



## **COWICHAN ESTUARY ENVIRONMENTAL MANAGEMENT PLAN COMMITTEE MEETING**

**THURSDAY, JANUARY 30, 2014 AT 9:00 A.M.**

**COWICHAN VALLEY REGIONAL DISTRICT BOARD ROOM  
175 INGRAM STREET, DUNCAN, BC**

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### **AGENDA**

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<b>1.</b>	<b><u>APPROVAL OF AGENDA</u></b>	<b>1</b>
<b>2.</b>	<b><u>ADOPTION OF MINUTES</u></b>	
	<b>M1</b> Adoption of the Minutes of the Cowichan Estuary Environmental Management Committee Meeting of June 6, 2013	<b>2-3</b>
<b>3.</b>	<b><u>BUSINESS ARISING FROM THE MINUTES</u></b>	
	<ul style="list-style-type: none"><li>• Status of Foreshore Leases (M. Harvey)</li><li>• CEEMP Committee Participation (R. Diederichs)</li><li>• DFO Small Craft Harbours Reporting (R. Diederichs)</li></ul>	
<b>4.</b>	<b><u>DELEGATIONS</u></b>	
	<b>D1</b> Cowichan Estuary Restoration and Conservation Association (G. Shuerholz)	
<b>5.</b>	<b><u>REPORTS</u></b>	
	<b>R1</b> Proposed Area D – Cowichan Bay Zoning Bylaws (A. Kjerulf)	<b>4-7</b>
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<b>6.</b>	<b><u>NEW BUSINESS</u></b>	
<b>7.</b>	<b><u>ADJOURNMENT</u></b>	

The next regular meeting of the Cowichan Estuary Environmental Management Plan Committee is scheduled to be held at the call of the chair.

Minutes of the Cowichan Estuary Environmental Management Committee Meeting held on Thursday, June 6, 2013, at 10:00 a.m. in Lands Department Building, Cowichan Tribes, Duncan, BC

**PRESENT:**

Chair Marlene Caskey, Ministry of Forests, Lands and Natural Resource Operations  
Grant Bracher, Ministry of Forests, Lands and Natural Resource Operations  
Heather Dunn, Ministry of Forests, Lands and Natural Resource Operations  
Tracy Fleming, Cowichan Tribes  
Burnett Laliberte, Cowichan Tribes  
Mike Tippet, Cowichan Valley Regional District  
Ann Kjerulf, Cowichan Valley Regional District  
Lori Iannidinardo, Cowichan Valley Regional District, Cowichan Bay Director

**OTHER:**

Laura Gale, Cowichan Valley Regional District, Recording Secretary  
Kerynne Bain, Cowichan Valley Regional District, Recording Secretary-VIU Student  
Andrew Cornell, Fisheries and Oceans Canada  
Derek Haupt, Western Forest Products  
Mackenzie Leine, Western Forest Products

**APPROVAL OF AGENDA**

**The Chair noted changes to the agenda which included adding three items of New Business.**

**It was moved and seconded that the agenda as amended be approved.**

**MOTION CARRIED**

**ADOPTION OF MINUTES**

**M1**

**It was moved and seconded that the Minutes of the Cowichan Estuary Environmental Management Committee Meeting of April 18, 2013, be adopted.**

**MOTION CARRIED**

**BUSINESS ARISING**

There was no business arising.

**REPORTS**

**R1 - WFP Dredging**

Derek Haupt (Operations Supervisor) and Mackenzie Leine (Communications) from Western Forest Products (WFP) were present to answer questions from the Committee. Derek updated the Committee on the planned dredging scheduled for June 19 - 28, and if needed July 17 - 25. Aqua Terra and Cowichan Tribes will be onsite during this process.

Tracy Fleming from Cowichan Tribes read a letter that would be going out to WFP regarding reducing dredging in the future.

**R2 - Hylton  
McAllister's Dock**

The Committee reviewed the application from September 2012, by Hylton McAllister. Tracy Fleming read a letter from Bonita Wallace, Ministry of Forests, Land & Natural Resource Operations to the Cowichan Tribes regarding Hylton's dock.

**Action:**

**Grant Bracher will make a recommendation to Mr. McAllister explicitly outlining environmental requirements; and specifying the depth of the dock and to not use styrofoam.**

**Marlene Caskey will send an email to Ms. Wallace on behalf of the Committee regarding conditions that the Committee feels important for this application to proceed.**

**R3 - Tankers**

Lori Iannidinardo expressed concerns from the community regarding the amount of tankers that had been in the Bay. They have since moved out. Kevin Obermeyer, President of the Pacific Pilotage Authority offered to partner with the CVRD to put Air Quality Monitors in the Bay.

**R4 - Foreshore 99 Year Leases.**

No records of Foreshore leases on the far side of Cowichan Bay (Khenipsen Road) have been found.

**NEW BUSINESS**

**NB1 - DFO Small Craft Harbours**

Andrew Cornell, from Small Craft Harbours, a Division at Fisheries and Oceans, has a project concept for the Fisherman's Wharf in Cowichan Bay which is under proposal for being developed. The mandate for this is to support commercial fishermen by making the offloading and loading a safe working space for the fish boats and to support economic development of commercial fishing.

**NB2 - DFO Participation on the Committee**

Marlene Caskey read an email from Bruce Runicman, (DFO), to the Committee regarding DFO restructuring and reducing the amount of committees that it sits on.

**Action:**

**Ann Kjerulf will prepare a letter for Marlene's signature to be sent to DFO asking for continued participation from them on the Committee.**

**Marlene Caskey will send Ken Horton a letter asking if he could appoint someone else to be on the Committee in his absence.**

**NB3 - Latest Correspondence from CERCA**

A letter from Cowichan Estuary Restoration Community Association (CERCA) regarding log boom grounding was read to the Committee. The Letter was not distributed.

**NEXT MEETING**

Thursday, October 10, 2013, at 10:00 a.m. in Nanaimo/Tribes (TBA)

**It was moved and seconded that the meeting be adjourned.**

**MOTION CARRIED**

The meeting adjourned at 1:09 p.m.

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Chairperson

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Recording Secretary



R1

**STAFF REPORT**  
**REGULAR BOARD MEETING**  
**OF WEDNESDAY, DECEMBER 11, 2013**

**DATE:** December 5, 2013 **File No:** 3900-20-3705  
**FROM:** Ann Kjerulf, MCIP, RPP, Senior Planner **BYLAW Nos:** 3705/3773  
Community and Regional Planning Division  
**SUBJECT:** Electoral Area D – Cowichan Bay Zoning Bylaws 3705 and 3773

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**Recommendation/Action:**

1. That CVRD Zoning Bylaw No. 3773 be considered for 1<sup>st</sup> and 2<sup>nd</sup> readings.
2. That CVRD Zoning Bylaw No. 3705 be considered for 1<sup>st</sup> and 2<sup>nd</sup> readings.
3. That Bylaw No. 3773 and Bylaw No. 3705 be referred to:
  1. Electoral Area D Advisory Planning Commission, Electoral Area D Community Parks Commission, and CVRD Regional Agricultural Advisory Commission for review, with staff to attend commission meetings in order to receive comments on the proposed bylaws;
  2. Referral agencies (Ministry of Transportation and Infrastructure, Agricultural Land Commission, Ministry of Agriculture, Ministry of Forests, Lands Natural Resource Operations (Land Tenures Branch), Ministry of Environment (Environmental Protection), Island Health, District of North Cowichan, City of Duncan, Islands Trust, Cowichan Bay Improvement District, Cowichan Bay Waterworks) for review and comment with a standard 45 day response time;
  3. First Nations (Cowichan Tribes, Malahat, Halalt, Lyackson, Penelakut, Stz'uminus) with telephone calls to be placed to both the Cowichan Tribes and Malahat with offers to meet in person, with a target response time of 60 days in all cases; and
4. That CVRD Zoning Bylaw No. 3773 be referred to the Cowichan Estuary Environmental Management Plan Committee for review.

**Relation to the Corporate Strategic Plan:**

Implementation of the Electoral Area D – Cowichan Bay OCP through regulatory bylaws, including new zoning bylaws, supports multiple objectives and strategic actions identified by the Corporate Strategic Plan.

**Financial Impact:** (Reviewed by Finance Division: N/A)

**Interdepartmental/Agency Implications:**

It is recommended that the proposed bylaws be referred to a number of agencies for review and comment. Approval of the Ministry of Transportation and Infrastructure is required prior to adoption of both Bylaws 3773 and 3705. Bylaw 3773 must also be approved by the Minister of Environment prior to adoption.



**Background:**

The CVRD Board adopted Electoral Area D – Cowichan Bay Official Community Plan (OCP) Bylaw No. 3605 on April 10, 2013. The development of new zoning regulations was identified as a key short-term action toward OCP implementation. Following a public consultation process this fall and report to the Electoral Area Services Committee on November 3, 2013, the CVRD Board at its November 13, 2013 passed the following motion:

***“That draft Area D – Cowichan Bay Zoning Bylaw No. 3705 (excluding land below the natural boundary of the ocean, the Cowichan Estuary Environmental Management Plan (CEEMP) area, and land within the OCP Marine Village designation), be proceeded with and that Bylaw 3705 be forwarded to the Board for consideration of 1<sup>st</sup> and 2<sup>nd</sup> readings along with a complementary amendment to Zoning Bylaw 1015 (excluding land above the natural boundary and land outside the CEEMP area), and further, that the amendment to Zoning Bylaw 1015 be approved by the Ministry of Environment in accordance with the CEEMP prior to adoption.”***

**Discussion:**

Staff are presenting two bylaws for consideration of first and second reading by the CVRD Board. Bylaw No. 3705 is proposed to provide new zoning regulations for the upland areas of Electoral Area D – Cowichan Bay. Bylaw No. 3773, a proposed amendment to current Zoning Bylaw No. 1015, is intended to address zoning regulations for marine areas including the Cowichan Estuary Environmental Management Plan (CEEMP) area. The proposed bylaws and associated map schedules have been provided under separate cover. The rationale for splitting the upland and marine areas into two zoning bylaws is two-fold:

- Zoning Bylaws respecting the CEEMP area must receive approval from the Minister of Environment in accordance with the CEEMP Provincial Order-in-Council No. 1652. This could be an onerous requirement for upland areas if covered under the same bylaw;
- A portion of water surface extending from Samsun Narrows northward to Electoral Area G along the shoreline of the District of North Cowichan was excluded from the OCP Plan Area. Amending, rather than repealing, Zoning Bylaw No. 1015 would retain the W-2 (Water Recreation) zoning in this part of the Electoral Area.

**Bylaw No. 3705 (Upland) – Key Elements:**

Based on direction from the Official Community Plan, Bylaw No. 3705 is proposed to incorporate a number of key elements including:

- An A-1T Agri-tourism Accommodation Zone;
- An A-7 Agricultural Service Zone;
- A Cluster Residential Zone with a base density of 1.0 ha (no services) or 0.4 ha (water service) and a potential for 15 units/ha (water and sewer) subject to conditions including 50% of the site dedicated as parkland;
- A Mixed Use Commercial Residential Zone in the Koksilah Village area and on the former Cannery site which would allow ground floor commercial or institutional uses and residential above;
- A Mixed Use Commercial Residential Zone in the Four Ways area that would allow a combination of commercial and institutional uses along with the existing manufactured home park;
- Expansion of the RUR3 (existing I4 Aggregate Processing) Zone to correct zoning deficiency for this long-standing use;
- Inclusion of new Park Conservation and Park Recreation Zones for existing CVRD Parks that were not previously zoned as parks;

- Increasing the allowable size of secondary suites from 74 m<sup>2</sup> to 90 m<sup>2</sup>;
- Increasing the allowable size of accessory dwellings from 74 m<sup>2</sup> to 90 m<sup>2</sup> on parcels that are 0.4 ha or larger;
- Introducing a minimum accessory dwelling floor area of 37 m<sup>2</sup>;
- Allowing four sleeping units in conjunction with a bed and breakfast operation on a parcel that is 0.4 hectares in size or greater;
- Allowing home-based businesses to employ one non-resident person on a parcel that is less than 0.4 hectares or two non-resident persons on a parcel that is 0.4 hectares or greater;
- Prohibiting automobile body shop, automobile service, boat service, automobile salvage or wrecking yard, brewery distillery, process plant, and fish/food/livestock/medical marihuana/poultry processing as home-based businesses (except in accordance with the ALC Act);
- Permitting backyard hens and limited agriculture in residential zones subject to minimum setbacks, lot size requirements, and other conditions;
- Introducing general regulations for landscaping and screening, and fencing requirements for swimming pools; and
- Introducing landscaping and screening provisions for all zones (as specified in Section 4.3).

***Bylaw 3773 (Marine Zones) – Key Elements:***

Key Changes proposed through amending Bylaw 3773 (amending the current Zoning Bylaw No. 1015) including permitting float homes and live-aboards subject to conditions for liquid waste management and adding conditions for marinas providing moorage to float homes or live-aboards including meeting fire safety requirements specified in the BC Float Home Standards and provision of a sewage collection system. Another notable change to proposed Bylaw 3773 is the inclusion of a cash-in-lieu provision for parking that would allow property owners to pay cash instead of providing parking required for their developments. A lack of parking has been an ongoing concern in Cowichan Bay Village, which was articulated during the OCP process.

**Public Consultation:**

With guidance from the OCP Implementation Committee, staff have undertaken a number of community engagement activities to solicit public input including on the proposed bylaws including: a community meeting held September 26<sup>th</sup>, open houses held October 1<sup>st</sup> and 3<sup>rd</sup>, and a zoning bylaw survey conducted between September 18<sup>th</sup> and October 18<sup>th</sup>. In addition to these planned activities, staff were invited to attend a meeting with float home and live-aboard residents on September 25<sup>th</sup> and a subsequent meeting with marina owners on October 16<sup>th</sup>.

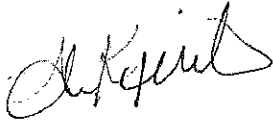
The Bylaws proposed for first and second reading at this time have incorporated community input received to the end of November, 2013. Input received at a community meeting held on December 3<sup>rd</sup>, 2013 respecting proposed changes to Zoning Bylaw No. 1015 for float homes and live-aboards, and referral agency comments may necessitate some adjustments to proposed regulations through the bylaw adoption process. Staff also anticipate holding both public meetings and public hearings on the proposed bylaws prior to their adoption.

**Options:**

The following options are available:

1. Move the recommendation as detailed on Page 1 of this report;
2. Move the recommendation as detailed on Page 1 of this report with amendments; or
3. Refer the proposed bylaws back to staff for further work, to be specified in the resolution.

Submitted by,



Ann Kjerulf, MCIP, RPP  
Senior Planner  
Community and Regional Services Division  
Planning and Development Department

AK/ca

**Reviewed by:**

Division Manager:

**Approved by:**

General Manager:

**Approved by (if applicable):**

CAO:



R2

## MEMORANDUM

**DATE:** January 2, 2014

**FILE No:** 2-D-13RS

**TO:**

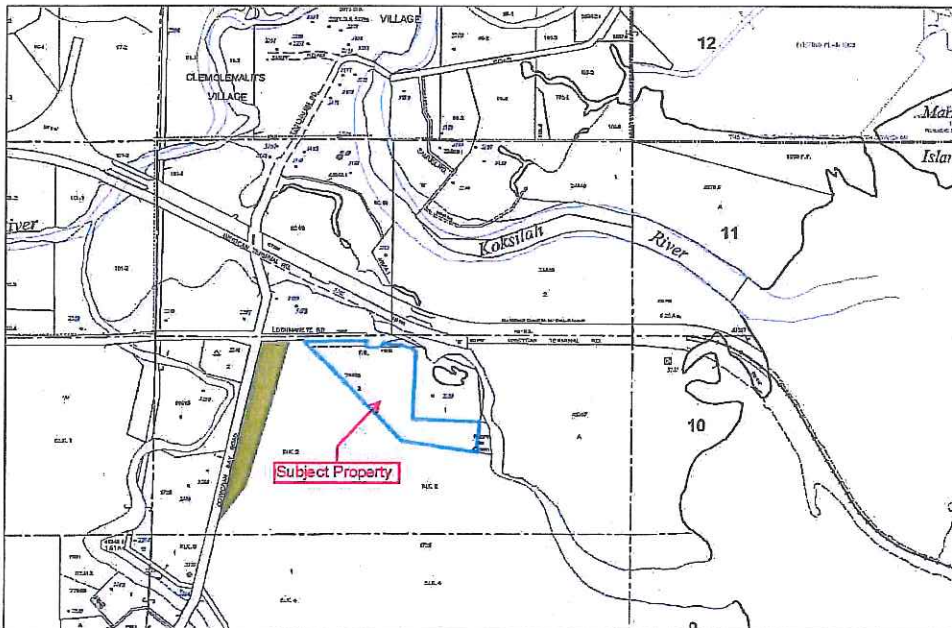
- Electoral Area D – Cowichan Bay – APC Chair and Members
- Government Agencies

**FROM:** Rob Conway, MCIP, RPP, Manager, Development Services Division,  
Planning & Development Department

**SUBJECT:** Proposed Rezoning of Lot 2, Plan 70020, Lochmanetz Road

### Background:

Location: Lot 2, Plan 70020, Lochmanetz Road, Cowichan Bay.



Legal Description: Lot 2, Section 10, Range 2 and District Lot 690 Cowichan District Plan VIP70020 (PID: 024-681-814)

Owner: 0782484 B.C. Ltd.

Size of Parcel: 3.05 ha. (7.54 ac.)

Existing Use of Property: Residential and Campground

Agricultural Land Reserve Status: In ALR

Environmentally Sensitive Areas: Koksilah River and marsh lands at the east side of the property.

Archaeological Site: None identified

Existing Plan Designation: Agricultural Resource



Proposed Plan Designation: To be determined

Existing Zoning: Primary Agricultural (A-1)

Proposed Zoning: New Campground Zone

Services:

Road Access: Lochmanetz Road

Water: Well

Sewage Disposal: On-Site

**Proposal:**

The subject property is zoned A-1 and is in the ALR, but has been used lawfully as a campground and the campground use is considered "legal non-conforming". As a legal non-conforming use the campground may be maintained, but it cannot not be expanded or replaced.

In 2011 the property was sold to new owners who had plans to re-develop it for an RV campground. Work commenced on the project but ceased after the owners were informed that the redevelopment exceeded what could be done under the legal non-conforming use provisions of the *Local Government Act*. The CVRD Board (Resolution No. 13-576, November 13, 2013) subsequently gave direction for CVRD staff to commence a zoning amendment process for the property. The CVRD's objective in rezoning the property is to resolve a long-standing zoning anomaly and to allow the property to be re-developed in a manner that is sensitive to the Cowichan Koksilah Estuary.

As a CVRD initiated zoning change, the property owner has not submitted a rezoning application. Nevertheless, the owners have made some commitments regarding development plans for their property. These include:

- An on-site sewage disposal system designed to the equivalent of a "Class A" Municipal Sewage Regulation standard;
- The transfer of 0.75 ha. (1.85 ac.) of land to the CVRD or a conservation organization for conservation and environmental protection purposes;
- Rainwater management and sediment and erosion control;
- Landscaping and restoration of the site.

A draft zone has been prepared to illustrate the type of zoning that is proposed for the site. The draft C-8 contains the following provisions:

- A maximum of 13 campsites per hectare (39 total);
- One single family dwelling permitted;
- Campground occupancy limited to 60 consecutive days or 180 days in a calendar year;
- Limitation on impervious surfaces (10 square metres per campsite);
- Prohibition of accessory structures.

Please note that the draft C-8 zone is provided for discussion purposes and is subject to change.

**Property Context:**

The subject property is located at the south side of Lochmanetz Road, and abuts a lower arm of the Koksilah River on its eastern boundary. The property is within the Cowichan-Koksilah Estuary but has been heavily altered in the past with excavation and filling activity. Much of the surrounding area is used for agriculture, but is a mix of land uses evident in the area including the Westcan Terminal access road and abandoned CNR railway right-of-way to the north, the South Cowichan Lawn Tennis Club to the west, and scattered residential uses.

**Policy Context:**

***Official Community Plan:***

The recently adopted Cowichan Bay Official Community Plan (OCP) designates the subject property "Agricultural Resource". This designation is intended to protect high quality agricultural land from suburban development, maintain a productive agricultural landscape and support increased food security in Electoral Area D. The non-conforming campground use is not recognized within the Agricultural Resource designation, but the following policies suggest that rezoning of the subject property may be considered:

***Policy 4.2, Objective 1(d)***

The CVRD may support an application to rezone land within the Agricultural designation to the A4 zone to accommodate new tourism and recreational uses subject to the following criteria:

- (i) The approval of the ALC has been granted;
- (ii) The use would not diminish the future potential of the land to be used for agricultural purposes; and
- (iii) Use and development of the lands would result in a harmonious relationship with neighbouring land uses.

***Policy 4.2, Objective 1(h)***

The CVRD recognizes longstanding commercial uses on parcels within the ALR, which predate the ALR, and commercial uses that have been approved by the ALR. These parcels may be zoned A7 – Agricultural Service; any expansion of non-farm uses on parcels zoned A7 will require ALC approval.

***Policy 4.2, Objective 2(f)***

Notwithstanding Policy (d) [to generally discourage non-farm use applications] the CVRD may support applications for an OCP amendment, rezoning, subdivision or ALR Exclusion for legal non-conforming uses which predate and have been in continuous operation since the establishment of the ALR on April 18, 1973.

***Development Permit Area:***

The Cowichan Bay Official Community Plan includes the subject property within the Aquatic Resource Development Permit Area (DPA), Sensitive Lands DPA, Agricultural Protection DPA and Rural Character DPA. If the property is rezoned for campground use, a development permit will be required in compliance with the applicable guidelines.

***Campsite Bylaw:***

Campgrounds in the CVRD are regulated by CVRD Campsite Standards Bylaw No. 1520. If the subject property is rezoned for campground use, a permit in accordance with the Campsite Bylaw will be required before the campground is developed.

***Cowichan Estuary Environmental Management Plan:***

The Cowichan Estuary Environmental Management Plan was adopted by an Order in Council of the Province of BC in September 1986. The Order requires approving authorities to obtain written approval from the Minister of Environment for land use decisions and other development approvals for lands within the CEEMP. The subject property is within the Plan area, and is designated "Possible Mixed Use". This designation suggests that the Plan may support the use of the site for uses other than agriculture, habitat management or conservation, but the Plan is silent as to the specific uses that would be supported within the Possible Mixed Use designation. The proposed zoning amendment will be referred to the Cowichan Estuary Environment Management Plan Committee for comment and direction.

**Agricultural Land Reserve**

A previous owner of the subject property obtained approval from The Agricultural Land Commission in 1988 to allow expansion of the campground that existed at that time. As it is not clear if the 1988 non-farm use approval authorizes the current development plan, or if further approval is required, the proposed zoning change has been referred to the Agricultural Land Commission for comment.

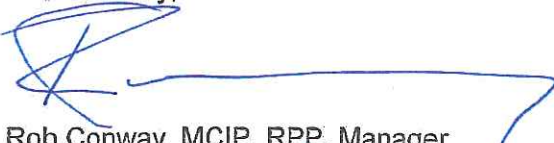
**Summary:**

The CVRD Board has directed staff to refer the proposed zoning change to the following organizations and agencies:

- Area D Advisory Planning Commission
- Cowichan Estuary Environmental Management Plan Committee
- Agricultural Land Commission
- Cowichan Tribes
- Vancouver Island Health Authority
- Ministry of Transportation and Infrastructure
- Cowichan Bay Improvement District
- Cowichan Bay Volunteer Fire Department
- School District 79
- CVRD Public Safety Division
- CVRD Environmental Initiatives Division
- CVRD Parks and Trail Division

All comments received regarding the proposed zoning change will be included in a report to the Electoral Area Services Committee. We request that any comments you have regarding this proposal be forwarded to this office by January 30, 2014. Should you require more time to respond or have questions regarding the proposed zoning change, please contact the undersigned.

Submitted by,



Rob Conway, MCIP, RPP, Manager  
Development Services Division  
Planning & Development Department

RC/mca

Attachments

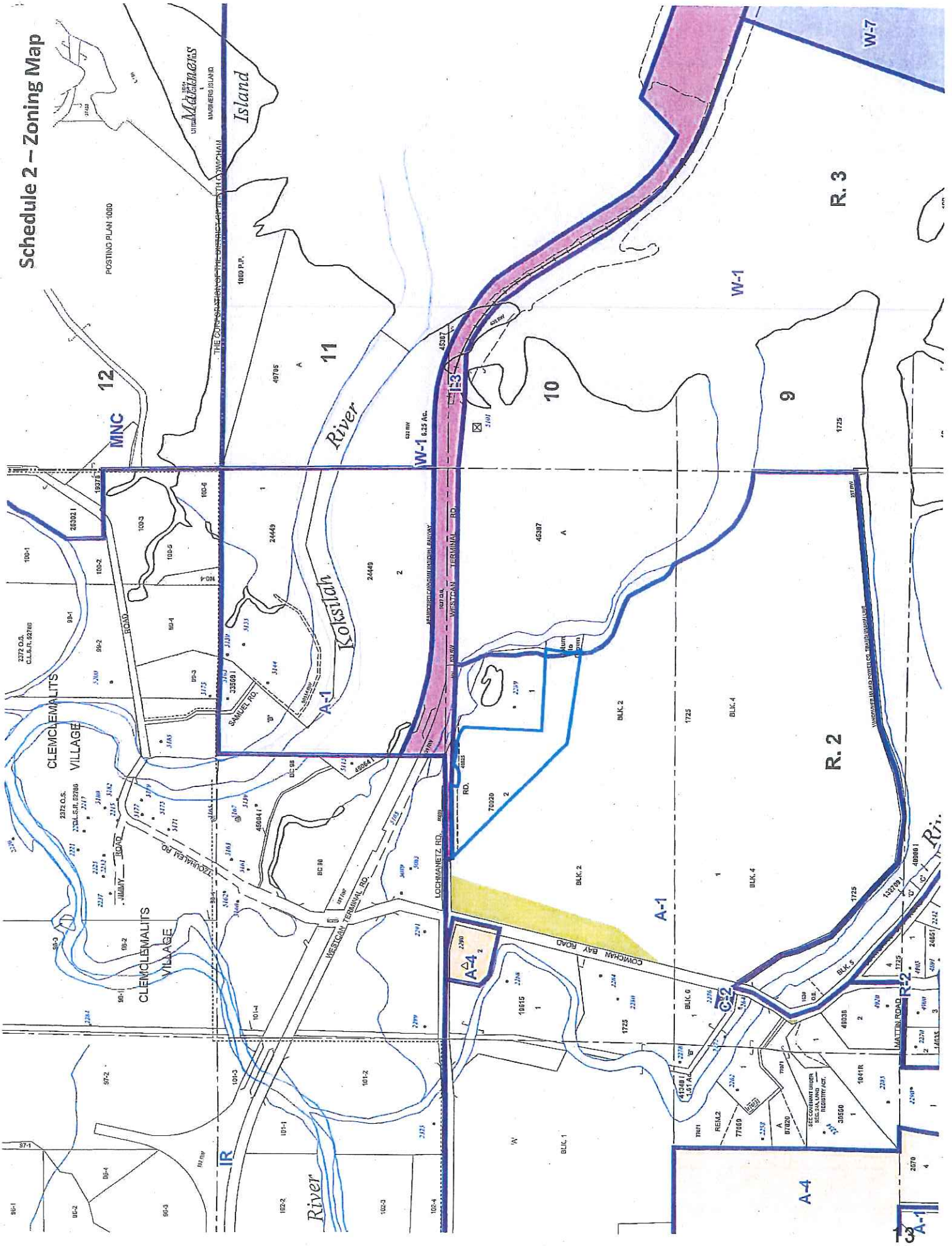
pc: Director L. Iannidinardo, Electoral Area D – Cowichan Bay



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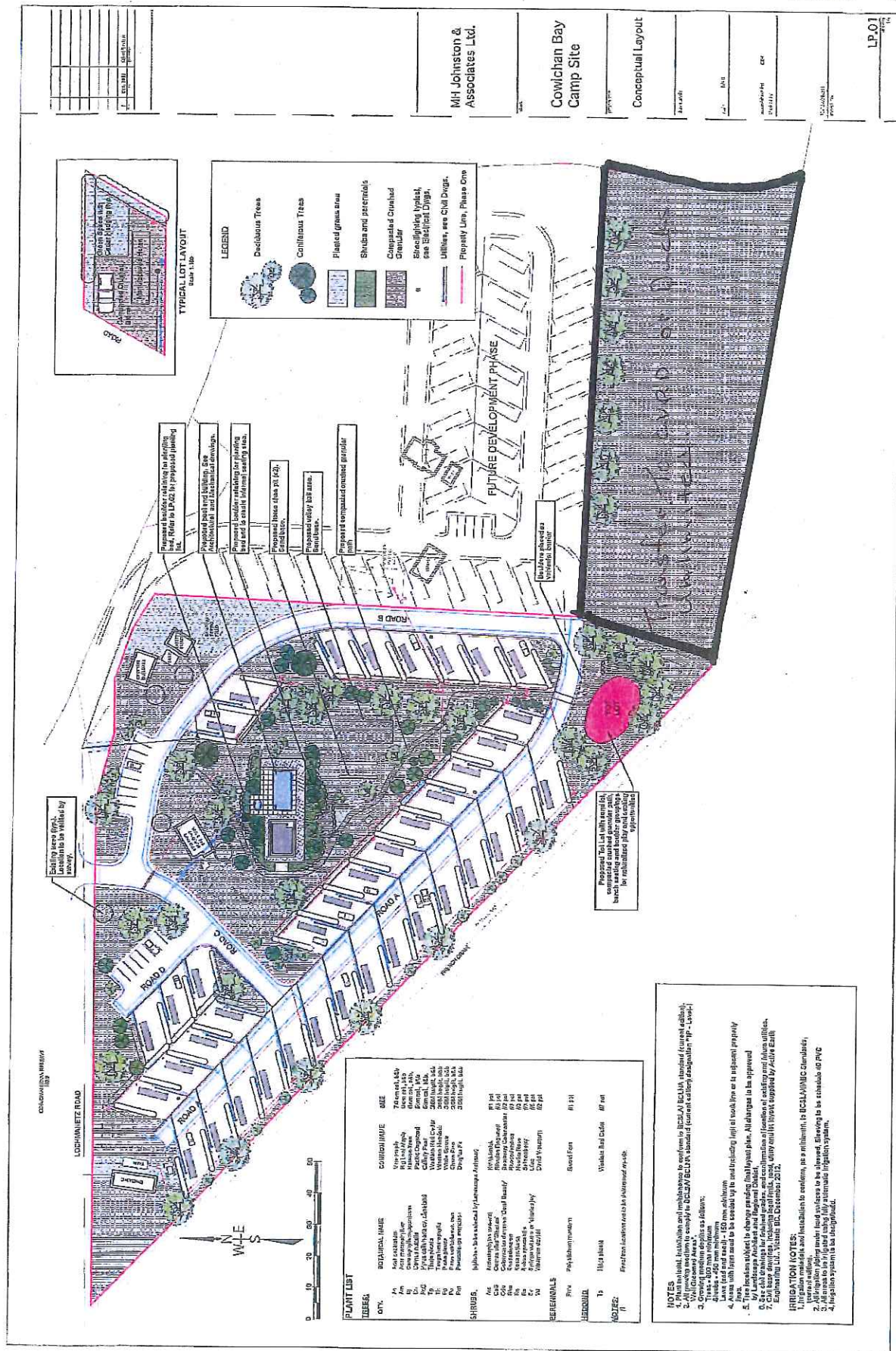


# Schedule 2 - Zoning Map





### SCHEDULE 3 – DEVELOPMENT PLAN



Cowichan Valley Regional District

June 25<sup>th</sup> 2013

Attn. Rob Conway – Manager Development Services Division

Re: Cowichan Bay Campground – 2289 Lochmanetz Rd.

My client's intention has always been to improve the existing campground and provide 39 campground units and a swimming pool. The attached landscape plan was developed to illustrate the proposed revitalization and how we propose to turn this site into a community asset.

The following is a response to the motion made by the EASC at its meeting April 2<sup>nd</sup> 2013 and would involve significant additional investment and brings the campground revitalization project to the limits of its viability.

**SEWAGE DISPOSAL** – The existing sewage disposal system is operated under permit with VIHA and there is no treatment of effluent. Any change to this system will require the approval of VIHA and we would be required to meet their requirements and standards for treatment. To ensure that we meet a "High Standard of Treatment" we are prepared to provide sewage treatment that meets the performance parameters addressed in the attached letter from our engineer (Blue Mountain Engineering Inc.)

**RAINWATER MANAGEMENT** – Attached is our Rainwater Management Plan dated May 21<sup>st</sup>. The Plan also outlines the parameters for the soil erosion and sediment control plan but indicates that a detailed plan would be developed if the zoning proceeds and we know what we are developing the plan for, and the detailed plan would then be a condition of development permit or building permit.

At the EASC meeting some concern was expressed about potential flooding and our discussions with the past owner of the site indicates that the area did flood once as a result of a log jam under the bridge connecting Lockmanetz to Western Terminal Road but that since that time no flooding has occurred. To ensure that flooding is not a potential concern the grade has been raised a minimum of .5M

**ENVIRONMENTAL PROTECTION AND ENHANCEMENT** - The intention of our rezoning is to permit the revitalization of the site as a campground and the landscape plan indicates how this is to be achieved and the additional plantings that are involved to enhance the site. As outlined on the Rainwater Management Plan and the Landscape Plan there is a neck of property at the south west end of our site which is a marsh area which acts as a natural rainwater collection area. This section of land is contained by a dyke along the Koksilah

River and is adjacent to the Ducks Unlimited property to the south and would be a natural extension to the Duck Unlimited property and could provide additional protected area in the estuary. We are prepared to gift this property to the CVRD or Ducks Unlimited provided we can have trail access to the Koksilah River.

As indicated at the EASC meeting April 2<sup>nd</sup> we are prepared to enter into a development agreement (restrictive covenant) securing the conditions outlined in this letter and attached plans, to give the community a guarantee that the conditions will be fulfilled.



Mark Johnston

M.H. Johnston & Associates Inc.



August 1, 2013

Mr Marty Block, Managing Partner  
South Island Aggregates Ltd.  
A-693 Stebbings Road  
Shawnigan Lake, BC  
V0R 2W3

**Re: Cowichan Bay Campsite; Suitability for (OSWWT) On Site Waste Water Treatment**

Dear Mr Block,

Blue Mountain Engineering has been consulted to explore the options for treatment of waste water from a site supporting:

- 40 unit RV Park (Seasonal),
- One single family home (continuously occupied)
- One duplex (continuously occupied),
- One Tri-Plex and
- 2 Cottages

With a total daily average flow of less than 5,000 lgal per day.

all located on the property at Cowichan Bay Camp ground.

In summary, the site has the potential for disposal of treated waste water to be released to the environment without contributing to or causing a health hazard. The area available is adequate for the intended development, with an area for a replacement dispersal field as required by Regulation.

In consideration of the soils as described during our meeting with yourself and M. Johnston on April 8, 2013, the following preliminary analysis shows that the system would require approximately 6,000 square feet of surface area for dispersal of the treated effluent.

Expected treatment performance to be capable of effluent released that exceeds Vancouver

Blue Mountain Engineering Inc.

561 Bellamy Close, Victoria, BC V9B 6C1

Office: (250) 658-0906

Cell: (250) 858-2491

Fax: (250) 658-0735

Email: [vproctor@bluemountaineng.ca](mailto:vproctor@bluemountaineng.ca)

Island Health Authority regulations, with the following parameters:

1/ Biological:

BOD<sub>5</sub>; <45                      TSS<45                      Biological activity; 0

With membrane technology use, the parameters could be orders of magnitude better, including

BOD<sub>5</sub>; < 2,    TSS < 5,    NTU < 5,                      Nitrogen < 2 mg/l                      Phosphorus < 1 mg/l

2/ Standards compliance:

The following internationally recognized Standards will be used to ensure a high level of treatment;

- CSA B-65 National installation code for decentralized wastewater systems.
- NSF standards for waste disposal and water reuse.
- BNQ Standard for stand alone waste water treatment systems.
- SPM-British Columbia

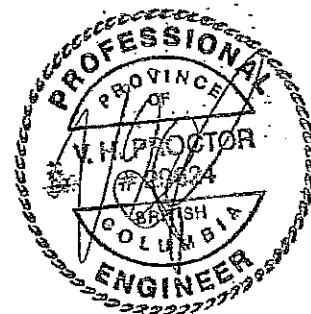
Final disposal technology and size will be determined in design phase.

Please advise if further information is required.

Regards



Victor Proctor, P. Eng.  
Blue Mountain Engineering Inc







# COWICHAN BAY CAMPGROUND

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## Rainwater Management Plan

**Prepared For:** MGM Holdings Ltd.  
PO Box 282  
Malahat, BC V0R 2L0

**Prepared By:** Active Earth Engineering Ltd.  
#105 – 4343 Tyndall Avenue  
Victoria, BC V8N 3R9

**Date:** May 21<sup>st</sup>, 2013

**Project:** 455 (05)

**Re:** Redevelopment of existing 39 unit RV Park

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**APPENDICES**

- *Appendix One - Figure 1 “Stormwater Plan”*
- *Appendix Two – Intensity – Duration Curve – North Cowichan*

## 1.0 INTRODUCTION & EXISTING SITE CONDITIONS

This report comments on the stormwater strategy for the proposed redevelopment of the campsite in Cowichan Bay, BC. Historically, the site had space for 44 seasonal campers, however, currently there are only approximately 8 full time residents. The Owner is proposing to upgrade the existing sewage collection, treatment and disposal system from a Class "D" (septic tank) system with an aging pipe network to a Class "B" system with new PVC sewer pipe. In addition, the Owner is proposing to remove the existing well, wellhead and pneumatic pressure system and construct a new water facility. The existing campground has been operating for many years under a VIHA sewage permit, and a private domestic water system that is groundwater fed. The historical drainage patterns indicate that during the rare occurrence of a high tide combined with heavy rainfall, the Site has flooded in certain low lying reaches. However, one of these flooding events occurred when a log jam existed under the bridge connecting Lochmanetz to Western Terminal Road (see Figure 1 "Stormwater Plan"). Since this jam has been cleared, we understand that no flooding has occurred on-site.

The site is generally flat with a modest slope from the northwestern corner down to the southeast corner. The site is bounded by the Koksilah River to the east, Lochmanetz Road to the north, and by the existing gravel road to the south. This man-made dyke system protects the site from Cowichan Bay tidal fluctuation. No soils investigations have been completed to date, however, when preliminary site grading was completed, the top soils were removed from within the road areas before placement of fabric and blasted rock. The native soils as mapped by BC Environment "Soils of Vancouver Island" are a Croft Hill fluvial, which is a silty clay loam that is very poorly drained. Typically these areas have free water remaining at or within 30cm of the surface most of the year.

The majority of the proposed access roads now consist of shot rock fill that the Owner recently placed. A geotextile fabric was placed on competent subgrade prior to the rock filling. To meet final design grades, an additional 275mm of base gravels and pavement will be placed on the roads during the site servicing phase.

There are no upland drainage systems that discharge to the subject property.

### **1.1 Sediment and Erosion Control**

During construction, sediment and erosion control procedures will be implemented and routinely monitored. Sediment traps will be in place to intercept site drainage during the construction period. Silt fences and /or drainage swales will be used to control any untreated site run-off from discharging to neighboring properties or to the estuary. Once the land is rezoned, and Development Permits are in place, AEE will prepare a detailed Sediment and Erosion Control Plan which will be implemented at time of construction.

### **2.0 DESIGN CRITERIA**

The CVRD Subdivision By-law No. 1215 governs the design and construction of stormwater and drainage components for the project. In this regard, we have prepared this drainage report to assist in assuring the safe, healthful redevelopment of this campsite.

#### **2.1 Storm Drains**

There are no proposed storm drains for this re-development. The site is rural in nature and the Owner intends to create open channels and grassed bio-swales to increase treatment and improve ease of maintenance.

#### **2.2 Storm water Best Management Practices**

There are a variety of stormwater best management practices (BMP's) that are in use and widely accepted by many approving agencies. By following and implementing various parts of the five practice areas listed below, projects are able to attenuate and treat storm water runoff:

- Pollution Prevention
- Source Controls (reduce runoff pollutants)
- On-site Controls (lot-level)
- Conveyance
- End-of-Pipe Controls

### 2.3 Flood and Tide Protection

All habitable (permanent) structures are to be designed so that the underside of the floor system is a minimum 600mm above the 200 year peak instantaneous flood elevation. However, the proposed sites will not contain any permanent structures, except for the mechanical rooms and hydro/power vaults. To ensure that flooding is not a potential concern at this site, the Owners have raised the existing grade by well over 0.5m.

According to local tide tables, the high water mark (HWM) is 1.5m geodetic, with tidal fluctuation from -2.3 to 1.5m geodetic. For a graphical illustration of the tides levels refer to Figure 1 "Stormwater Plan"

### 3.0 DESIGN FLOWS AND CONTROL

Land type classifications for the pre and post development conditions have been summarized in the following table below. Post development conditions have been broken into impervious and non-impervious land types in order to approximate a composite run-off coefficient.

#### Pre-Development

Type	R Value	Area (ha)
Gravel Roads	0.80	0.549 (ha)
Grassed Areas	0.17	1.649 (ha)
Total	0.33	2.198 (ha)

#### Post Development

Type	R Value	Area (ha)
RV sites (Gravel)	0.80	0.727 (ha)
Grassed Areas	0.17	0.974 (ha)
Road	0.95	0.446 (ha)
Pool/Mech. Bldg	0.90	0.051 (ha)
Total	0.55	2.198 (ha)

Pre and post development flows have been calculated through the use of the rational method, which was selected due to the small catchment area. By inputting the drainage area, time of concentration, runoff coefficients, and rainfall intensity as per the District of North Cowichan IDF data, pre and post development flow rates for the 10 year storm have been calculated and summarized below:



### Pre-development

$$Q = \text{RAIN} \quad t_c = 0.794 \text{ hours (Lag Method)}$$

$$L = 370\text{m} \quad h = 1.20\text{m} \quad S = .0032\text{m/m}$$

$$Q = (0.33) \cdot (2.198 \text{ ha}) \cdot (18 \text{ mm/hr}) \cdot (0.00278)$$

$$Q = 0.036 \text{ m}^3/\text{s}$$

### Post Development

$$Q = \text{RAIN} \quad t_c = 0.459 \text{ hours}$$

$$Q = (0.55) \cdot (2.198 \text{ ha}) \cdot (24 \text{ mm/hr}) \cdot (0.00278)$$

$$Q = 0.081 \text{ m}^3/\text{s}$$

As noted, there is a total increase in flow of  $0.045 \text{ (m}^3/\text{s)}$  between pre and post development levels.

The CVRD stormwater bylaw does not specify a requirement for storage. Storm water management guidelines implemented in neighbouring municipalities, such as the District of Saanich, require an obligation to store run-off in relation to the area of impervious surface created post development. Following these guidelines, the developer at this site would be required to detain approximately  $\pm 200 \text{ m}^3$  per hectare of impervious surface, which in this case would equate to approximately  $\pm 100 \text{ m}^3$ .

Storage will be satisfied through the use of available void storage capacity within the blasted rock placed within the central areas of the property. By removing the existing soils with low permeability and replacing with approximately  $\pm 600\text{mm}$  blasted rock fill, there will be an increase in detention and storage that would satisfy the above requirements. Additional storage will be created through the use of a local rock pit positioned to the north, near the entrance to the development. The storage capacity of both the blasted rock fill and the local rock pit has been summarized below:

Type	Storage
Local Rock Pit	$\pm 10.5 \text{ m}^3$
Blasted Rock Fill	$\pm 1490.0 \text{ m}^3$

Discharge from the entire site will be controlled through the wetland and existing  $450\text{mm } \varnothing$  diameter culvert located within the dyke adjacent to the Koksilah River. The existing capacity of this culvert is shown below:

**Mannings Equation:**

$$Q = \frac{A \cdot S^{1/2} \cdot R^{2/3}}{n}$$

$$Q = \frac{(0.159 \text{ m}^2) \cdot (0.0020 \text{ m/m})^{1/2} \cdot (0.1125 \text{ m})^{2/3}}{.013}$$

$$Q = 0.127 \text{ m}^3/\text{s}$$

The existing 450mm Ø CSP culvert is sufficiently sized to handle the anticipated post development, 10 year flow rate.

**3.1 TREATMENT**

A majority of over-land run-off from the proposed development will be treated through use of grassed bio-swales, positioned along the depressional low points of Road A. These bio-swales flow to the south/southeast eventually discharging to the existing wetland located adjacent to the Kokisilah River. Run-off will gain additional treatment through this low-lying wetland before discharging through the existing dyke, into the Kokisilah River, and eventually flowing into Cowichan Bay. The treatment of the remaining run-off will be obtained through the surface of the rock pit located near the entrance, within the northern portion of the development. The open-grate rim on the lawn basin located within the rock pit will be set proud, allowing for depressional storage and adequate treatment before entering the rock pit and infiltrating to the surrounding soils.

**3.2 "200 YEAR" FLOOD ROUTE**

The 200 year flood route follows the same overland drainage route as the road run-off, entering grassed bio-swales located along the localized low points of Road A. The flood route is then directed towards the existing low lying wet land where there is significant depressional storage available. The post development, 200 year storm has been calculated and summarized below:

---

**200 Year Storm (Post Development)**

$$Q = \text{RAIN} \quad t_c = 0.459 \text{ hours}$$

$$Q = (0.55) \cdot (2.198 \text{ ha}) \cdot (38 \text{ mm/hr}) \cdot (0.00278)$$

$$Q = 0.128 \text{ m}^3/\text{s}$$

The available storage capacity in the blasted rock, local rock pit, and existing low lying wet land area will allow for significant detention of any anticipated run-off. With this consideration, the existing 450Ø CSP culvert has been deemed sufficient to handle any additional flows generated from the site post development.

The above report and recommendations for the "Cowichan Bay Campground" have been prepared by,

ACTIVE EARTH ENGINEERING LTD.



Corey B. Brown, Grad Tech  
Design Technologist



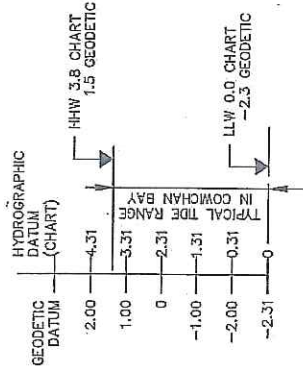
Michael J. Achtem, P.Eng  
Review Engineer, Principal



OVERLAND RUN-OFF TO DISCHARGE TO ROCK PIT c/w LAWN BASIN; ROCK PIT TO PROVIDE IN GROUND DISPOSAL THROUGH INFILTRATION

PROVIDE POSITIVE DRAINAGE AWAY FROM PROPOSED POOL HOUSE

ASPHALT WATER CONTROL TO DIRECT OVER LAND RUN-OFF TO LOW POINT OF ROAD (TYP.)  
ROAD RUN-OFF TO DISCHARGE OVERLAND TO GRASSED DRAINAGE SWALE AT LOW POINT OF ROAD



\* ALL SURVEY AND HYDROGRAPHIC DATA SUPPLIED BY MCELHANNY CONSULTING SERVICES LTD.

### COWICHAN BAY CAMPGROUND FIGURE 1 - STORM WATER PLAN

COWICHAN VALLEY REGIONAL DISTRICT



APRIL 26 2013  
SCALE 1:250

### LEGEND

- EXISTING WATER BODY
- PROPOSED OVER-LAND DRAINAGE
- ROCK PIT
- APPROX. 1.50m HIGH WATER MARK
- PROPOSED GRASSED SWALE

EXISTING 450mm Ø CULVERT c/w TIDEFLAP FLAP GATE  
EX. INLET INV. 0.40m  
EX. OUTLET INV. 0.38m  
EXISTING DYKE ADJACENT TO KOKSILAH RIVER  
+2.3m TO +2.5m

PLAN 1 PROPOSED SITE LAYOUT  
SCALE 1:250



**9.8 C-8 ZONE – SEASONAL CAMPGROUND ZONE**

**(a) Permitted Uses**

The following principal permitted uses and no others are permitted in the C-8 Zone:

- (1) Seasonal Campground;
- (3) Single Family Dwelling.

**(b) Permitted Density:**

- (1) No more than 13 campground sites per hectare are permitted.\*
- (2) A campground site shall have a minimum area of 100 square metres.
- (3) No more than 1 dwelling per parcel is permitted.
- (4) The maximum permitted gross floor area of all permanent principal and accessory structures is 600 square metres per parcel.

\* Land transferred to the Cowichan Valley Regional District or a conservation organization for conservation purposes may be included in the total site area used for determining campground density.

**(c) Conditions of Use:**

- (1) Seasonal Campground use is subject to CVRD Campsite Standards Bylaw No. 1520.
- (2) No tent, recreational vehicle or park model trailer may be occupied for more than 60 consecutive days or more than 180 days in a calendar year.
- (3) A minimum of 10 percent of the total site area, excluding conservation areas, must be designated and maintained for recreational use.
- (4) Not more than 10 square metres of any campground site may be covered with concrete, asphalt or other impervious surface.
- (5) A minimum of 20 percent of the total site area, excluding all required buffers and recreational areas, must be left in a natural condition or restored to a natural condition where the site has been disturbed. Land transferred to the CVRD or a conservation organization for conservation purposes. *qualifies*
- (6) No accessory or principal structures, including decks, roofs and storage sheds, shall be permitted within a campground site.



- (7) The height of buildings and structures shall not exceed 6.0 metres.
- (8) The minimum setback from all property boundaries for all principal and accessory buildings and structures and all campsites shall be 7.5 metres.

Other Amendments:

Amend Part 13 to include a minimum parcel size of (2.0 ha.) for the C-8 Zone.

Add the following definitions:

“Seasonal Campground” means the use of land for seasonal accommodation for vacation or recreational purposes, in tents, recreational vehicles or park model trailers and may include accessory washrooms, showers, laundry facilities, recreational facilities and office.

“Recreational Vehicle” means a camper, travel trailer, fifth wheel trailer or motor home with maximum width of 2.6 metres in transit mode and that is licensed in accordance with the *Motor Vehicle Act*.

British Columbia  
Agricultural  
Land Commission

November 22, 1988

Telephone: (604) 660-7000  
Faxcom: (604) 660-7033

Room 133, 4940 Canada Way, Burnaby, B.C. V5G 4K6

Reply to the attention of  
Colin Fry

Twin J. Holdings Ltd.  
2289 Cowichan Bay Road  
Box 40  
Cowichan Bay, B.C.  
VOR 1N0

Attention: Mr. Ian Johnstone

Dear Mr. Johnstone:

Re: Application # 02-J-87-21195

Further to your letter of August 22, 1988 this is to advise that the Provincial Agricultural Land Commission has reconsidered your application regarding land described as Section 10, Range 2, Cowichan District, Except Parcel "B", Plan 1725, Koksilah River and North 33 Links of Section West of River and East of the Northeast boundary of Block 2 of said Plan.

Pursuant to Section 20(1) of the Agricultural Land Commission Act, the Commission, by Resolution #1127/88 allowed your application to:

- enlarge the existing pond to develop a floating home moorage basin
- develop fifteen (15) pull-through R.V. sites
- develop a tenting area
- upgrade washroom facilities
- construct a second permanent dwelling

As far as the additional dwelling is concerned please be advised that a second dwelling on a property does not carry with it all the privileges of ownership in fee simple and that certain accommodations such as mortgages, home ownership grants, etc. may not be applicable. Moreover, this permission for a second dwelling is not to be construed in any way as a justification for future subdivision.

This approval is granted provided that your development is in substantial compliance with the sketch plan attached hereto.

The land referred to in the application will continue to be subject to the provisions of the Agricultural Land Commission Act and regulations except as provided by this approval.

...2 ✓

Page 2

This approval in no way relieves the owner or occupier of the responsibility of adhering to all other legislation, including zoning, subdivision and other land use bylaws of the regional district and decisions of responsible authorities which may apply to the land.

Before your development can proceed, other requirements such as public road dedications, highway access permits, sewage disposal permits, etc. may be necessary and we urge you to check with the responsible authorities.

Please quote Application #02-J-87-21195 in any future correspondence.

Yours truly,

PROVINCIAL AGRICULTURAL LAND COMMISSION



Per: R. P. Murdoch, General Manager

CF/lv

Encl.

cc: Regional District of Cowichan Valley (#4/87)  
Approving Officer, Hwys - Nanaimo  
B.C. Assessment Authority - Nanaimo





## Cowichan Tribes

5760 Allenby Road Duncan, BC V9L 5J1  
Telephone (250) 748-3196 Fax: (250) 748-1233

File #:e462-220813

Hon. Mary Polak  
Minister of Environment  
PO Box 9047 Stn Prov  
Victoria, BC V8W 9E2  
Via Email: [ENV.Minister@gov.bc.ca](mailto:ENV.Minister@gov.bc.ca)

Hon. Steve Thomson  
Minister of Forestry, Lands, Natural Resources Operations  
PO Box 9049 Stn Prov  
Victoria BC V8W 9E2  
Via Email: [FLNR.Minister@gov.bc.ca](mailto:FLNR.Minister@gov.bc.ca)

January 10, 2014

Dear Minister Polak and Minister Thomson:

**Re.: Request for Re-zoning Intertidal Crown Lease 103103, Cowichan Bay, File Number 1405504 to Habitat Management**

We would like to request the re-zoning of the referenced Lease to "Habitat Management" in accordance with:

- the stipulations of the Cowichan Estuary Environmental Management Plan (CEEMP) stating that ultimately all Leases related to the industrial/commercial use of the Cowichan Estuary will be transferred to habitat management;
- the Agreement signed between BC Environment and BC Lands (transfer of areas for administration within Lot 160 – dated July 18, 1991) stating that it is:  
  
*"...the ultimate intent of transferring all those portions no longer used for industrial purposes to BC Environment for estuary management and conservation."*
- the 1992 "Agreement on Joint Stewardship of the Cowichan Estuary" signed between the Cowichan Tribes and the Minister of Environment Lands & Parks (1992) in recognition of the historic and continuing livelihood-, cultural-, and spiritual importance of the estuary to Cowichan Tribes.

- the Letter by the BC Ministry of Environment Lands and Parks dated July 29, 1994 (file # 44400-20/COWI) addressed to the Cowichan Bay Improvement Association which states that it

*"...will request the Licensees of 103103 that regular reports are provided by both companies (i.e. at the time MacMillan Bloedel Ltd., Carson Bulldozing Ltd., and Doman Forest Products Limited) on the amount of use of the Licence areas to determine the companies' need for the area. If it can be shown that the areas are not used and/or have been abandoned, the license(s)/Leases will be terminated."*

Lease 103103 (see attached Map), originally allocated to log storage by MacMillan Bloedel and BCFP, later transferred to Tidal Harmony Holdings Ltd., has not been in use for log storage or any other visible activity for many years. It is for this reason that this site has been chosen for a successful eelgrass recovery program spear-headed by a local not-for-profit group and funded by the Habitat Conservation Trust Fund (HCTF). There is consensus that this part of the estuary has turned into the most productive section of the Cowichan Estuary, playing a key role in the on-going Chinook salmon recovery program.

Against this background and in compliance with the long term goals of the Cowichan Estuary Environmental Management Plan it appears prudent to now re-zone this area for habitat management and conservation as a very important step within the rehabilitation process of the Cowichan Estuary.

### **Important Background Information**

Cowichan Tribes has a very long history of occupation and use of the Cowichan and Koksilah Rivers, Cowichan estuary and Cowichan Bay. The Hul'qumi'num Treaty Group Review of Ethnographic, Historical and Archaeological Resources, Revised: September 8, 2009 (HTG Report 2009) describes physical occupation by Cowichan Tribes of two village sites Thiek and Kilpahlas (i.e. the two Clemclemaluts villages identified by colonial survey 1859), and commonly held the lands of productive resource areas located in the vicinity of those villages (e.g. fishing places, shellfish beds, hunting grounds), as physically occupied through use by all the villagers for procuring a multitude of species. The report goes further to say

*"Cowichan Bay was rich in resources and was reportedly used by all Cowichan people. Herring were raked in the spring and smelts were taken during the spring and summer. A variety of beach foods such as clams, cockles, crabs and urchins were available. Shark and dogfish were caught in Cowichan Bay, as were a large number of species of groundfish. Harbour seals and sea-lions were available in Cowichan Bay and were hunted there. In addition, several kinds of nets were used to take ducks, geese and other migratory species."* (p. 31)

Many resources are to this day still procured by Cowichan Tribes' members from the Bay and Estuary. However for the past four decades or so, shellfish has been deemed unsafe



for human consumption in Cowichan Bay due to environmental degradation and pollution resulting from about a century of intensive logging use and industrial development. Evidence of this use is illustrated by the dozens of stray logs in the Estuary. Grounding and abrasion of logs (including grounded log booms) and woody debris has been identified as a major contributor to the disappearance and destruction of eelgrass growth and the absence of other vegetation, especially in the northern part of the Cowichan Estuary (Burt *et al.* 2002). Eelgrass disappearance currently poses the greatest threat to the ecological integrity of the Estuary.

Marine vegetation that still does occur in the Estuary is mostly concentrated in the southern part in the lower intertidal zone which happens to coincide with Lease area 103103. Today this area is populated with an assemblage of eelgrass, spaghetti red algae and sea lettuce. Eelgrass is considered to be the most valued fish habitat type and is a nursery for many marine creatures including chinook, chum, and coho salmon, as well as larval shellfish and crustaceans. As a source of eelgrass transplants, Lease 103103 has been essential to eelgrass restoration efforts in the northern part of the estuary.

Cowichan Tribes is also supporting a local not-for-profit group proposal to breach the WestCan Terminal access road which acts like a dike and functionally and ecologically separates the northern part of the Estuary from the south.

Given the evidence and information provided in this letter, Cowichan Tribes requests the rezoning of Lease 103103 to Habitat and Conservation Management designation as stipulated in the Cowichan Estuary Environmental Management Plan. Cowichan Tribes would also like to engage with your Ministries to explore any other Lease or License of Occupation areas in the Bay or Estuary that have lapsed with the objective of returning them to functioning and productive marine ecosystems.

Please do not hesitate to contact me or Tracy Fleming, Referrals Coordinator, at 250-748-3196, at any time if you require clarification or to arrange a meeting.

Yours truly,



Chief William C. Seymour

WS/tf

Attachment.

pc. Rudi Mayser, Manager of Authorizations, Forest, Lands, Natural Resources, [Rudi.Mayser@gov.bc.ca](mailto:Rudi.Mayser@gov.bc.ca)

