therefore the point at which a watercourse would no longer be considered assessable under the RAR is the point from which there is no evidence of a continuous alluvial channel or surface flow connectivity with downstream fish bearing waters.

## **2.0 FIELD SURVEY RESULTS**

The high water marks of the watercourses on the subject property were flagged with orange *Riparian Management Zone* flagging and geo-referenced with a Garmin Map 60CSx GPS.

### **2.1 Nook Creek tributary in southwest corner**

The watercourse in the southwest part of the property is fish bearing, with juvenile salmonids observed up to the existing lower road crossing culvert (Photograph 1). Fish access is possible upstream to at least the perched outlet of the culvert (Photograph 2) at the upper road crossing (Figure 3). A natural barrier to upstream fish passage formed by a bedrock cascade is located 60 m upstream of the upper road crossing. However, the landowners have observed coho salmon spawning upstream of the barrier, and therefore the bedrock cascade can be considered passable by adult salmonids at certain stream flows. A wide area of floodplain with braided stream channel occurs between the lower and upper road crossings. Most of the riparian area upstream of the upper road crossing has been logged. The stream channel averages 1.3 m in width with substrates comprised of cobble, gravel and boulder (Photographs 3 & 4). Channel gradient averages 6.4%.

### **2.2 Nook Creek tributary on east side of property**

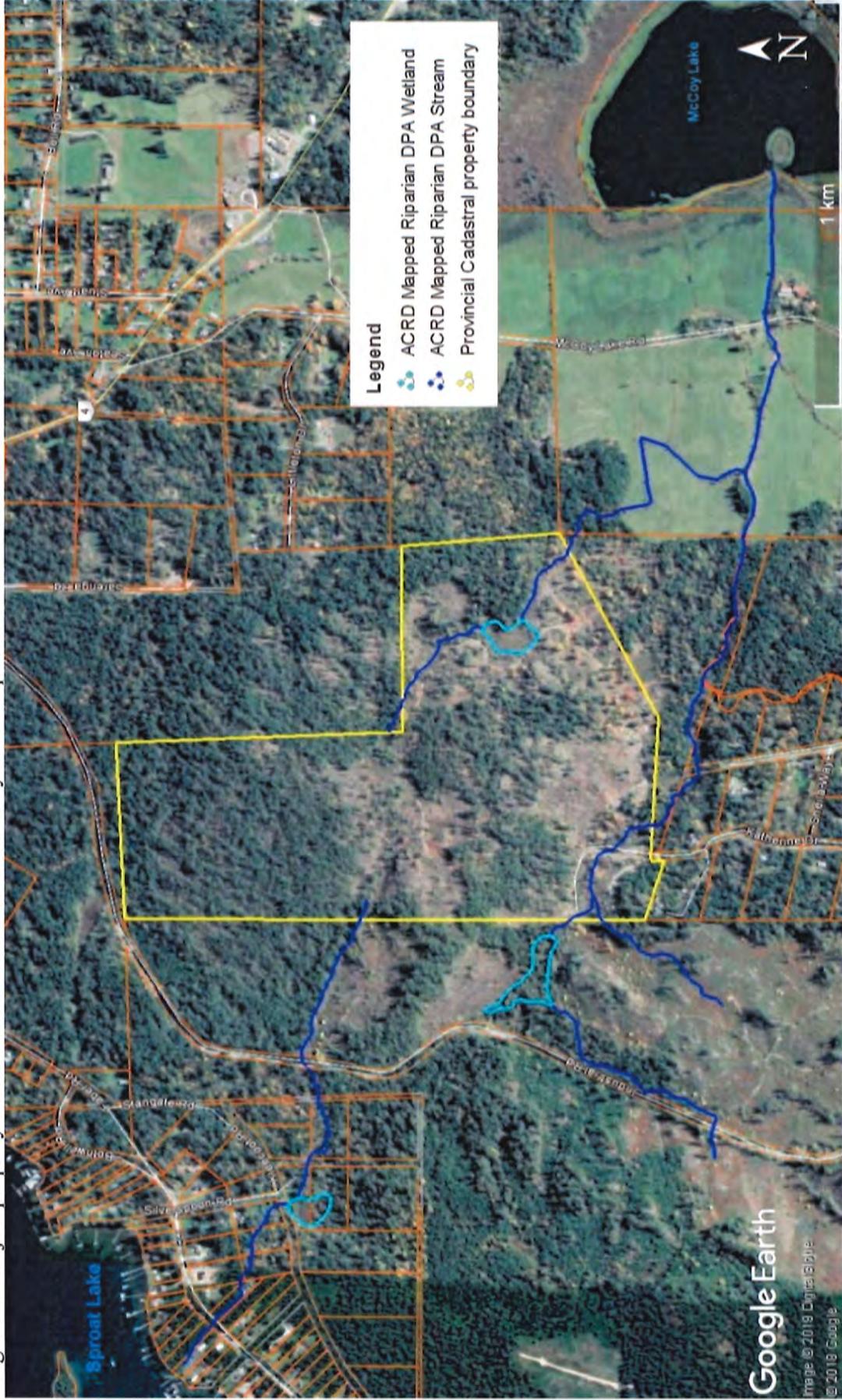
The upstream end of the watercourse on the east side of the property commences below an isolated wetland with a braided, non-defined, non-alluvial outlet. The upper reach of the watercourse is not well defined (Photographs 5 & 6) until it enters the subject property. The upper reach has been logged on the subject property (Photograph 7). Average channel gradient of the upper reach is 5.9% with a channel width of 1.0 m and substrates comprised of gravel, fines and cobble. The upper Reach of the watercourse runs to a 0.43 ha upper wetland, with the lower 20 m of stream channel braided and poorly defined. Surface flows at the time of the September 10, 2018 survey started at spring seepages located approximately 30 m upstream of the upper wetland.

The upper wetland (Photographs 8 & 9) consists of a sedge dominated core area of open water fringed with hard-hack. Dead standing western redcedar snags suggest that this wetland has undergone alternating periods of inundation and draining most likely associated with beaver activity. The upper wetland drains to a 0.76 ha lower wetland.

The lower wetland appears to have diminished in size considerably over the past several years and is transitioning to red alder regenerative forest with reed canary grass (Photograph 10). Small areas of aquatic (yellow pond lily) vegetation were still apparent near the downstream end of the wetland. It appears that the control at the outlet (probably an old beaver dam) was removed by machine several years ago. The only standing water in the wetland at the time of survey was at the outlet (Photograph 11).

Review of available air photos indicated that the wetlands were forested in 2001 and by July 2005 the forest cover was dead and both of the wetlands were flooded. In the July 2012 air photo only the upper wetland contained water.

Figure 1. Subject property location and stream network on July 2018 air photo





The lower wetland drains to a watercourse running through the southeast corner of the property. Approximately the upper 60 m of the channel below the outlet of the lower wetland appears to have been ditched. The channel (Photograph 12) has largely been logged. A logging road crossing constructed out of waste wood (Photograph 13) causes some stream flows to run down the road during high water. A barrier to upstream fish passage formed by a bedrock outcrop is located approximately 15 m downstream of the road crossing (Photograph 14). Average channel gradient for the lower reach of the watercourse in the southeast corner of the property is 6.1%, with a channel comprised of fines, bedrock, and cobble / gravel downstream of the barrier. Channel width averages approximately 2.1 m. No fish were observed in the watercourse.

## 2.2 Isolated Wetlands

A small isolated wetland is located on proposed Lot 24 at the headwaters of the watercourse along the east side of the property. Two isolated hard-hack dominated wetlands are situated in the centre of the property (Photographs 15 & 16). The southern isolated wetland on proposed Lot 20 drains northerly, but there was no culvert at the road or defined channel connecting this wetland with the smaller wetland to the north on the proposed road / Lot 23.

The northern wetland on the proposed road / Lot 23 was formed by back-flooding created by a logging road grade. The wetland drains via a water-bar across the logging road, but there was no evidence of surface flows or stream channel for the first 65 m below the road. Downstream of this point to the west edge of the property there is a defined slough-like channel through proposed Lots 23 & 26 (Photograph 17).

## 3.0 WATERCOURSE SETBACKS

Section 6.2 of the ACRD's Zoning Bylaw indicates that "Notwithstanding anything else contained in this By-law, except where relief is granted by the Water Resources Service of the Department of Lands, Forests and Water Resources, no building shall be constructed:

- Within 7.62 meters [25 feet] of the natural boundary of a lake or within 30.48 meters [100 feet] of the natural boundary of any other natural water course or source of water supply (other than a well, which is governed by the Sanitary Regulations, 1917)".

However, for minor streams not located within ravines (e.g. the watercourses on the subject property) the Sproat Lake OCP's Riparian DPA only applies to a 15-metre strip on both sides of the stream measured from the high water mark. It is our understanding that the ACRD may consider a reduction to the watercourse setbacks under a variance application. **Therefore, we are recommending watercourse setbacks of 15 m from high water mark of the streams and wetlands on the property, with the exception of the isolated wetlands on proposed Lots 20, and the east end of Lot 24 where we recommend 10 m setbacks.** We have not considered the isolated northern wetland straddling proposed Lots 23 / 24 and the proposed road to represent a watercourse, as it has been formed by back-flooding created by a road grade and is therefore not *a natural watercourse* or *natural source of water supply* under the WSA.

The proposed watercourse setbacks would exceed the riparian protection provided by the provincial RAR, which would require 10 m setbacks for the streams, 15 m for the wetlands and would provide no protection for the isolated wetlands on the subject property.

Recommended watercourse setbacks are shown on Figure 4.

### 3.1 Sproat Lake OCP Riparian Areas DPA Guidelines

The Sproat Lake OCP includes the following guidelines for the Riparian Areas DPA:

- i. Development or alteration should be planned to avoid intrusion into DPA I areas and to minimize the impact of any activity on these areas.
- ii. A QEP should be retained for the purpose of preparing a report detailing site conditions and describing any measures that must be taken in order to protect the riparian area.
- iii. Protective measures such as the planting or retention of trees or vegetation may be required to preserve, protect, restore or enhance streams, fish habitat or riparian areas.
- iv. In the absence of a report from a QEP, a minimum vegetated buffer of 30 metres between the high water mark and any building or structure should be preserved on major streams free from development, and 15 metres on minor streams or streams.
- v. The total amount of impervious cover on property adjacent to a stream should minimize impact on the receiving aquatic environment. Consideration should be given to reducing impervious cover through reduction in building footprint and paved areas, exceeding the minimum riparian setback where feasible, and use of on-site infiltration.
- vi. The construction of a small accessory building such as a gazebo, garden shed or play house may be permitted if all the following apply:
  - a) The building is located within an existing landscaped area;
  - b) No native trees are removed;
  - c) The building is located a minimum of 15 metres from the high water mark of a minor stream or 30 metres from the high water mark of a major stream; and
  - d) The total area of the structure is not more than 9.2 m<sup>2</sup>.

### 4.0 ASSESSMENT OF IMPACTS

Roads will be constructed to Ministry of Transportation and Infrastructure (MoTI) standards. The watercourse crossings will be constructed to MoTI and FLNRO standards / specifications and will be authorized under *Water Sustainability Act* Section 11 Notifications. Onsite Engineering Ltd. has conducted a hydrologic analysis and prepared design for the watercourse crossings. The culvert installation on Nook Creek tributary in the southwest corner of the property was completed in summer 2020.

Phase 1 of the proposed subdivision will include Lots 1 – 9 in the southwest corner of the property and will include construction of approximately 725 m of road, including a watercourse crossing on the southwest Nook Creek tributary (Figure 5). Within Phase 1, Lots 1, 2 and 9 contain Riparian DP areas.

- Lot 1 is not constrained by the Riparian DPA and has an existing road access that will likely be re-used for a driveway access.
- The developable area of Lot 2 lies east of the Nook Creek tributary, with a small portion lying west of the tributary. It is likely that this small portion can be partially restored during removal of the existing road and culvert crossing (Figure 5).
- Lot 9 is not constrained by the Riparian DPA, however driveway access is constrained between the 15 m Riparian DPA / watercourse setback boundary on the north side of Nook Creek tributary and the lot boundary. Our rough measurements indicate that the distance between the setback boundary and lot boundary measures approximately 10 m at its narrowest point.

Approximately the first 60 m of driveway (Figure 5) will require a design that avoids deposition of traditional road cut and fill materials within the Riparian DPA boundary.

Phase 2 will include approximately 270 m of road construction and a watercourse crossing on the eastern Nook Creek tributary. Within Phase 2, Lots 10, 11, 13 and 14 contain Riparian DP areas.

- Lots 10 and 11 are not constrained by the DP area, as the eastern Nook Creek tributary runs along the boundary between the two lots.
- Lots 13 and 14 contain significant areas of the Riparian DPA along the east side of the upper and lower wetland, however building sites and access to these lots are not constrained.

Phase 3 will include approximately 900 m of road construction. Within Phase 3, Lots 15, 16 and 23 contain Riparian DP areas.

- Lot 15 is not constrained, with the Riparian DPA associated with the lower wetland running along the east end of the property
- Lot 16 contains the Riparian DPA associated with the west side of the upper wetland, and the upper Reach of the easterly Nook Creek Tributary. Lot 16 is not constrained by the Riparian DPA.
- Lot 23 contains the headwaters of the unnamed tributary to Sproat Lake along the north side of the lot and is not constrained by the Riparian DPA.

Phase 4 will include approximately 300 m of road construction. Only Lot 26 contains a Riparian DPA associated with headwaters of the unnamed tributary to Sproat Lake in the southwest corner of the lot. Lot 26 is not constrained by the Riparian DPA.

Phase 5 will include approximately 215 m of road construction. There are no Riparian DP areas on Phase 5.

Figure 3. Watercourse features

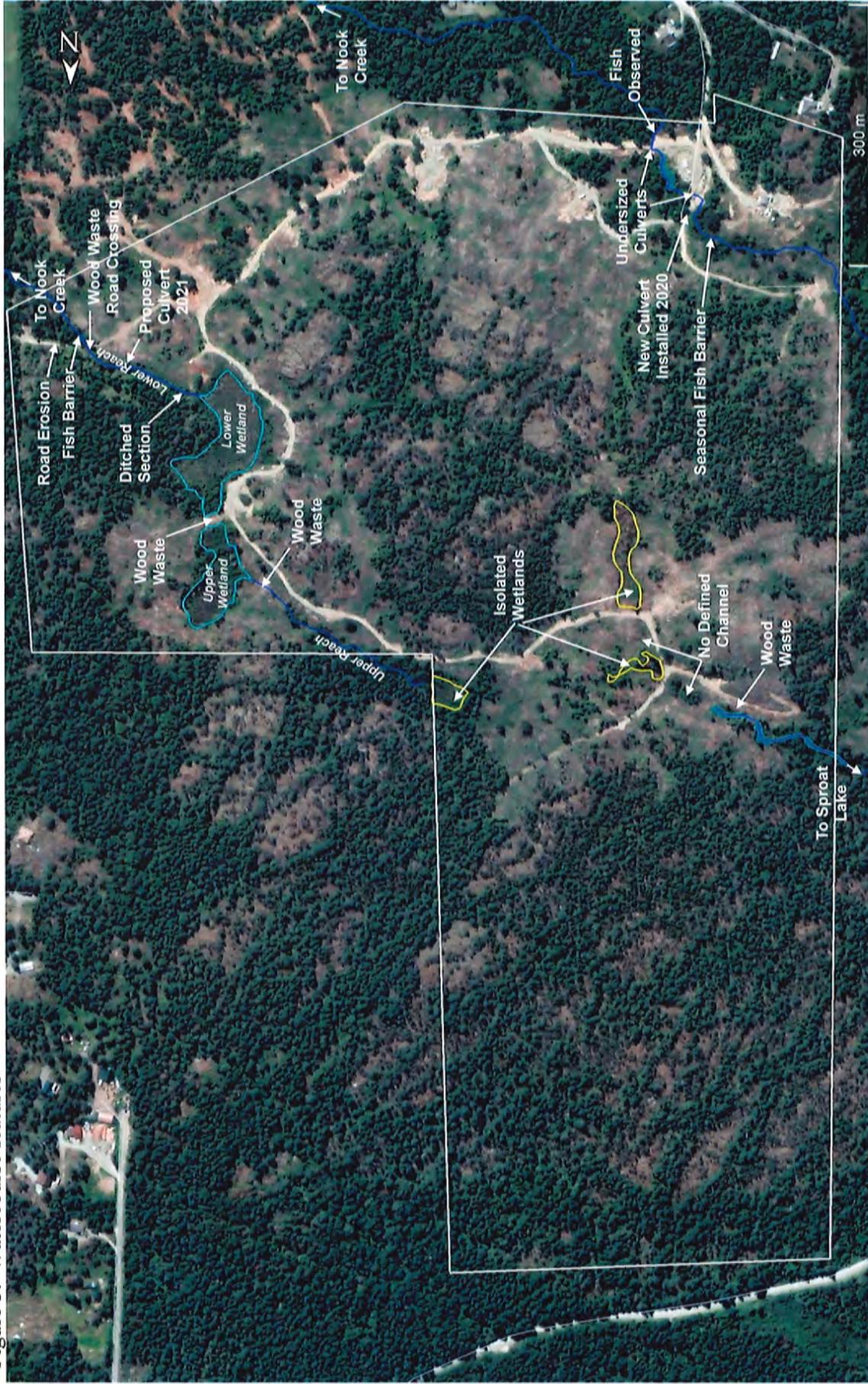
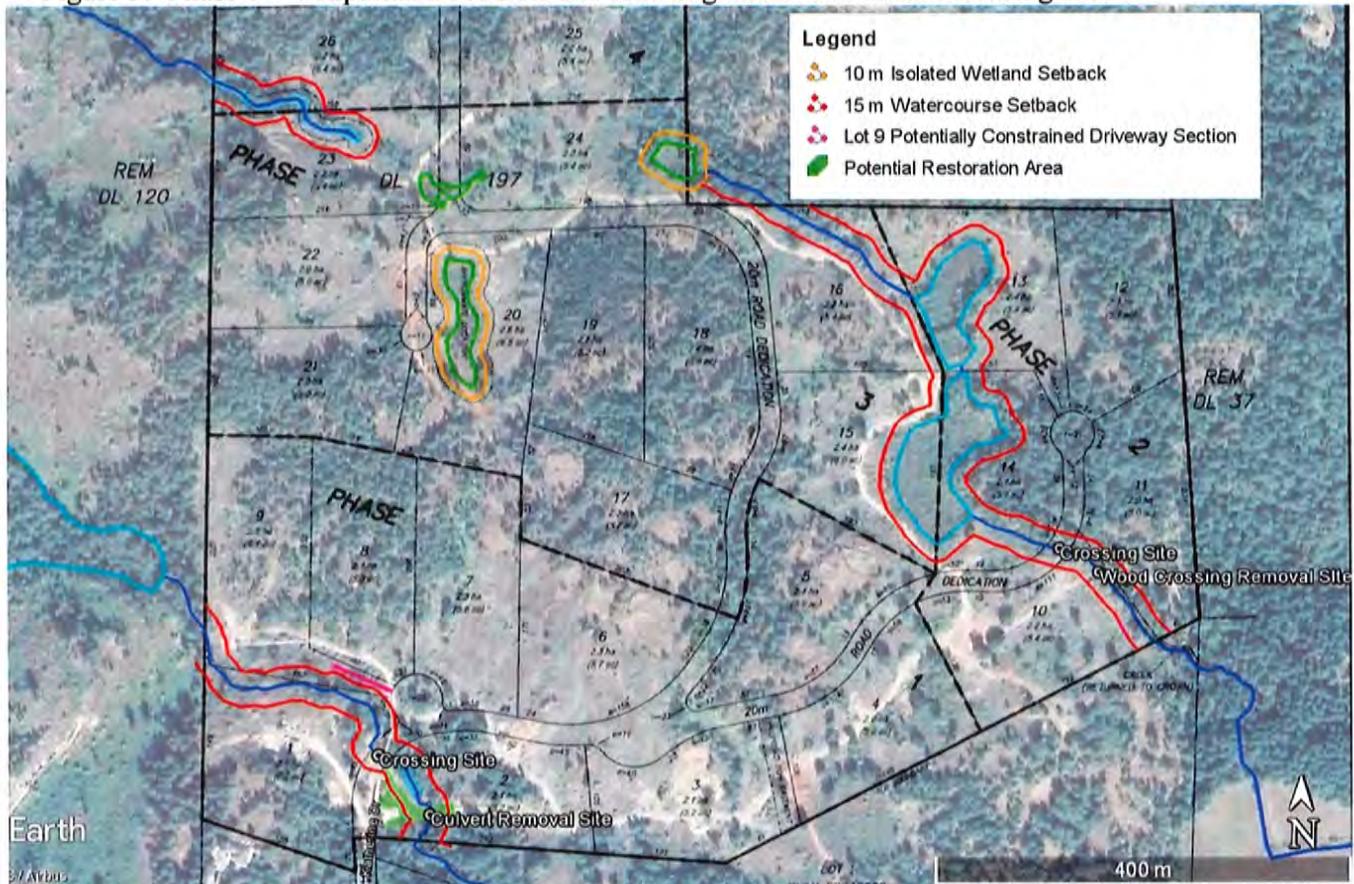




Figure 5. Phase 1 – 4 Riparian DPA Lots and road alignment with stream crossing sites



## 5.0 DISCUSSION & RECOMMENDATIONS

While the provincial *Riparian Areas Regulation* (RAR) does not apply within the ACRD, one of the objectives listed within the Sproat Lake OCP is to achieve conformance with the objectives of the provincial *Fish Protection Act* (now *Riparian Areas Protection Act*). Under the RAR, the streams on the subject property would receive 10 m Streamside Protection and Enhancement Area (SPEA) setbacks and the wetlands would receive 15 m SPEA setbacks, compared to the 30.48 m required by the ACRD's Zoning Bylaw.

A significant level of effort went into the proposed subdivision plan to reduce road density, avoid intrusion into riparian areas and limit the number of watercourse crossings. Under the proposed subdivision plan only two watercourse road crossings will be required (Figure 4). The proposed road crossing of the watercourse in the southwest corner of the property between Lots 1 and 2 was constructed in summer 2020. The proposed new road crossing of the watercourse on the east side of the property will be on a well defined, previously logged section of channel immediately above a bedrock dominated cascade. As a component of the WSA permitting required for this new crossing we suggest that the existing crossing downstream on Lot 10 be removed. Onsite Engineering Ltd. has conducted a Hydrologic analysis and calculation of culvert sizing for the road crossings.

It is likely that the existing logging roads will be used during construction of the new proposed roads, and therefore the de-activation and restoration of the existing logging road culvert crossings will be conducted following completion of construction of the new road crossings.

As indicated previously, approximately the southern two-thirds of the subject property has been selectively logged, including portions within the Riparian DPA. Subdivision and subsequent development of the parcels created by subdivision will allow the ACRD to identify and protect the watercourse setbacks on the subject property, as well as require restoration of previously disturbed areas within the Riparian DPA as a condition of future development permit applications.

It was noted during the field surveys that there are several areas on the property where excessive volumes of woody debris have been deposited within stream channels (Photograph 18) to function as corduroy roads / culverts. This wood waste should be removed to prevent stream back-flooding and erosion during high water.

There is good potential to increase water storage on the property by modifying the existing wetlands. The wetlands could be dredged to increase retention capacity. The dredged materials could be re-used for landscaping and garden / agriculture areas. Beneficial aspects of increasing water retention on the property include fire protection water storage, irrigation water storage, stormwater retention and increased flow duration to downstream fish bearing waters. We believe that this would be in keeping with existing zoning / permitted land use. All such works would need to be approved by Forest Lands, Natural Resource Operations & Rural Development, and potentially Fisheries and Oceans, Canada. The isolated wetlands on proposed Lots 20 and 24 would be good candidates for fire protection water storage due to their proximity to proposed roads.

As much of the subject property is comprised of impervious bedrock, pre-development conditions would be expected to include minimal natural potential for retention of run-off or stormwater, except in small depression areas and fractures within the bedrock. It has been our experience that residential development of bedrock dominated sites can actually result in increased capacity for the site to retain stormwater due to the placement of pervious structural and non-structural fill material for buildings, roads, and lot grading.

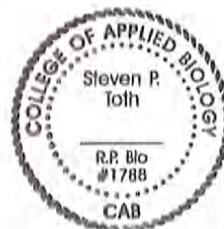
As the current development proposal involves subdivision only, we are not including any specific requirements for permanent delineation or restoration of the Riparian DPA on the subject property. It is our recommendation that as those parcels created by the proposed subdivision which contain Riparian DPAs are developed, that the ACRD require identification and protection measures for the watercourse setbacks on those parcels, as well as restoration of previously disturbed areas within the Riparian DPA as a condition of the development permit applications.

Please contact us if you require any additional information.

Sincerely,  
Steve Toth, AScT, R.P.Bio.



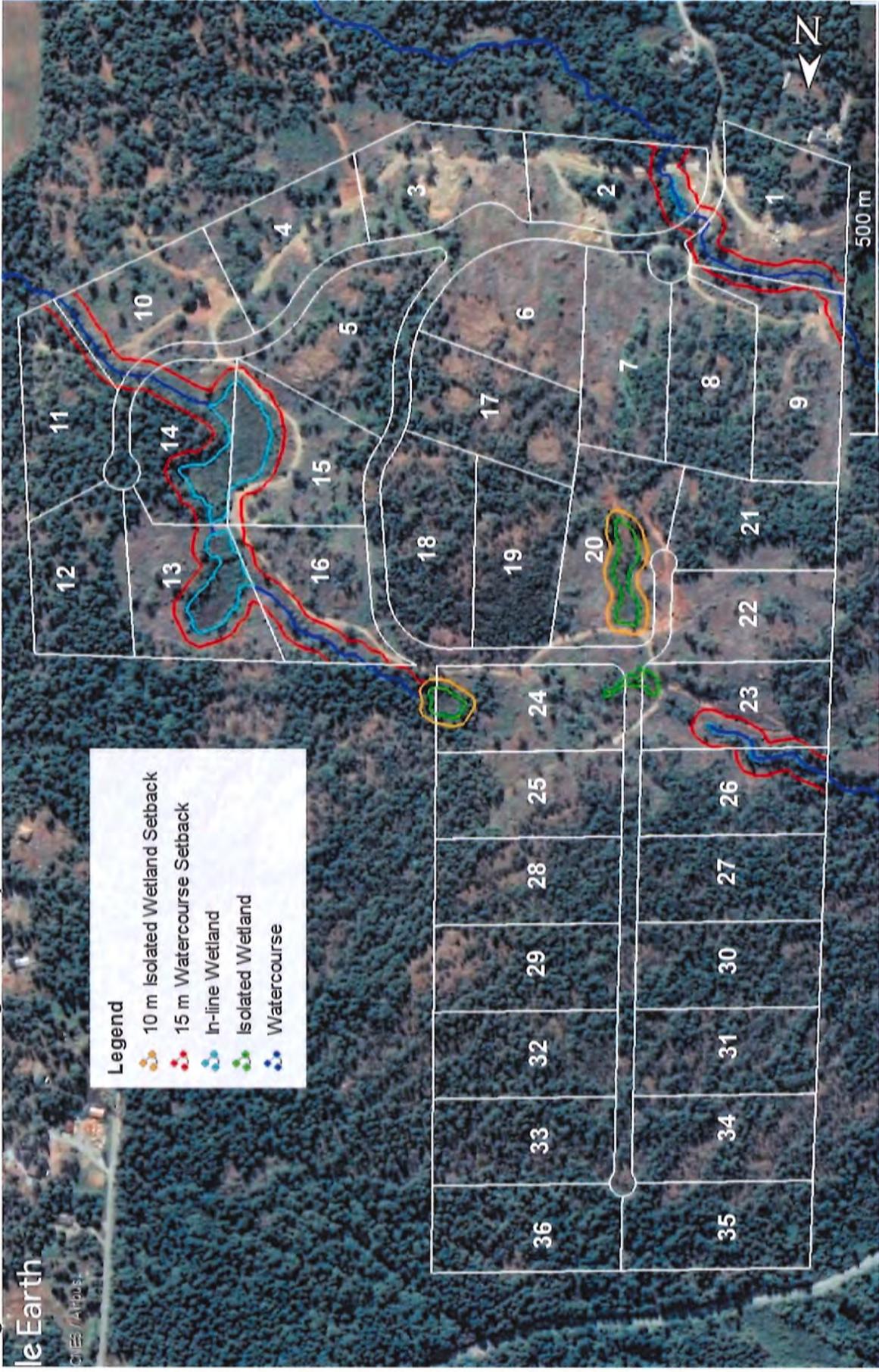
**Toth and Associates Environmental Services**



#### STATEMENT OF LIMITATIONS

This report was prepared exclusively for 1077514 BC Ltd. by Toth and Associates Environmental Services. The quality of information, conclusions and estimates contained herein is consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by Toth and Associates Environmental Services, their contractors and/or supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by 1077514 BC Ltd. only. Any other use or reliance on this report by any third party is at that party's sole risk.

Figure 6. Subdivision outline on August 2018 airphoto with watercourse setbacks



**6.0 PHOTOS**



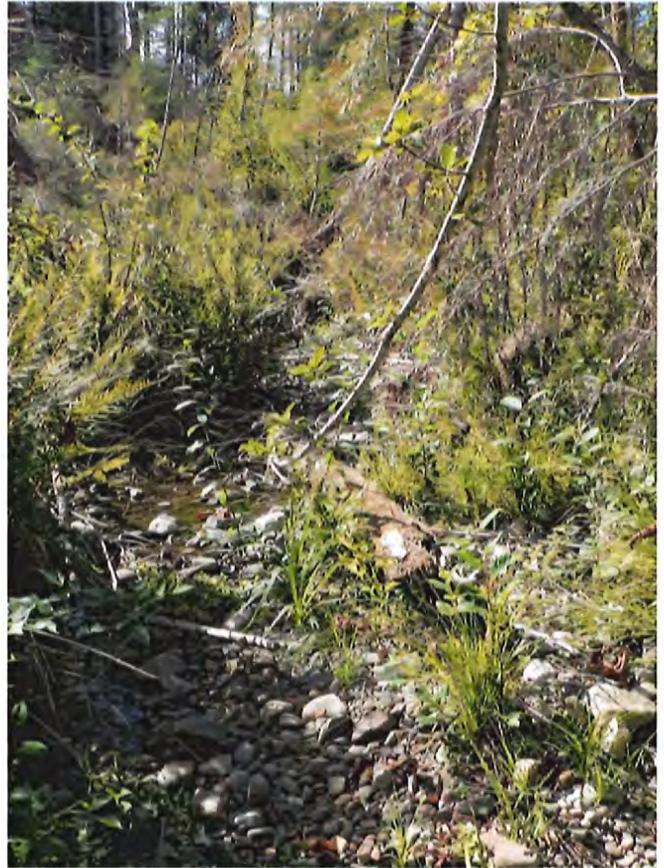
Photograph 1. September 18, 2018. View upstream to lower road crossing culvert.



Photograph 2. View upstream to perched outlet of upper road crossing culvert.



Photograph 3. View downstream on watercourse in the southwest part of the property.



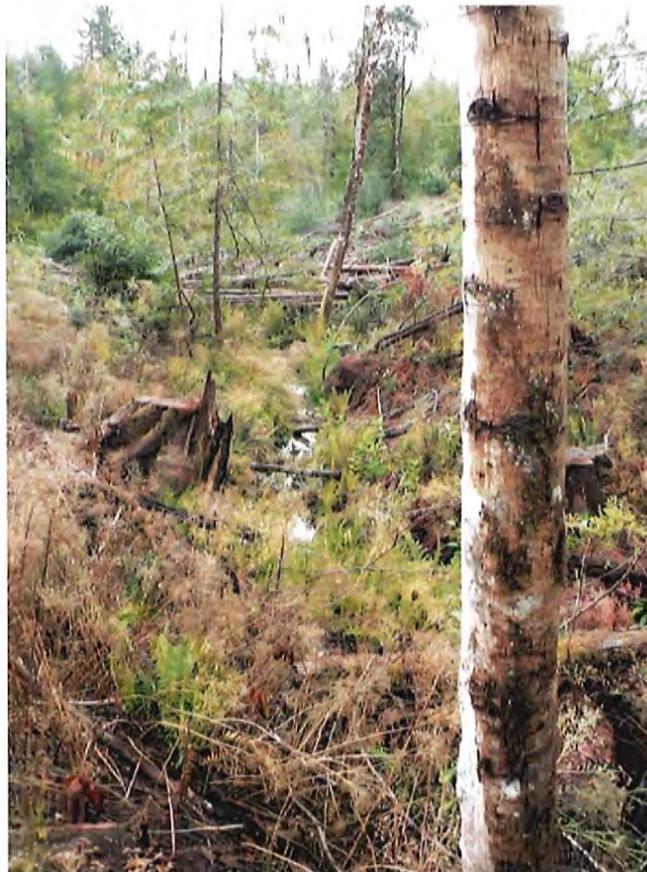
Photograph 4. View upstream on watercourse in the southwest part of the property.



Photograph 5. View upstream on watercourse on the east side of the property.



Photograph 6. View downstream on watercourse on the east side of the property.



Photograph 7. View downstream through logged channel on the east side of the property.



Photograph 8. View to upper wetland on the east side of the property.



Photograph 9. View of core area of the upper wetland on the east side of the property.



Photograph 10. View of typical successional vegetation in lower wetland on the east side of the property.



Photograph 11. View of standing water at the outlet of the lower wetland.



Photograph 12. View downstream on lower reach of the watercourse in the southeast corner of the property.



Photograph 13. View of road crossing constructed with wood debris.



Photograph 14. View downstream from road crossing on Lot 7 to top of bedrock cascade.



Photograph 15. September 18, 2018. View from road to isolated southern wetland on Lot 22.



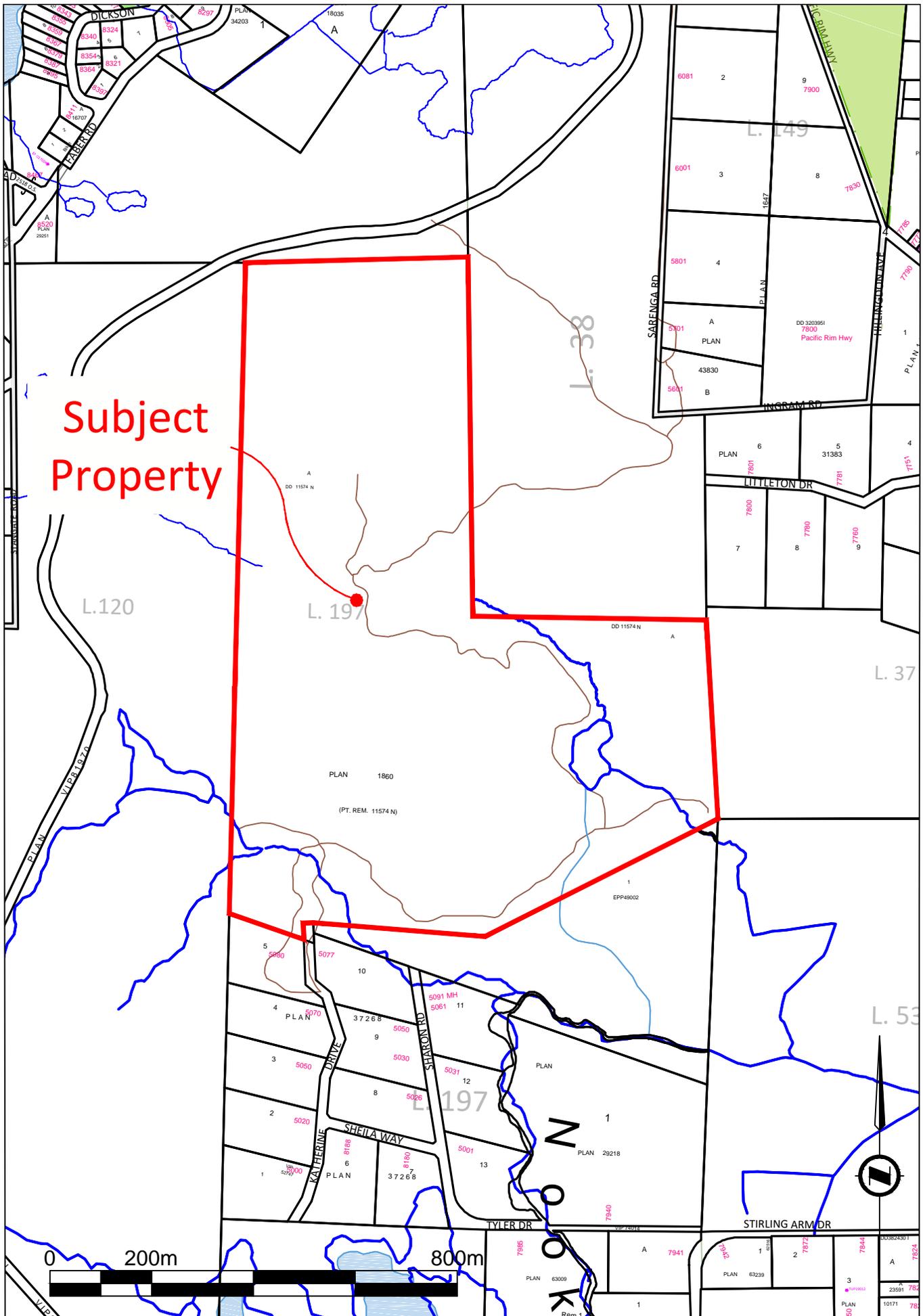
Photograph 16. September 18, 2018. View to isolated northern wetland on Lot 26.



Photograph 17. View downstream on wide, slough-like watercourse on the west side of the property.



Photograph 18. View of wood corduroy road between upper and lower wetland.



Legal Description: PARCEL A (DD 11574N) OF LOT 197 ALBERNI DISTRICT PLAN 1860 EXCEPT PARTS IN PLANS 29218, 34905 AND EPP49002