



# ALBERNI-CLAYOQUOT REGIONAL DISTRICT

3008 Fifth Avenue, Port Alberni BC, CANADA V9Y 2E3

Telephone (250) 720-2700 Fax (250) 723-1327

## MEMORANDUM

**To:** P1430 Public Hearing  
**From:** Mike Irg, GM of Planning and Development  
**Meeting Date:** March 1, 2021  
**Subject:** Public Hearing Bylaw P1430  
RD21005 – Lot 45, Taylor Arm Drive (Mykyte)

A first public hearing for Bylaw P1430 was held electronically using Zoom on Monday, October 4, 2021 at 7:00 pm. At the October 13, 2021 ACRD Board meeting the Board of Directors received the October 4, 2021 public hearing minutes and passed the following motion:

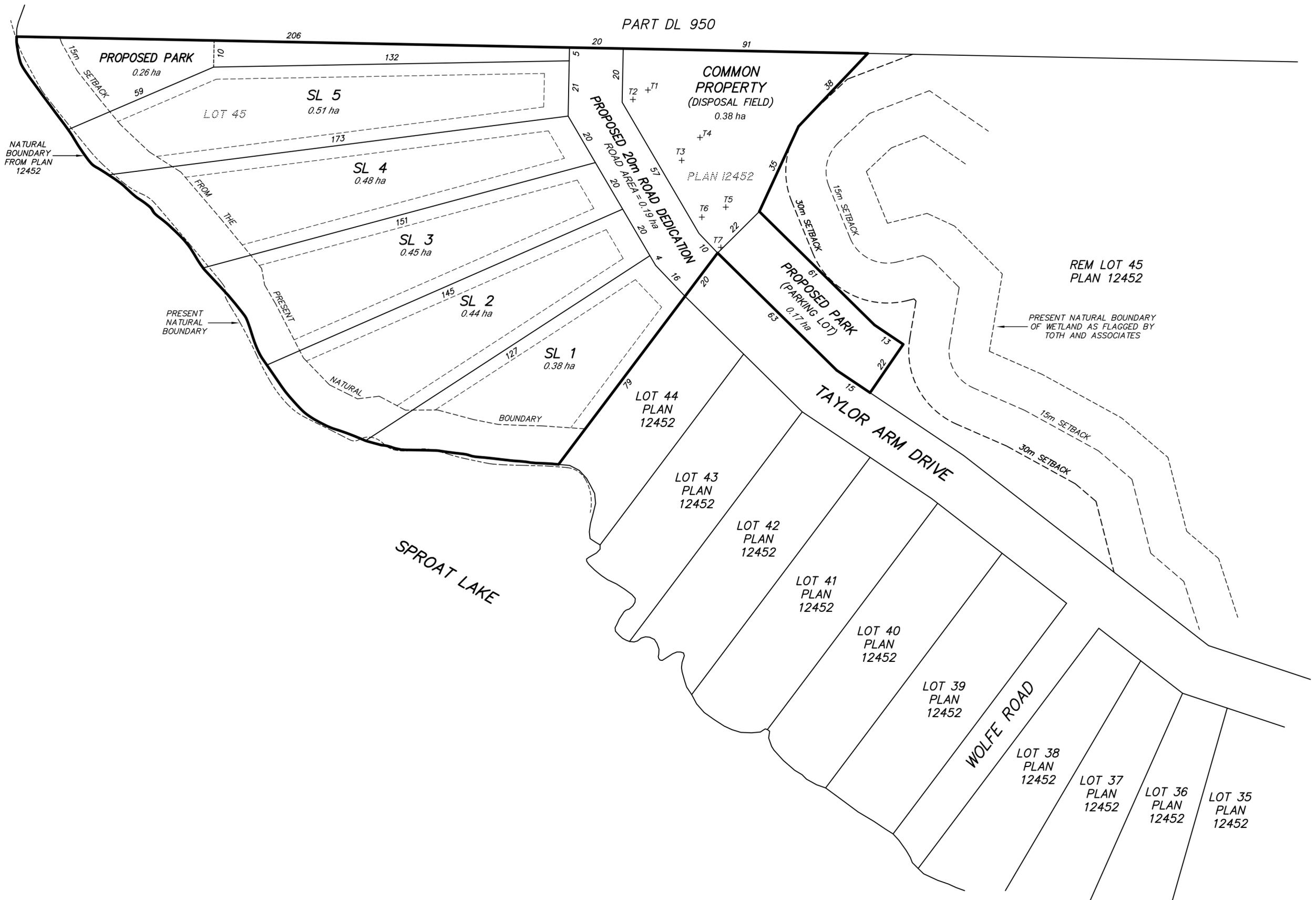
*“THAT the applicant be requested to provide additional information on a development concept for the balance of the property and further instruct staff to hold a second public hearing and that the public hearing be delegated to the Director for Electoral Area “D” (Sproat Lake), the Alternate Director or the Chairperson of the ACRD Board.”*

The applicant has provided the attached concept plan for the entire 37.8 hectares of Lot 45. Staff note that Bylaw P1430 only applies to a 3.2 hectare portion of Lot 45. The portion of the property outside of this rezoning application is split-zoned with the majority zoned Forest Rural (A3) District and a +/- 7.6 hectare portion on the east side of the property adjacent to Asher Road and Clayoquot Road zoned Acreage Residential (RA1) District.

The balance of the property that is zoned A-3 would require a separate rezoning application before the balance of the development could proceed. To date, a rezoning application for the balance of the property has not been submitted.

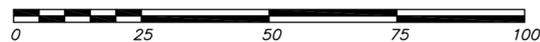
Prepared by: Michael Irg  
Mike Irg MCIP, RPP, GM of Planning and Development

## RD21005



**PROPOSED BARE LAND STRATA PLAN OF  
PART OF LOT 45, DISTRICT LOT 622,  
CLAYOQUOT DISTRICT, PLAN 12452.**

**SCALE 1:1000**

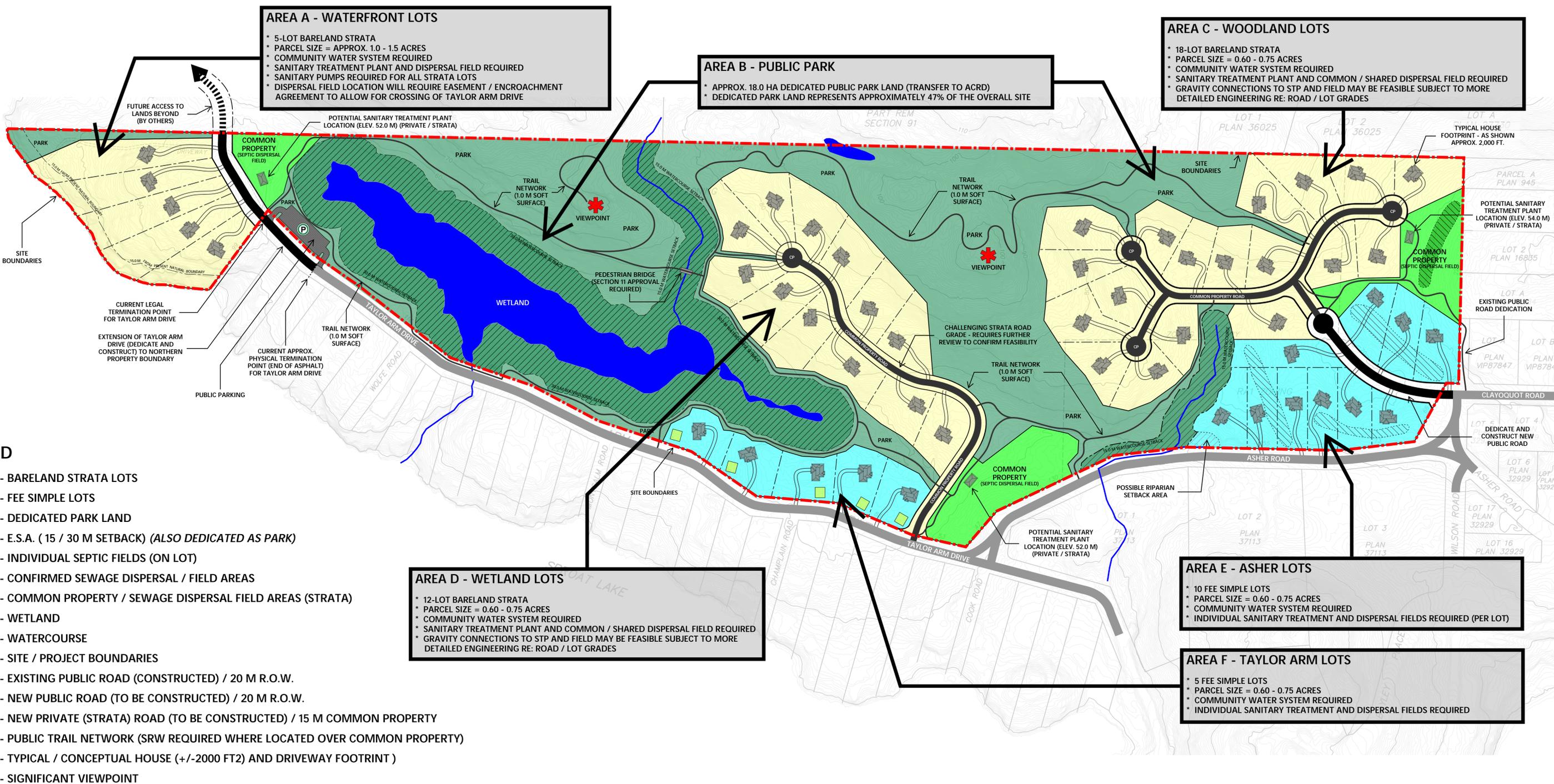


**LEGEND**

ALL DISTANCES ARE IN METRES AND DECIMALS THEREOF.  
ALL DISTANCES ALONG CURVES ARE ARC DISTANCES.  
ALL DIMENSIONS AND AREA ARE SUBJECT TO FINAL SURVEY.  
DL DENOTES DISTRICT LOT  
REM DENOTES REMAINDER  
ha DENOTES HECTARES  
SL DENOTES STRATA LOT  
+T7 DENOTES TEST PIT LOCATION  
--- DENOTES ACRD (RA1) ZONING SETBACKS

| No. | DATE       | REVISION   |
|-----|------------|--|
| 1   | 2020/12/22 | INITIAL PROPOSAL   |
| 2   | 2021/01/08 | MODIFIED LAYOUT  |
| 3   | 2021/10/01 | CHANGED 10m ROAD DEDICATION TO 5m PARK STRIP, MODIFIED LOTS                |
| 4   | 2022/01/18 | MODIFIED SL 5 & PARK AT LAKE, ADDED PARK (PARKING LOT) AT TAYLOR ARM DRIVE |
| 5   | 2022/01/20 | MODIFIED SL 4, SL 5 & PARK AT LAKE   |
| 6   | 2022/01/21 | MODIFIED SL 5 & PARK AT LAKE   |
|     |            |  |
|     |            |  |

**PRISM**  
LAND SURVEYING LTD.  
223 FERN ROAD W.  
QUALICUM BEACH, B.C. V9K 1S4  
PHONE: 250-752-9121  
FAX: 250-752-9241  
FILE NUMBER: 19-236-S  
DRAWING NUMBER: 19-236 P8.DWG  
DATE: 2022/01/21



**AREA A - WATERFRONT LOTS**

- \* 5-LOT BARELAND STRATA
- \* PARCEL SIZE = APPROX. 1.0 - 1.5 ACRES
- \* COMMUNITY WATER SYSTEM REQUIRED
- \* SANITARY TREATMENT PLANT AND DISPERSAL FIELD REQUIRED
- \* SANITARY PUMPS REQUIRED FOR ALL STRATA LOTS
- \* DISPERSAL FIELD LOCATION WILL REQUIRE EASEMENT / ENCROACHMENT AGREEMENT TO ALLOW FOR CROSSING OF TAYLOR ARM DRIVE

**AREA B - PUBLIC PARK**

- \* APPROX. 18.0 HA DEDICATED PUBLIC PARK LAND (TRANSFER TO ACRD)
- \* DEDICATED PARK LAND REPRESENTS APPROXIMATELY 47% OF THE OVERALL SITE

**AREA C - WOODLAND LOTS**

- \* 18-LOT BARELAND STRATA
- \* PARCEL SIZE = 0.60 - 0.75 ACRES
- \* COMMUNITY WATER SYSTEM REQUIRED
- \* SANITARY TREATMENT PLANT AND COMMON / SHARED DISPERSAL FIELD REQUIRED
- \* GRAVITY CONNECTIONS TO STP AND FIELD MAY BE FEASIBLE SUBJECT TO MORE DETAILED ENGINEERING RE: ROAD / LOT GRADES

**AREA D - WETLAND LOTS**

- \* 12-LOT BARELAND STRATA
- \* PARCEL SIZE = 0.60 - 0.75 ACRES
- \* COMMUNITY WATER SYSTEM REQUIRED
- \* SANITARY TREATMENT PLANT AND COMMON / SHARED DISPERSAL FIELD REQUIRED
- \* GRAVITY CONNECTIONS TO STP AND FIELD MAY BE FEASIBLE SUBJECT TO MORE DETAILED ENGINEERING RE: ROAD / LOT GRADES

**AREA E - ASHER LOTS**

- \* 10 FEE SIMPLE LOTS
- \* PARCEL SIZE = 0.60 - 0.75 ACRES
- \* COMMUNITY WATER SYSTEM REQUIRED
- \* INDIVIDUAL SANITARY TREATMENT AND DISPERSAL FIELDS REQUIRED (PER LOT)

**AREA F - TAYLOR ARM LOTS**

- \* 5 FEE SIMPLE LOTS
- \* PARCEL SIZE = 0.60 - 0.75 ACRES
- \* COMMUNITY WATER SYSTEM REQUIRED
- \* INDIVIDUAL SANITARY TREATMENT AND DISPERSAL FIELDS REQUIRED

**LEGEND**

- BARELAND STRATA LOTS
- FEE SIMPLE LOTS
- DEDICATED PARK LAND
- E.S.A. ( 15 / 30 M SETBACK) (ALSO DEDICATED AS PARK)
- INDIVIDUAL SEPTIC FIELDS (ON LOT)
- CONFIRMED SEWAGE DISPERSAL / FIELD AREAS
- COMMON PROPERTY / SEWAGE DISPERSAL FIELD AREAS (STRATA)
- WETLAND
- WATERCOURSE
- SITE / PROJECT BOUNDARIES
- EXISTING PUBLIC ROAD (CONSTRUCTED) / 20 M R.O.W.
- NEW PUBLIC ROAD (TO BE CONSTRUCTED) / 20 M R.O.W.
- NEW PRIVATE (STRATA) ROAD (TO BE CONSTRUCTED) / 15 M COMMON PROPERTY
- PUBLIC TRAIL NETWORK (SRW REQUIRED WHERE LOCATED OVER COMMON PROPERTY)
- TYPICAL / CONCEPTUAL HOUSE (+/-2000 FT2) AND DRIVEWAY FOOTPRINT
- SIGNIFICANT VIEWPOINT

**NOTES:**

1. BASE DRAWING WITH LIDAR CONTOUR DATA PROVIDED BY SIMS ASSOCIATES SURVEYING INC.
2. WHILE THIS PLAN HAS BEEN DRAWN TO SCALE IT IS NOT A PLAN OF SURVEY. ALL PROPOSED AREAS AND DIMENSIONS ARE APPROXIMATE AND SUBJECT TO CONFIRMATION AND REVISIONS THROUGH FORMAL SURVEY BY A BRITISH COLUMBIA LAND SURVEYOR (B.C.L.S.).
3. ALL PROPOSED ENGINEERING STANDARDS AND SERVICING ARE CONCEPTUAL AND SUBJECT TO CONFIRMATION BY A PROFESSIONAL CIVIL ENGINEER (P.Eng.) THROUGH DETAILED INFRASTRUCTURE DESIGN AND APPROVAL PROCESSES.
4. 2022 TOWNSITE PLANNING INC. ALL RIGHTS RESERVED. ALL DOCUMENTS AND PLANS ARE PROTECTED BY COPYRIGHT LAW AND MAY NOT BE USED OR REPRODUCED FOR ANY PURPOSE EXCEPT WITH EXPRESS WRITTEN CONSENT PROVIDED BY TOWNSITE PLANNING INC.



**TAYLOR ARM DRIVE  
PRELIMINARY CONCEPT PLAN**  
FEBRUARY 8, 2022

File: 20-09 (TAYLOR ARM DRIVE)  
Drawn By: SWM  
Date: 02-08-2022  
Version: 20-9-06

NOTE: THIS PLAN IS CONCEPTUAL AND PROVIDED FOR ILLUSTRATIVE PURPOSES. ALL PLANS AND PROPOSALS ARE PRELIMINARY AND SUBJECT TO CHANGE

SCALE: (M) 0 20 40 60 80 100 200

**TOWNSITE  
PLANNING**  
P.O. BOX 160  
LANTZVILLE, BC V0R 2H0  
tel / text: 250.797.2515  
email: scott@townsiteplanning.ca  
web: www.townsiteplanning.ca



# ALBERNI-CLAYOQUOT REGIONAL DISTRICT

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

## Rezoning Application

**MEETING DATE:** June 23, 2021

**ACRD FILE NO.:** RD21005

**APPLICANTS:** Dale Mykyte (agent Fern Road Consulting Ltd.)

**LEGAL DESCRIPTION:** LOT 45, DISTRICT LOT 622, CLAYOQUOT DISTRICT, PLAN 12452

**LOCATION:** West end of Taylor Arm Drive

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

**Applicant's Intention:** The property owner is applying to rezone 3.2 hectare (7.9 acre) portion of their 37.8 hectare (93.5 acre) subject property from Forest Rural (A3) District to Acreage Residential (RA3) District in order to accommodate a bare land strata subdivision with a 0.6 acre minimum lot size. The applicant has provided a conceptual subdivision proposal that would create five (5) waterfront parcels ranging from 0.38 hectare (0.94 acre) to 0.63 hectare (1.55 acre) in lot area, an extension of Taylor Arm Drive to the north edge of the existing property and a common property area for communal sewage disposal east of the Taylor Arm Drive right-of-way.

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### Recommendations:

- THAT Bylaw P1430, Regional District of Alberni-Clayoquot Zoning Atlas Amendment Bylaw be read a first time;
- THAT the public hearing for Bylaw P1430 be delegated to the Director for Electoral Area 'D', the Alternate Director or the Chairperson of the Regional District;
- THAT the Board of Directors confirm that adoption of Bylaw P1430 is subject to:
  - a. Agreement to include the property within the Sproat Lake Fire Protection Service Area.
  - b. Registration of a restrictive covenant requiring suitable public access, acceptable to the ACRD, to the Crown Land lying north of the property at the time of subdivision;
  - c. Meeting technical referral agency requirements.

## RD21005

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**Advisory Planning Commission Recommendation:** The Sproat Lake APC considered this application at their June 10, 2021 meeting where they passed a motion to support the application as presented.

**Observations:**

i) **Status of Property:** The subject property is 37.8 hectares (93.5 acres) in total lot area bordered by Taylor Arm Drive and Asher Road to the south and a portion of Clayoquot Road to the east. The majority of the property is forested with no improvements. The inland portion of the property north of Taylor Arm Drive includes a low-lying wetland area. Approximately 280 metres (918 feet) of the property fronts onto Sproat Lake in the western portion of the property, which is the area that the property owner is applying to rezone. This portion of the property is treed and consists of a high rocky outcrop that falls steeply to Sproat Lake. There is an existing driveway that dissects this portion of the property roughly following the proposed road dedication that provides access to the waterfront.

ii) **Services**

- a. **Sewage Disposal:** On-site sewage disposal. The applicant intends to service the proposed 5 lot bare land strata development with a communal sewage disposal system to be located on the upland portion of the property on the east side of the Taylor Arm Drive right-of-way. The applicant has provided a report from a Registered On-site Wastewater Practitioner (ROWP) that indicates that the soils in the proposed common property area are adequate to accommodate the five lot development.
- b. **Water Supply:** Individual water intakes from Sproat Lake.
- c. **Fire Protection:** The property is not within the Sproat Lake Fire Protection Service Area. The residential lots along the waterfront on Taylor Arm Drive are included within the fire protection area, but the subject property is not included. As a condition of rezoning approval, staff recommends that the property owner petition the ACRD to include the property within the Sproat Lake Fire Protection Service Area subject to review from the Fire Department and ACRD staff.
- d. **Access:** Taylor Arm Drive would be extended through the subject property to provide access to each of the proposed lots and to the Crown Land parcel to the north. The additional Taylor Arm Road dedication would encompass an existing driveway that is used to access the Crown Land parcel and additional waterfront areas to the west of the property. Recognizing the importance of maintaining public access to Crown Lands in this area, staff are recommending that the Board require a covenant as a condition of rezoning approval to secure public access through road dedication as proposed on the conceptual site plan.

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 designates the

**RD21005**

property as “Residential Use”. The objective of this land use designation is to provide a range of housing options within the plan area. The Residential Use designation supports a 0.24 hectare (0.6 acre) minimum lot size for lots serviced by community/communal water or sewer. The lots would be serviced by a communal sewage disposal system.

The Sproat Lake OCP designates Development Permit Area I – Riparian Areas Protection as a 15 metre buffer along the lakefront and surrounding the wetland located on the upland portion of the property. A development permit will be required as part of any future subdivision application.

***The zoning amendment and proposed subdivision comply with the policies and objectives of the Sproat Lake OCP. A development permit application will be required at the subdivision application stage.***

- c. **Zoning:** The property is split-zoned with the majority zoned Forest Rural (A3) District and a +/- 15.8 acre portion on the east side of the property adjacent to Asher Road and Clayoquot Road zoned Acreage Residential (RA1) District. The portion of the property subject to this rezoning application is currently zoned A3 and the property owner is applying to rezone to Acreage Residential (RA3) District in order to accommodate subdivision to a 0.24 hectare (0.6 acre) minimum density.

|                    | <b>A3 District (existing)</b> | <b>RA3 District (proposed)</b> |
|--------------------|-------------------------------|--------------------------------|
| Minimum Lot Area:  | 10 acres                      | 0.6 acre                       |
| Minimum Lot Width: | 330 ft.                       | 90 ft.                         |
| Lot Coverage:      | -                             | 15%                            |
| Minimum Setbacks   |                               |                                |
| Front:             | 50 ft.                        | 49.2 ft.                       |
| Rear:              | 30 ft.                        | 32.8 ft.                       |
| Side:              | 15 ft.                        | 16.4 ft.                       |

***The proposed 5-lot bare land strata development requires a rezoning of a portion of the subject property from Forest Rural (A3) District to Acreage Residential (RA3) District to accommodate the proposed minimum lot size and lot width.***

**Comments:** The rezoning is the first step in the applicant’s proposal to subdivide the waterfront portion of their property into 5 bare land strata lots. If the rezoning application proceeds, the following items will need to be addressed during the subdivision application process:

1. **Park land dedication:** The *Local Government Act* requires that park land dedication or cash-in-lieu of park land be provided to the Regional District by the property owner as a condition of any subdivision that would create 3 or more new parcels. The Sproat Lake Official Community Plan includes a notation for potential future park land in this area. Staff will work with the applicant to recommend either new park land dedication or cash-in-lieu at the subdivision stage. Park land dedication is considered by the ACRD Board prior to subdivision approval and would be referred to the Sproat Lake Advisory Planning

**RD21005**

Commission for discussion.

2. Public access: The dedication of an extension to the Taylor Arm Drive road allowance to the north end of the parcel will provide road access to each proposed lot and to lands beyond. The additional road dedication would encompass an existing driveway and trail that is used to access the subject property, Crown Land lying to the north of the property and additional privately-owned waterfront areas located to the west. Recognizing the importance of maintaining public access to Crown Lands and lake front access in this area, staff recommend that the Board require a covenant as a condition of rezoning approval to secure public access through road dedication as proposed on the conceptual site plan.

Staff will ensure that any future subdivision layout complies with the public access requirements of the covenant. It is also noted that this property lies within 800 metres of a Controlled Access Highway and as per the requirements of the *Transportation Act*, the Ministry of Transportation and Infrastructure must approve the zoning amendment prior to adoption by the Board.

3. Development permit: The Sproat Lake OCP designates DPA I – Riparian Areas Protection which includes all lands within 15 metres of the natural boundary of the lake and surrounding the wetland located on the upland portion of the property. A development permit will be required as part of any future subdivision application. A Professional Biologist has conducted an assessment of the entire property and has flagged a 30 metre setback from the upland wetland area to confirm that no part of the proposed 5-lot bare land strata development will encroach into the 30 metre setback.

In addition to the public access covenant noted above, planning staff also recommends that the property be included within the Sproat Lake Fire Protection Service Area as a condition of rezoning approval. This will ensure that any future development of this property is serviced by the Sproat Lake Fire Department (SLFD). The application to the ACRD to be included within the service area would be reviewed by the SLFD and the Regional Fire Services Manager to establish whether the fire department has the capacity to service this development and determine whether any infrastructure upgrades are required.

Planning staff are generally supportive of proceeding with the public hearing process for the application. The zoning amendment complies with the policies and objectives of the Sproat Lake OCP. Subject to the conditions outlined above, the zoning amendment would provide an opportunity for development that is similar in character with the surrounding area to the south east while ensuring secured public access in the area and ensuring that the development will be adequately serviced with communal sewage disposal and fire protection.



Submitted by:

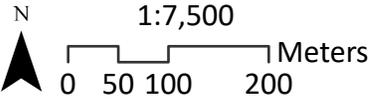
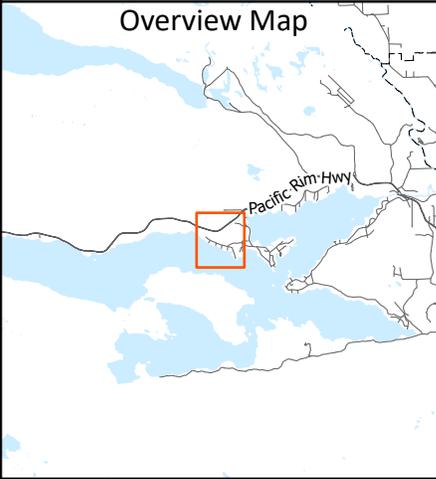
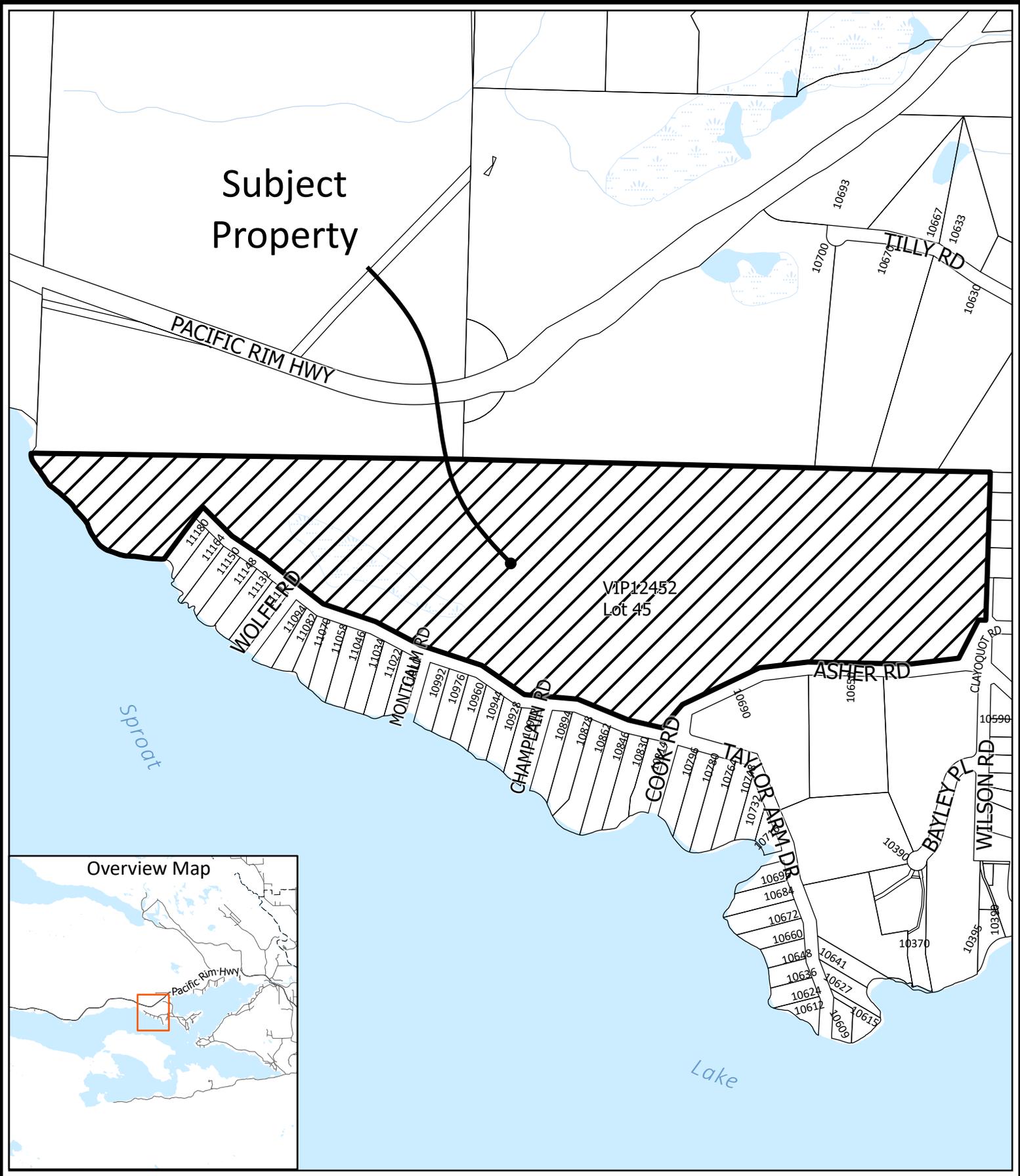
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Mike Irg, MCIP, RPP, General Manager of Planning & Development



Approved by:

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

### RD21005



Legal Description: LOT 45, DISTRICT LOT 622, CLAYOQUOT DISTRICT, PLAN 12452

# Fern Road Consulting Ltd.

Our File: 19-236-S

2021-01-21

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

Attention: Mike Irg

Dear Mike:

**RE: Lot 45, District Lot 622, Clayoquot District, Plan 12452  
Taylor Arm Drive**

On behalf of our client, Dale Mykyte, we are applying for a zoning amendment for a portion of the above lot.

## **DESCRIPTION**

The portion for which we are applying to rezone is the waterfront portion. Taylor Arm Drive dead ends at the lot. Terrain is challenging, the site has a high rocky out cropping before falling steeply to Sproat Lake. The site is mostly forested. This portion of the lot is zoned A3 (Forest Rural) but the Sproat Lake Official Community Plan has designated this to be Residential. There is a large pond to the east of the proposed development.

## **PROPOSAL**

This application is for 5 lots on the waterfront. Taylor Arm Drive will be extended to the north boundary of the lot to provide access to "lands beyond". The lack of depth of soil for individual sewage disposal requires that this proposal be a Strata with Common Property (CP) on the north easterly side of Taylor Arm Drive. H<sub>2</sub>O Environmental has conducted a soils investigation and has determined that the soils on the proposed CP are adequate and for 5 lots, the soils would be capable of disposing of sewage for a 5 bedroom house plus a 2 bedroom secondary suite on each lot.

Toth & Associates, R. Bio., has conducted an investigation of the entire site. S. Toth, R. Bio. has flagged the 30 meter setback from the pond and this development does not encroach into the 30 meter setback.

Accordingly, we request a zoning change from A3 to RA-1.

## **OTHER ITEMS**

### **Park**

This proposal will require Park or cash-in-lieu. Our client will work with the Parks Committee and ACP to determine appropriate location and size of Park.

### **Remainder**

Our client intends on applying to ACRD to rezone the remainder of the A3 zone to RA-1 zone. However, we are still working on a design and will apply for it separately.

## **ENCLOSURES**

In support of this application we are enclosing:

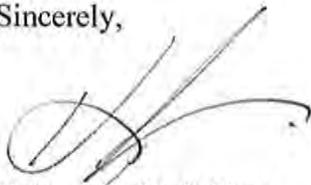
- Application Form
- Title Search
- Letter of Authorization (under separate cover)
- Report prepare by H<sub>2</sub>O
- Proposal Plan

Could you please calculate the fees for this application and send me the fee by email. Our client will then contact your office and pay them with a Visa card.

Please contact me if you have any questions or need any additional information.

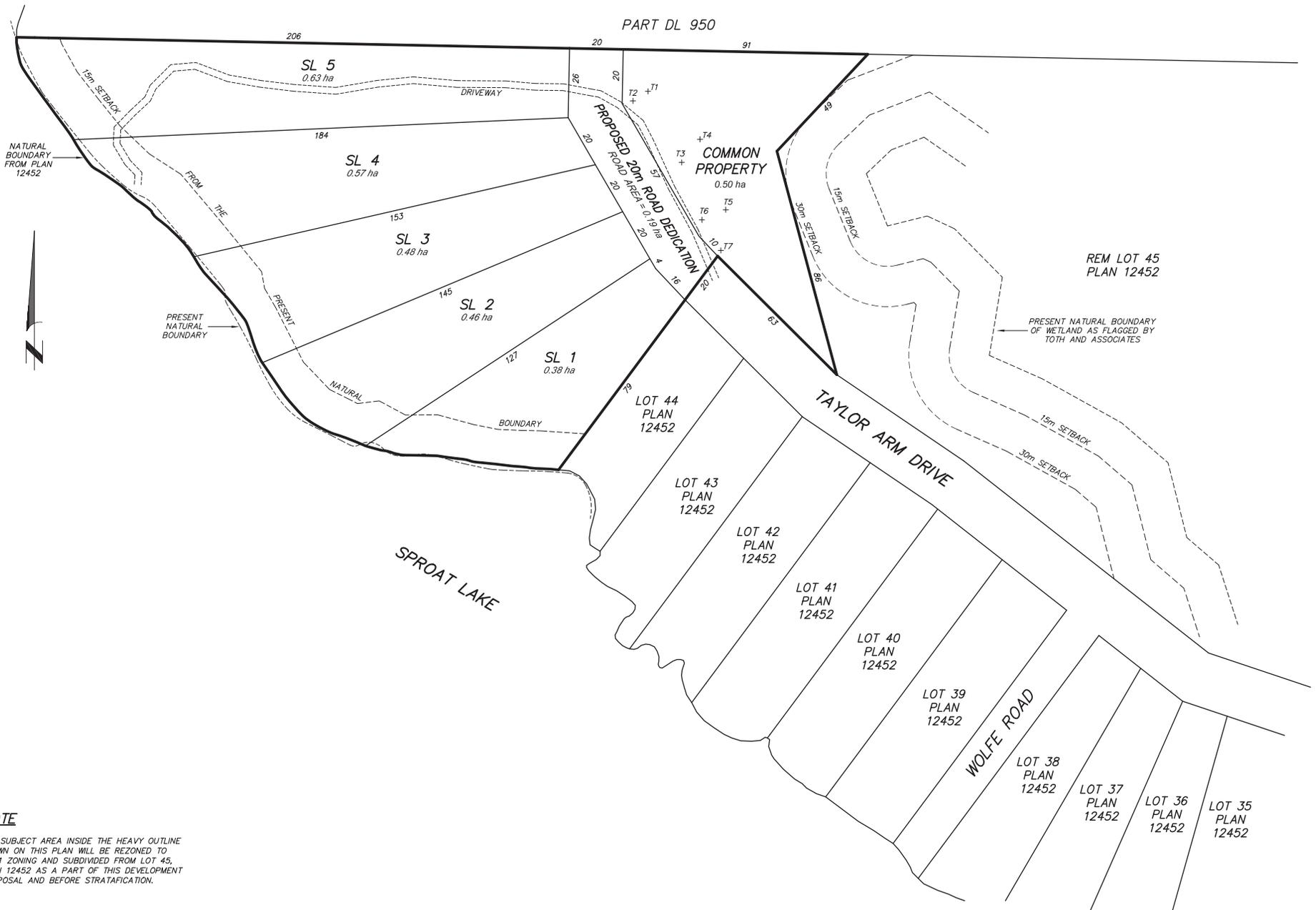
We look forward to working with you on this project.

Sincerely,



Helen MacPhail Sims  
Office Manager

HMS/tj  
Enclosures



**NOTE**

THE SUBJECT AREA INSIDE THE HEAVY OUTLINE SHOWN ON THIS PLAN WILL BE REZONED TO RA-1 ZONING AND SUBDIVIDED FROM LOT 45, PLAN 12452 AS A PART OF THIS DEVELOPMENT PROPOSAL AND BEFORE STRATIFICATION.

**PROPOSED BARE LAND STRATA PLAN  
OF LOT 45, DISTRICT LOT 622,  
CLAYOQUOT DISTRICT, PLAN 12452.**

SCALE 1:1000



**LEGEND**

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**SIMS ASSOCIATES**

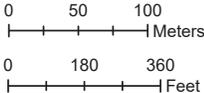
LAND SURVEYING LTD.  
223 FERN ROAD W.  
QUALICUM BEACH, B.C. V9K 1S4  
PHONE: 250-752-9121  
FAX: 250-752-9241  
FILE NUMBER: 19-236-S  
DRAWING NUMBER: 19-236 P2.DWG  
DATE: 2021/01/08



RD21005 - LOT 45, DISTRICT LOT 622, CLAYOQUOT DISTRICT, PLAN 12452

Prepared 7 June 2021, ACRD.  
Orthophoto mosaic 2014/2018, ACRD

Scale: 1:3,500

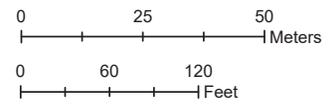




RD21005 - a portion of LOT 45, DISTRICT LOT 622, CLAYOQUOT DISTRICT, PLAN 12452  
to be rezoned

Prepared 7 June 2021, ACRD.  
Orthophoto mosaic 2014/2018, ACRD

Scale: 1:1,000







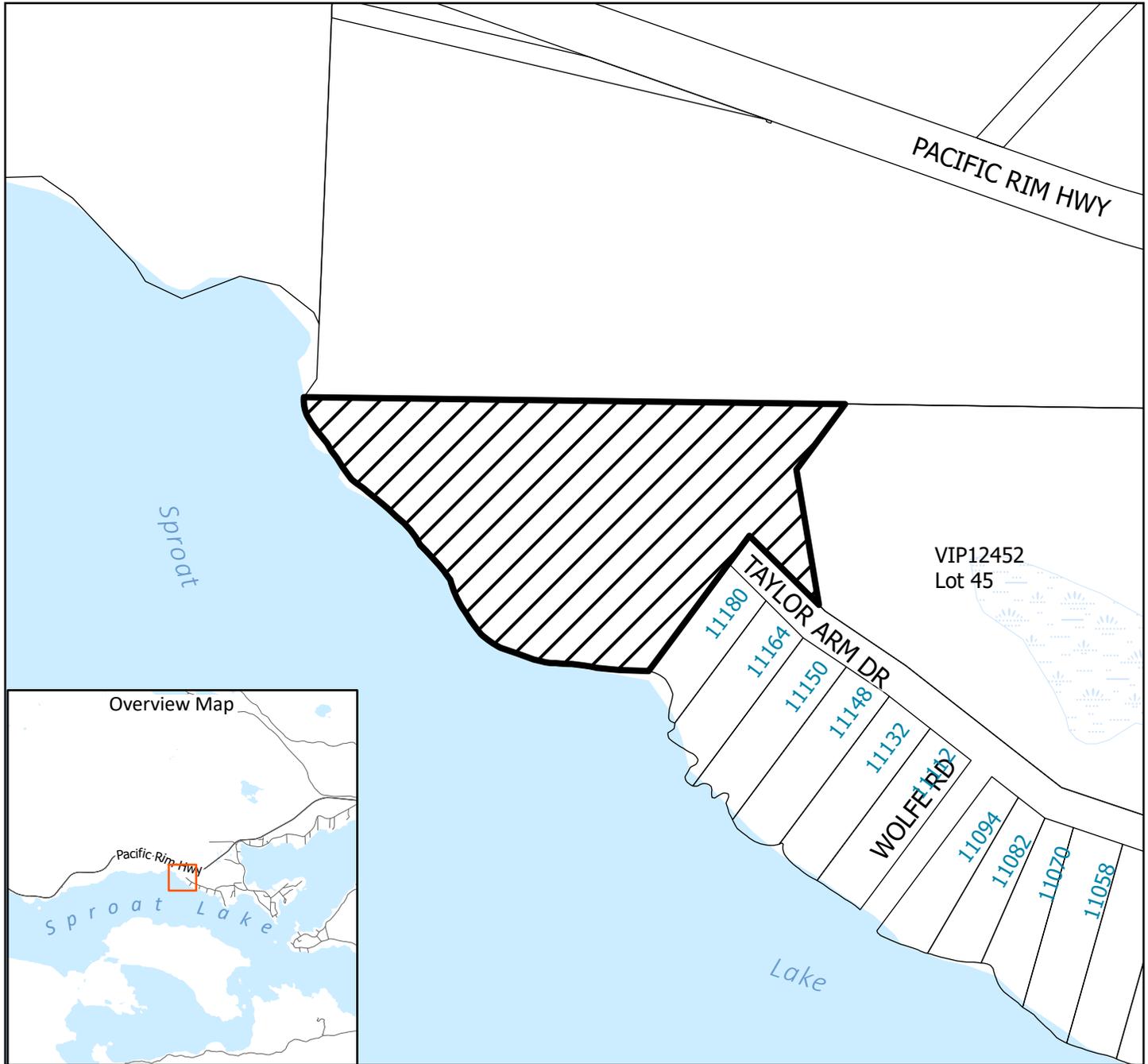






# Schedule 'A'

This schedule is attached to and forms part of  
Bylaw P1430

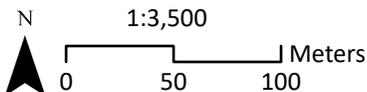


P1430 Mykyte

Legal Description: a portion of LOT 45, DISTRICT LOT 622, CLAYOQUOT DISTRICT, PLAN 12452



To be rezoned from Forest Rural (A3) District to  
Acreage Residential (RA3) District





3060 Lake Road, Denman Island, BC V0R 1T0  
Tel : (250) 335-1864 Fax: (250) 335-1846  
Email: h2oenv@telus.net

December 8, 2020

H<sub>2</sub>O File: 20-11

Dale Mykyte  
13738 FM 529  
Houston, TX 77042

**Re: Soil Investigation for Strata Lot Wastewater Dispersal on  
Part of Lot 45, DL 622, Clayoquot District, Plan 12452**

---

Mr. Mykyte,

**Introduction**

H<sub>2</sub>O Environmental Ltd. (H<sub>2</sub>O) was retained by you to aid in the subdivision of part of a lot at the above legal address. This current plans are for nine bare land strata lots.

**Island Health Subdivision Policy**

Island Health (IH) policies call for a minimum of 90 cm native mineral depth for a community sewage septic system<sup>1</sup> for properties utilizing both private wells or water supply systems.

IH has authority over wastewater systems up to 22,700 litres per day (lpd). If the flow exceeds that, a completely separate system has to be constructed to allow for more than 22,700 lpd effluent volume.

**Lot 1 Description**

The northwest corner Lot 45, DL 622 has been designated as the location for the potential nine strata lots. The lots will be waterfront and the wastewater system will be located to the east of the lots.

Lot 45 is approximately 37.3 ha. Seven testpits were advanced to the north of the proposed locations of the strata lots, north of the present access road, to determine if there is sufficient soil and area to allow for a wastewater system to safely treat and disperse the effluent from the lots.

The testpits were advanced on a slope with a northeast exposure, grading down to a narrow valley with slopes of up to 30%.

The general soil profile on the area investigated for wastewater is a varying thickness of 5 cm to 20 cm of organic forest debris, underlain by silt loam with high sand and coarse fragment content to varying depths, from 38 cm to 80 cm. The silt loam was located above either bedrock or massive clay. The depths of useable soil varies but is not enough to satisfy the IH policies.

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<sup>1</sup> Vancouver Island Health Authority- *Subdivision Standards, July/13, Pg. 3*

However, all the observed soil depths can be used to adequately install and treat effluent according to the BC Sewerage System Standard Practice Manual<sup>2</sup> (SPM).

### **Discussion**

The current plans call for an unrestricted building plan for the strata lots. This could result in total design flows of more than 22,700 lpd.

The workable area for the wastewater dispersal field for the nine lots is approximately 100 metres by varying widths. For convenience sake, H<sub>2</sub>O is assuming a width of 5 metres available before the slope becomes excessively steep for wastewater dispersal. Some areas have less than 5 metres of width, some have more, the width increasing slightly to the east. There must be sufficient capacity for both primary and reserve dispersal fields within the investigated area.

500 m<sup>2</sup> is, conservatively speaking, available for the wastewater fields in this area, with the primary and reserve taking up 250 m<sup>2</sup> each.

H<sub>2</sub>O has assumed Type 3 treatment, the highest quality effluent specified in BC and the treatment that requires the least space for dispersal, will be used on the site. Back calculating the flows able to be dispersed within the 250 m<sup>2</sup> of land available for the primary field, the daily design flow cannot exceed 14,000 litres per day.

The daily design flows are based on number of bedrooms and, to a lesser extent, the size of the house. The following table summarizes some of the potential housing configurations that would not exceed 17,400 lpd.

Table 1 – Partial Configurations for Lot Allowances

| Number of Lots | House bedrooms | Suite bedrooms | Total DDF (lpd) |
|----------------|----------------|----------------|-----------------|
| 9              | 5 @ 1,600 lpd  | None           | 14,400          |
| 7              | 3 @ 1,300 lpd  | 1 @ 700 lpd    | 14,000          |
| 5              | 5 @ 1,600 lpd  | 2 @ 1000       | 13,000          |

H<sub>2</sub>O believes there is the ability within the strata bylaw to allow different building capacity to individual lots. This could be used to allow one or two lots larger houses with suites and other lots restricted to smaller houses with smaller or no suites.

Alternatively, additional area can be investigated for wastewater dispersal.

### **Effluent Treatment and Dispersal**

At this time, collection of effluent will be by individual septic tanks on each lot, with a common treatment and dispersal system to be located on common property to the

<sup>2</sup> Ministry of Health, 2014 – *Sewerage System Standard Practice Manual, Version 3*

north of the lots. The distribution system will be a uniform, pressurized distribution system, most likely a sand mound, due to the lack of consistently thicker soils in the dispersal area.

H<sub>2</sub>O has designed numerous wastewater systems of this size. They generally consist of a large receiving/equalization tank which times doses the treatment plant, gravity feeds to a large dose tank that also times doses to the dispersal field either through multiple pumps or through an indexing valve to cycle through different zones of the field.

### **Conclusions**

There is sufficient depth of soil on the investigated portion of Lot 45 to safely disperse and treat approximately 14,400 litres per day potentially generated from the 9 lot subdivision including sufficient area for both a primary and reserve field within the area studied.

Different configurations of house allowances can be designed in the strata bylaws to ensure the eventual wastewater system built will have adequate capacity for all lots.

Additional area could be investigated, further to the east on Lot 45.

### **Closure**

H<sub>2</sub>O is pleased to provide you with this letter regarding the soil conditions and potential wastewater solutions. Please contact H<sub>2</sub>O with any questions you may have regarding this information.

### **H<sub>2</sub>O Environmental Ltd.**



Per: Steven M. Carballeira, P. Geo.

Attachments:  
Figure 1 – Location of Testpits  
Soil Logs



Figure 1. Approximate Locations of Testpits by GPS

|  |    |            |        |           |     |                  |       |         |         |
|--|----|------------|--------|-----------|-----|------------------|-------|---------|---------|
| Client: Mykyte   |    |            |        |           |     |                  |       |         |         |
| Date of work: 03-Dec                                     |    |            |        |           |     |                  |       |         |         |
| Location: Lot 45, DL 622, Clayoquot District, Plan 12452 |    |            |        |           |     |                  |       |         |         |
| Logged by: SMC   |    |            |        |           |     |                  |       |         |         |
|  |    |            |        |           |     |                  |       |         |         |
| Lot #:   | 45 | Testpit #: | 1      | Slope %:  | 18  | Veg: DOUGLAS FIR |       |         |         |
| Depth (cm)   |    | Texture    | Colour | Structure | CF% | Con              | Roots | Mottles | Seepage |
| 0  | 5  | HU         | BLACK  |           |     | L                | Y     | N       | N       |
| 5  | 38 | SILO       | RED    |           | 25  | L                | TO 38 | AT 38   | Y       |
| 38   |    | BEDROCK    | GREY   | N         |     | H                | N     | N       | Y       |
| Comments:  |    |            |        |           |     |                  |       |         |         |

|            |    |            |        |           |     |                  |       |         |         |
|------------|----|------------|--------|-----------|-----|------------------|-------|---------|---------|
| Lot #:     | 45 | Testpit #: | 2      | Slope %:  | 18  | Veg: DOUGLAS FIR |       |         |         |
| Depth (cm) |    | Texture    | Colour | Structure | CF% | Con              | Roots | Mottles | Seepage |
| 0          | 10 | HU         | BLACK  |           |     | L                | Y     | N       | N       |
| 10         | 66 | SILO       | RED    |           | 50  | L                | TO 66 | N       | N       |
| 66         |    | BEDROCK    | GREY   | N         | 50  | H                | N     | N       | N       |
| Comments:  |    |            |        |           |     |                  |       |         |         |

|            |     |            |        |           |     |                  |       |         |         |
|------------|-----|------------|--------|-----------|-----|------------------|-------|---------|---------|
| Lot #:     | 45  | Testpit #: | 3      | Slope %:  | 18  | Veg: DOUGLAS FIR |       |         |         |
| Depth (cm) |     | Texture    | Colour | Structure | CF% | Con              | Roots | Mottles | Seepage |
| 0          | 18  | HU         | T      |           |     | L                | Y     | N       | N       |
| 18         | 80  | SILO       | RED    | M/BL      | 25  | L                | TO 80 | N       | N       |
| 80         | 100 | SILT/CLAY  | GREY   | MASSIVE   | 2   | F                | N     | Y       | Y       |
| Comments:  |     |            |        |           |     |                  |       |         |         |

|                      |    |            |        |           |     |                  |       |         |         |
|----------------------|----|------------|--------|-----------|-----|------------------|-------|---------|---------|
| Lot #:               | V  | Testpit #: | 4      | Slope %:  | 5   | Veg: DOUGLAS FIR |       |         |         |
| Depth (cm)           |    | Texture    | Colour | Structure | CF% | Con              | Roots | Mottles | Seepage |
| 0                    | 12 | HU         | BL     | N         |     | L                | Y     | N       | N       |
| 12                   | 50 | SILO/FBR   | RED    | N         | 40  | L                | TO 50 | N       | N       |
| 50                   |    | BEDROCK    | GREY   | N         |     | H                | N     | N       | Y       |
| Comments: HARD AT 82 |    |            |        |           |     |                  |       |         |         |

|                         |    |            |        |           |     |                  |       |         |         |
|-------------------------|----|------------|--------|-----------|-----|------------------|-------|---------|---------|
| Lot #:                  | 45 | Testpit #: | 5      | Slope %:  | 5   | Veg: DOUGLAS FIR |       |         |         |
| Depth (cm)              |    | Texture    | Colour | Structure | CF% | Con              | Roots | Mottles | Seepage |
| 0                       | 15 | HU         | T      |           |     | L                | Y     | N       | N       |
| 15                      | 76 | SILO       | RED    | N         | 50  | L                | TO 75 | N       | N       |
| Comments: BEDROCK AT 76 |    |            |        |           |     |                  |       |         |         |

|            |    |            |        |           |     |                  |       |         |         |
|------------|----|------------|--------|-----------|-----|------------------|-------|---------|---------|
| Lot #:     | 45 | Testpit #: | 6      | Slope %:  | 9   | Veg: DOUGLAS FIR |       |         |         |
| Depth (cm) |    | Texture    | Colour | Structure | CF% | Con              | Roots | Mottles | Seepage |
| 0          | 10 | HU         | T      |           |     | L                | Y     | N       | N       |
| 10         | 55 | SILO       | RED    | N         | 30  | L                | TO 50 | N       | N       |
| 55         |    | BEDROCK    | GREY   | N         | 40  | H                | N     | N       | Y       |
| Comments:  |    |            |        |           |     |                  |       |         |         |

SILO= SILT LOAM  
SALO= SANDY LOAM

HU = HUMIC  
BR = BEDROCK

FBR = FRACTURED BEDROCK  
WETI = WEATHERED TILL

|                      |     |            |        |           |     |                  |       |         |         |
|----------------------|-----|------------|--------|-----------|-----|------------------|-------|---------|---------|
| Lot #:               | 45  | Testpit #: | 7      | Slope %:  | 5   | Veg: DOUGLAS FIR |       |         |         |
| Depth (cm)           |     | Texture    | Colour | Structure | CF% | Con              | Roots | Mottles | Seepage |
| 0                    | 17  | HU         | BL     | N         |     | L                | Y     | N       | N       |
| 17                   | 80  | SILO       | RED    | N         | 25  | L                | TO 80 | N       | N       |
| 80                   | 120 | SILT/CLAY  | GREY   | MASSIVE   |     | H                | N     | Y       | Y       |
| Comments: HARD AT 80 |     |            |        |           |     |                  |       |         |         |

SILO= SILT LOAM  
 SALO= SANDY LOAM

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