

COPY

March 16, 2011

Front Counter BC
Ste 142, 2080 Labieaux Road
Nanaimo, BC, V9T 6J9

VIA EMAIL: tom.hilborn@gov.bc.ca

Attention: Tom Hilborn, P.Ag.
Senior Natural Resource Officer

**Re: Crown Land Tenure Application - Squirrel Cove Marine Resort
Qathen Xwegus Management Corporation**

Dear Mr. Hilborn, P.Ag.

Chatwin Engineering (Chatwin) is pleased to submit this Crown Land Tenure Application and Management Plan for the proposed development of the Squirrel Cove Marine Resort at Squirrel Cove, Cortes Island. The submission package is for full build-out however, the site will be densified in phases over time.

This single application package includes the following:

- Completed Crown Land Tenure Application;
- Development Management Plan with project overview, project description and environmental, and socio community review;
- Engineering Layout drawings and Metes and Bounds descriptions for 4 individual mooring areas and for a Marina Lease;
- Letter of Agency for Chatwin Engineering; and,
- Crown Land Application Fee (cheque) payable to the Minister of Finance at a value of \$560.00 (including HST).

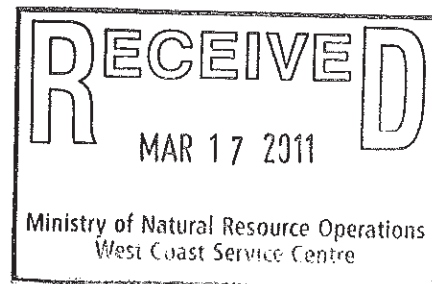
Applicant:
Chris Roddan
Qathen Xwegus Management Corporation
PO Box #9 Squirrel Cove, Cortes Island
c/o 203, 4400 Marine Avenue
Powell River, BC, V8A 2K1

If you require any further information, please do not hesitate to call the undersigned at 250-753-9171

Yours truly,

CHATWIN ENGINEERING LTD.


Chris Zamora, B.Sc., R.P.Bio.
Senior Biologist / Manager of Environmental Services



N:\Projects\N1124-02\Reports\Crown Land Application\Front Counter Squirrel Cove Cover Letter.docx



Qathen Xwegus Management Corporation
PO Box 9
Squirrel Cove, B.C.
V0P 1K0
Phone: 604 485 9400

March 10, 2011

Tom Hilborn
Frontcounter BC
142-2080 Labieux Rd
Nanaimo, V9T 3K7
(250) 751-7220

Dear Tom Hilborn

Re: QXMC – Letter of Agency

Qathen Xwegus Management Corporation (QXMC) have retained Chatwin Engineering, to act as their agent in order to obtain permits required for Squirrel Cove Marine Development Applications within the Squirrel Cove, Cortes Island.

Contact details for Chatwin Engineering, are as follows:

Address: 1614 Morley Road.

Nanaimo BC, V9S 1JT

Phone: **250 753 9171**

e-mail: [Chris Zamora \[ChrZam@chatwinengineering.com\]](mailto:ChrZam@chatwinengineering.com)

The term of this appointment will be from March 15, 2011 until April 15, 2011.

Yours Sincerely,

Chris Roddan

RECORD OF SELF-ASSESSMENT AGAINST FISHERIES AND OCEANS CANADA
PROJECT SUBMISSION REQUIREMENTS

Version December 2010

The project you are submitting / have submitted to FrontCounter BC may be subject to further requirements under the federal *Fisheries Act*. The purpose of this form is to help you determine if further information is required for Fisheries and Oceans Canada (DFO). Please submit your completed form to the FrontCounter BC office where you are submitting / have submitted your Provincial application(s), or scan and email your form to Frontcounterbc@gov.bc.ca if the ATS Project # has been included on the bottom of this form.

SECTION 1

Is the proposed activity(s) greater than 30 m from water?

☐ Yes ☒ No

Water is defined as all permanently wetted areas such as oceans, rivers, streams and lakes, as well as intermittently wetted features such as intertidal areas, floodplains or seasonally wetted channels or wetlands. The distance from water (i.e. the 30m) is measured from the top of bank.

Will the proposed activity(s) avoid impacts to downstream water quality and quantity?

☐ Yes ☒ No

Impacts to Water Quality and Quantity include changes in surface or groundwater flows as a result of water withdrawal; discharge or diversion; exposure of soils to erosion and sediment release to nearby streams (e.g. urban development and stormwater management).

If you are uncertain or need help, please refer to DFO's Working Near Water in BC and Yukon website. Go to www.pac.dfo-mpo.gc.ca and click on "Working Near Water."

If you answered YES to both questions, print and sign this form and attach it to your Provincial application(s).

If you answered NO to either one or both questions, please refer to DFO's Working Near Water in BC and Yukon website: Go to www.pac.dfo-mpo.gc.ca and click on "Working Near Water." Work through the steps under "Planning work or activities near water?" and after you have submitted your application to DFO, complete Section 2 of this form and attach a signed copy to your Provincial application(s).

SECTION 2

I have reviewed DFO's Working Near Water in BC and Yukon website and (select one of the following options):

- ☐ I will comply with ALL the conditions of one or more DFO Regional Operating Statement(s) and/or DFO-endorsed Best Management Practice(s) and have submitted a Notification Form to DFO. Please list the DFO Regional Operating Statement(s) and/or DFO-endorsed Best Management Practice(s) you will follow:

No Application has been
submitted to DFO.

- ☐ I have submitted a Project Review Application Form to DFO for (select applicable type):

- ☐ Notification to DFO
☐ Request for Project Review
☐ Request for a *Fisheries Act* Authorization

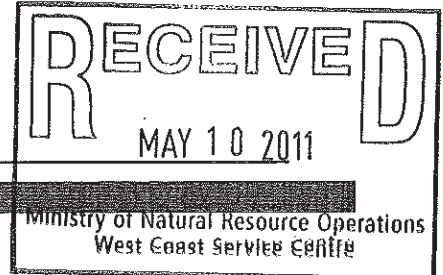
DFO Submission Date: _____ DFO File # (if you have one): _____

SIGNATURE

Print Name: Chris Farnon

Signature: [Signature]

Date: May 10/2011



FrontCounter BC Office Use Only

ATS Project #

63570

1. What are the construction materials for the marina? Anchors?

The main dock and finger floats will be wood framed and anchored in place using concrete or steel piles. Access to the main docks will be by elevated wharfs with attached aluminum gangways. No chain and concrete anchor blocks are proposed to be used for the docks. The piles will allow the docks to rise and fall with the tides. Single point and double point mooring floats will be attached in place using chain and concrete anchor blocks. The mooring floats and boats will be allowed to swing with changing tides.



Applying for a Crown Land Tenure

All applications must include completed application form, general location map, local detail map, appropriate fees and attachments as indicated below.

INFORMATION REGARDING APPLYING FOR CROWN LAND AVAILABLE AT
www.al.gov.bc.ca/clad/land_prog_services/programs.html

PART 1. NAME(S) AND MAILING ADDRESS

Applicant Name:

FULL LEGAL NAME of Individual(s), Company or Society,
Ministry or Government Agency Your File: _____
Qathen Xwegus Management Corporation

Contact Name for Company or Ministry Applicants:

Chris Roddan/Bruno Thielmann

Applicant Mailing Address:

Qathen Xwegus Management Corporation
PO Box #9 Squirrel Cove, Cortez Island
c/o 203, 4400 Marine Ave postal code V8A 2K1
Powell River, BC

Applicant Contact Numbers: Phone: Cell: 604-414-8038

Daytime Phone: _____ Fax: _____

Applicant Email Address:

Chris Roddan - swsltd@telus.net

Are you an Agent submitting this application on behalf of your client?

☒ Yes ☐ No

Letter of Agency attached ☒ Yes ☐ No

Agent Name & Mailing Address:

Chatwin Engineering Ltd.
1614 Morey Rd
Nanaimo, BC postal code V9S 1J7

Agent Contact Numbers: Chris Zamora

Phone: 250-753-9171 Fax: 250-754-4459

Agent Email Address:

czamora@chatwinengineering.com

** till April 15, 2011 only.*

For applications made by more than one individual: ☐ Joint Tenants or ☐ Tenants in Common

For your information: Joint Tenants: on the death of one tenant the interest passes to surviving tenant.

Tenants in Common: on the death of one tenant the interest passes to the beneficiaries of the estate.

BC Inc. #, BC Registration # or Society #: BC0805529
84020-7617-20001

HST Registration #: 840217617 RT0001

Age: 19 or over ☒ Yes ☐ No

Canadian Citizen or Permanent Resident ☒ Yes ☐ No

Do you hold another Crown land tenure? ☐ Yes ☒ No If yes, provide File Number:

Period of Projected Use:

☐ Two years or less ☐ Two to five years ☐ Five to ten years ☐ Ten to thirty years ☒ More than thirty years

Application Type: ☒ new application ☐ replacement application – file number _____

☐ investigative permit application ☐ amendment application – file number _____

Proposed Use/Tenure Type: (e.g. powerline right of way, gravel quarry licence): Marina and Mooring Anchorage

FOR OFFICE USE ONLY

(date/time received)

RECEIVED
MAR 18 2011

Ministry of Natural Resource Operations
West Coast Service Centre

File Number:

1413569

Disposition ID:

892153

Per # 911204

Project Number:

63570

Client Number:

234121

PART 2. PURPOSE, LOCATION, AREA**PLEASE SELECT APPROPRIATE PROPOSED LAND USE**

Proposed Land Use Program Area	New Application Fees (including HST)	Program Specific Requirements Website
<input type="checkbox"/> Aggregates & Quarry	\$1,120.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Agriculture – Intensive	\$ 280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Agriculture - Extensive	\$ 280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Airport – private	*\$50 per hour process time	Contact FrontCounter BC
<input type="checkbox"/> Alpine Skiing	Type 1 (minor) \$1,120.00 Type 2 (major) contact FrontCounter BC	www.tca.gov.bc.ca/resort_development/
<input type="checkbox"/> Aquaculture – Fin fish	\$5,516.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Aquaculture – Shellfish	\$1,344.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Commercial - General	\$ 280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Commercial - Film	\$560.00 fee plus \$280.00 rental	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Commercial Recreation	Non-Motorized \$280.00 Motorized \$3,696.00	www.tsa.gov.bc.ca/resorts_rec/tenure/commercialrecreation
<input type="checkbox"/> Communication Site	\$1,120.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Community/ Institutional	\$ 280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Federal Reserves	\$3,465.00	Federal Government Only – Contact FrontCounter BC
<input type="checkbox"/> Ferry Terminals	*\$50 per hour process time	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> General Industrial	\$ 560.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Golf Course	\$3,696.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Grazing	\$ 280.00	http://www.for.gov.bc.ca/hra/Legislation/grazing.htm
<input type="checkbox"/> Head Lease	\$50 per hour process time	Contact FrontCounter BC
<input type="checkbox"/> Log Handling	\$1,120.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input checked="" type="checkbox"/> Marina	\$ 560.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Mining	\$ 560.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Ocean Energy	Investigative Permit \$560.00 Licence for Equipment \$560.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Oil and Gas	\$ 560.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Private Moorage	\$ 280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Provincial Reserves	For Provincial Government Ministries Only	
<input type="checkbox"/> Utilities (Linear Use)	Less than 25 Km \$1,120.00 More than 25 Km *\$50 per hour Access to single lot \$280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Residential	\$ 280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Roadways – Public	\$ 280.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Roadways – Industrial	\$1,120.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Water Power	\$3,696.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html
<input type="checkbox"/> Wind Power	Investigative Permit \$560.00 Monitoring Towers (max 5) \$560.00 Wind Farm *\$3,696.00	www.al.gov.bc.ca/clad/land_prog_services/programs.html

Note: Investigative Permits (available for all program areas): **\$560.00** (including HST)**Replacement Application Fees:** 50% of above fee or \$224.00 (including HST), as a minimum.**Amendment Fees:** Contact FrontCounter BC

* To be paid at a later date

PART 2 (continued)

General Location of Crown land (i.e. distance from nearest community, Indian Reserve or significant geographic location such as a lake or mountain; location on a named road; etc.):

Please provide a shape file if available. See Attached Management Plan

Area in Hectares: _____ **OR** length (km/m): _____ width (km/m): _____

PART 3. LEGAL DESCRIPTION OR BOUNDARY DESCRIPTION

If surveyed, give legal description: as provided by the local Land Title Office (e.g., Lot 1 of Section 31, Township 12 W6M Kamloops Division of Yale District Plan 18411). A legal description is found in the Certificate of Title (CofT). A copy of the CofT must be attached to the application. A copy of your Registered Survey Plan, if available, will confirm the dimensions of the place of use.

See Attached Management Plan

If unsurveyed: enter description of unsurveyed Crown land and description of boundaries.

See Attached Management Plan

Instructions to Describe Unsurveyed Crown Land

- The point of commencement, for unsurveyed parcels, should be described in terms of an existing survey post (e.g., 18 metres west of the S.E. corner of the parcel) or a readily identifiable geographic feature (e.g., a prominent point of land or intersection of two roads) to enable accurate location of the parcel.
- Boundary lines of the area must be, as much as possible, astronomically true north, south, east and west so that a rectangular lot is formed.
- Where the topographic features of the area do not allow for rectangular boundary lines running true north, south, east and west, then boundaries will be permitted in other directions as long as they do not interfere with the orderly survey of other surrounding land.
- The side lines of small parcels fronting on lakes, rivers, tidal waters and on certain surveyed highways shall, where possible, be parallel to each other and perpendicular to the general trend of the features on which the small parcel fronts.
- The sidelines for unsurveyed foreshore shall, as a general rule, be laid out at right angles to the general trend of the shore. This may be varied to suit special conditions, but encroachment on the foreshore fronting adjoining lands shall be avoided. The outside or waterward boundary shall be a straight line or series of straight lines joining the outer ends of the side boundaries. On narrow bodies of water the outside boundary shall not normally extend beyond the near edge of the navigable channel.

1 hectare = 2.471 acres

1 metre = 3.281 feet

100 metres x 100 metres = 10,000 square metres or 1 hectare

PART 4. APPLICATION CERTIFICATION

All applications must be complete. Incomplete applications will be returned to applicant.

Please refer to the specific program requirements (e.g., Aggregates, Commercial, Residential) for information that must be submitted with this application.

All of the following **must** be attached to or enclosed with this application form:

☒ **Fees** (in the amount indicated in Part 2) to **Minister of Finance** (cheque or credit card authorization form attached or pay in person with debit card or cash)

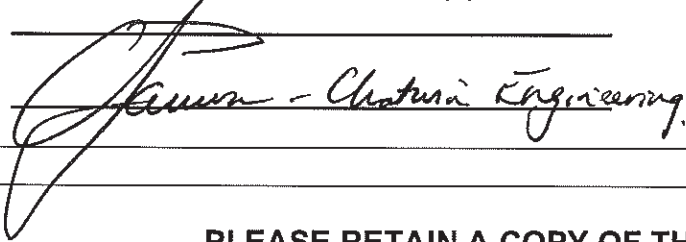
☒ **General Location Map(s)** at a scale of 1:50,000 to 1:250,000 indicating general location of the area under application and the location of access roads, watercourses and other major landmarks.

☒ **Detailed Site Map(s)** outlining in detail the area under application, showing the exact perimeter boundaries of the application area including the dimensions (in metre) and area (ha), including watercourses, district lots etc.

☒ **Program Specific Requirements** (i.e. communication site, agriculture, industrial). Program specific requirements can be confirmed at http://www.al.gov.bc.ca/clad/land_prog_services/programs.html

PLEASE NOTE: Additional items may be required (e.g. Advertising, Security Deposit, Proof Of Insurance, Letter Of Consent) Please consult Program Policies or contact FrontCounter BC for further information. Some items may have additional associated costs or require additional processing time.

Applicant or Agent signature(s):



Date: March 15, 2011

PLEASE RETAIN A COPY OF THIS APPLICATION FOR YOUR RECORDS

NOTE: The information you provide will be subject to the Freedom of Information and Protection of Privacy Act. If you have any questions regarding the treatment of your personal information, please contact the Manager, Privacy, Information Access and Records Management.

The submission of this form does not in any manner convey any rights to use or occupy Crown land.

FRONTCOUNTER BC OFFICE LOCATIONS

www.frontcounterbc.gov.bc.ca OR Call Toll-Free 1-877-855-3222

Cranbrook 1902 Theatre Road Cranbrook BC V1C 7G1	Fort St. John Ste 100, 10003 110 th Avenue Fort St John BC V1J 6M7	Kamloops 441 Columbia Street Kamloops BC V2C 2T3
Nanaimo Ste 142, 2080 Labieux Road Nanaimo BC V9T 6J9	Prince George 1044 5 th Ave Prince George, BC V2L 5G4	Smithers 1 st Floor, 3726 Alfred Avenue Smithers BC V0J 2N0
Surrey Ste 200, 10428 – 153 rd Street Surrey BC V3R 1E1	Williams Lake Ste 201, 172 North 2 nd Avenue Williams Lake BC V2G 1Z6	

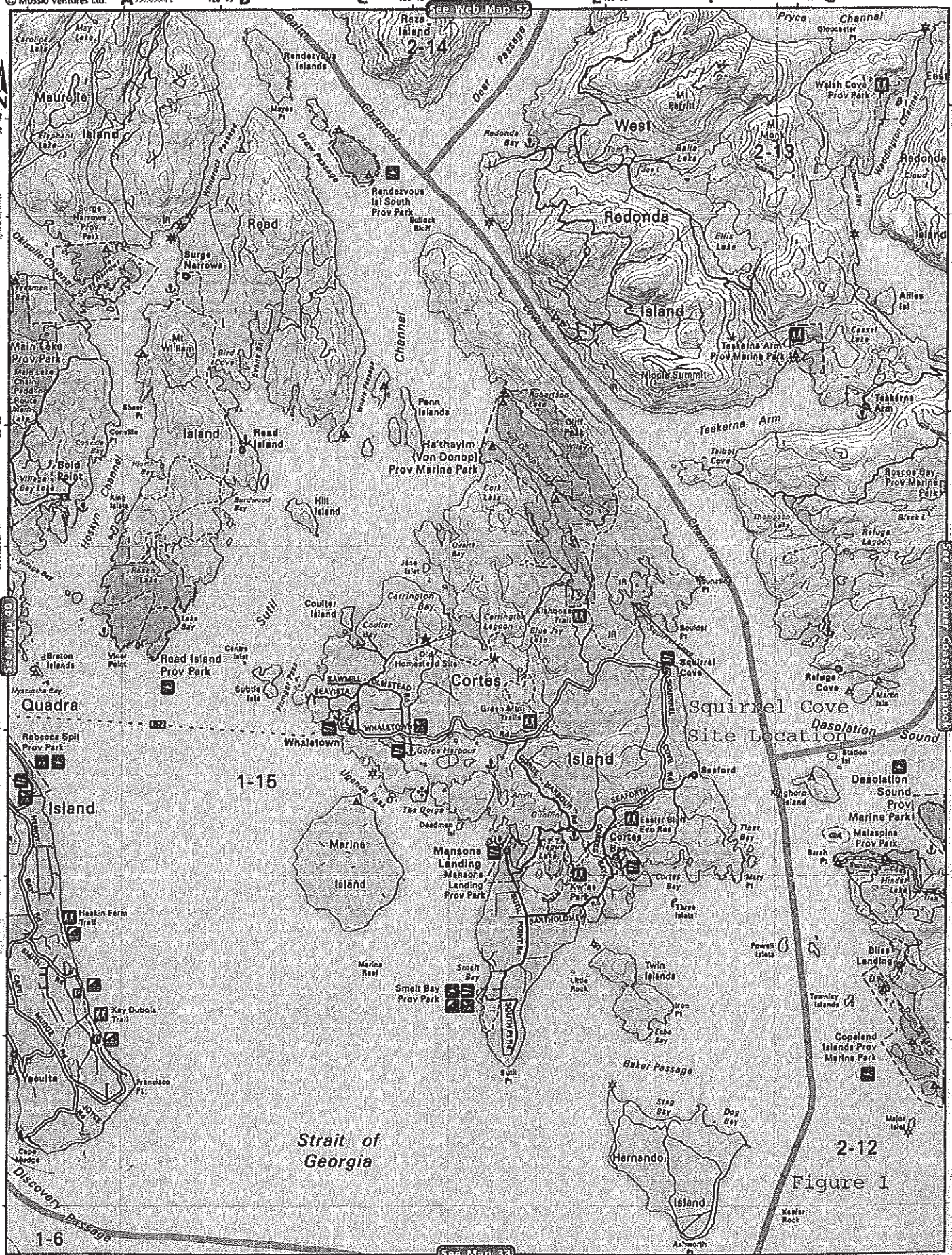
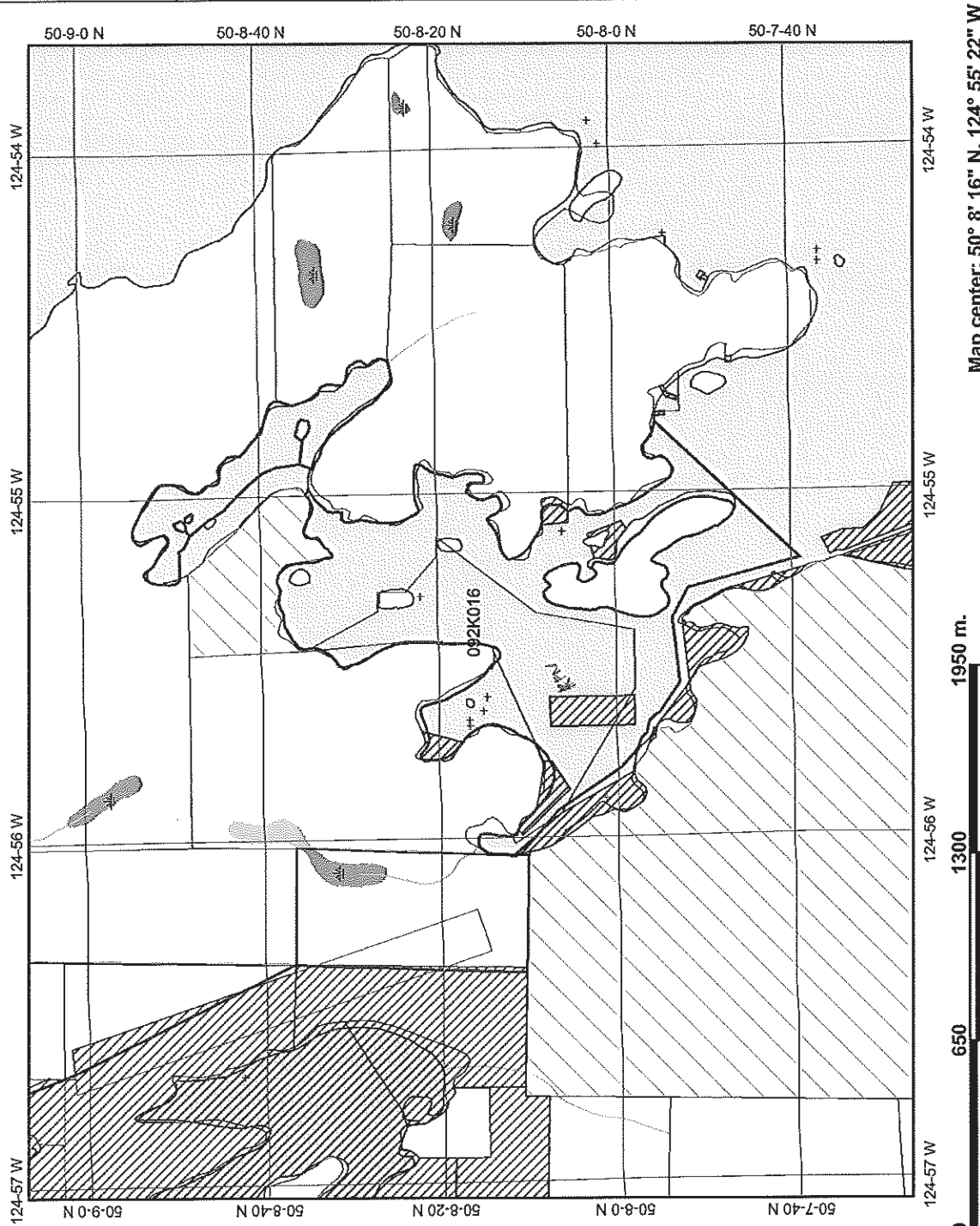
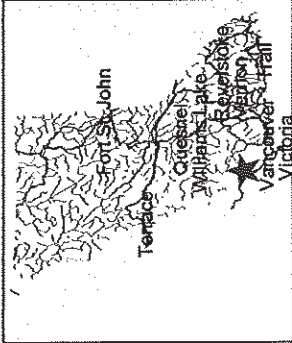


Figure 1

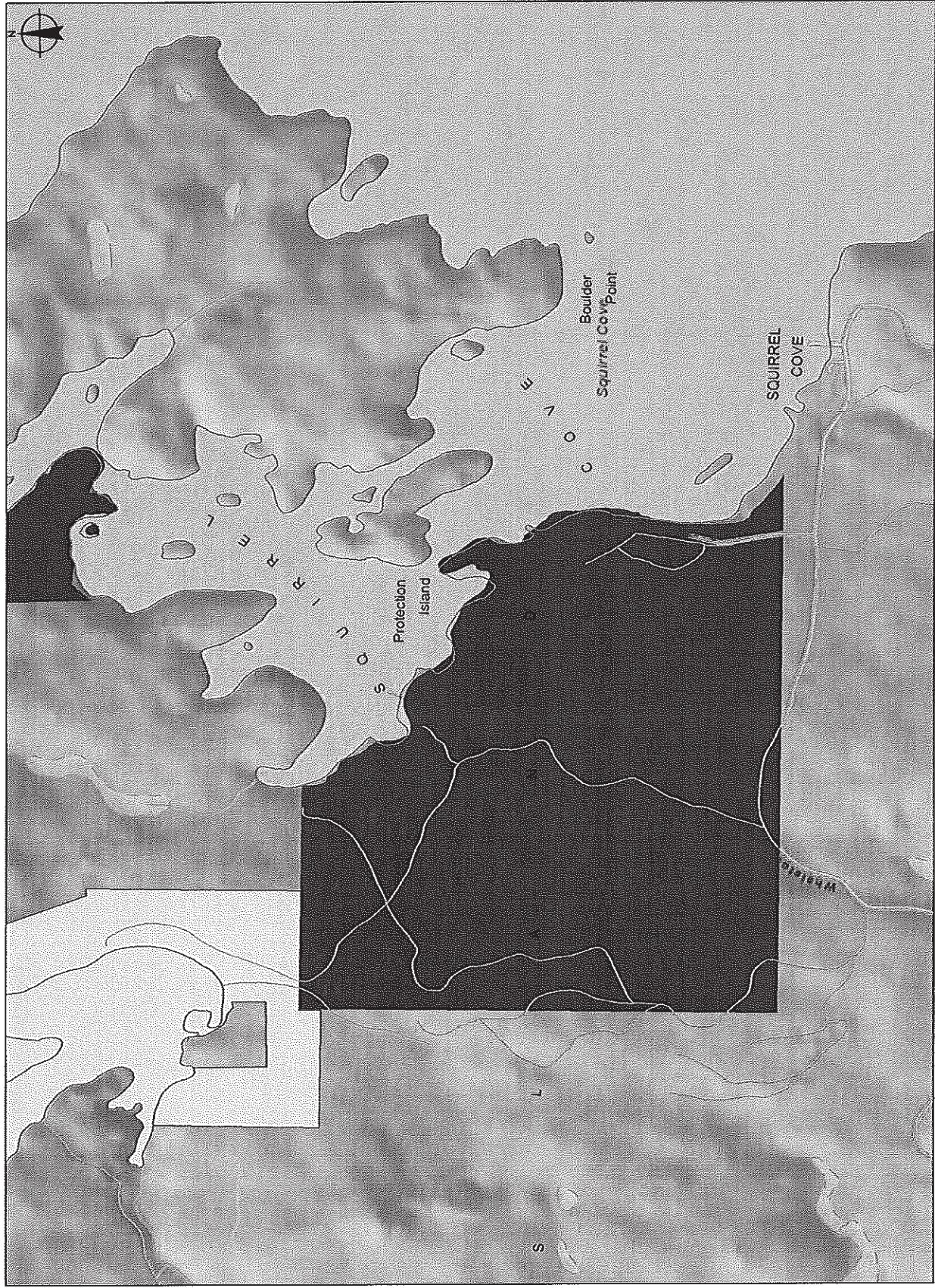
Internet Mapping Framework



This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



- Legend**
- Interest Parcels**
 - Provincial Park
 - Crown Grant
 - Application
 - Lease
 - Development Agreement
 - Licence
 - Permit
 - Reserve
 - Right of Way
 - Transfer of Admin / Control
 - Inactive Disposition Transaction
 - OIC Ecological Reserve
 - Dominion Patent
 - Inventory Site
 - Uncoded / Unknown
 - Survey Parcels**
 - Primary
 - Indian Reserves Primary
 - Mineral Claim
 - Timber Licence
 - Subdivision
 - Indian Reserves Subdivision
 - Right of Way
 - Unknown
 - BCGS Grid
 - Water - Points (TRIM)
 - Other Features**
 - Rapids
 - Dam
 - Flooded Land - Inundated
 - Marsh
 - Swamp
 - Sand/Gravel Bar
 - Flow Arrow
 - Arrowhead
 - Island - Definite
- Scale: 1:21,546



MARCH 16, 2011

SQUIRREL COVE MARINE RESORT
CROWN LAND MANAGEMENT PLAN

SECTION A – PROJECT OVERVIEW

Quathen Xwegus Management Corporation (QXMC) is proposing the development of a marine resort within Squirrel Cove located on the east side of Cortes Island in Desolation Sound (Figure 1). The intent of the Squirrel Cove Marine Resort (SCMR) project is to develop Squirrel Cove, a naturally embayed waterway, with a full range of berthing choices, amenities and pricing, including full-service slips/docks, moorings and open anchorage areas. Development of the proposed marina, moorings and marked navigation channels will eliminate the existing random, inefficient, unsafe anchorage and navigation as well as add capacity and services for recreational boaters. Upland facilities to provide services to the recreational boaters will be constructed within the Klahoose First Nation (KFN) Reserve lands (IR7 and IR8) and will therefore not be described in detail within this application.

The project proposes to create and develop five water lot areas totaling 49.74ha within Squirrel Cove identified as Area E (Entry), Area M (Middle), Area I (Inner), Area R (Remote) and Navigational Channels. Figure 2 illustrated the proposed Tenure Areas Master Plan for the development. A 30+ year lease will be sought for Area E which supports a marina. QXMC wishes to submit the whole development plan under one License of Occupation and to further densify the middle and inner areas of the cove with single point and double-point moorages over time.

A sixth area (2.9ha) identified in Figure 2 as Area KFN Aquaculture is proposed to provide available space for relocating shellfish aquaculture leases located on the shoreline adjacent to Area E. The relocation or the future uses of the aquaculture tenures can be further discussed with the Lands Branch during review of this application. Site photographs taken within the study area have been included in this management plan as Appendix A.

The development proposes to include a marina as well as single and double point moorings for recreational boaters. The project will provide 383 berths including slips, side and end-tie berths 45' to 83'+ moorings 45' to 90'; shore power, fuel, dinghy, water taxi/shore boat and floatplane docks. An onsite harbour master will provide management for the resort and ensure compliance with the resort's Management Plan (See Figure 2).

The floating fuel dock includes a fuel dock office, high speed diesel and gasoline pumps with an emergency shutoff, fire suppression and spill control systems as well as a refueling hookup to the fuel storage system for a fuel supply barge. Fuel will be stored in approved double-wall tanks (3 @ 30k-40k liters each) on land in an enclosed/secure containment structure. Fuel delivery by truck is also an option at this facility if needed (avgas, etc.). Other services include a potable water supply, waste pump-out and power.

The main components of the development include the following:

Area E: (14.38 ha) (30yr+ Lease)



- 63 slips servicing 45'-83' vessels totaling 3896 linear ft., 1595 side/end-tie berthing
- 72 single-point moorings, 50' median vessel, 45'-90' size range
- 970' side-tie long dock
- 840' of special-use side-tie docks (fuel, water taxi, dingy, floatplane, harbourmaster)

Area M: (4.13ha)

- 35 single-point moorings, 50' median vessel, 45'-90' size range

Area I: (9.68ha)

- 160 double-point moorings, 50' median vessel, 45'-90' size range. (also anchorage)

Area R: (3.13ha)

- 330' T-dock side-tie berthing (dinghies, shallow draft inside, large boats outside)
- 20 single-point moorings 45'-80' vessels (+kayak beach landing in Kayak Cove)

Navigation Channels: (18.42ha)

- A network of 50m wide buoyed public navigation channels provides navigational direction for boats entering Squirrel Cove and navigating throughout the various mooring basins
- The main interior channel is 70m wide and provides access to the individual moorings areas

Aquaculture: (2.90 ha) (Proposed Relocated Existing Tenures)

- KFN aquaculture area retained and relocated, demarcated by buoys and protective float lines (Lands File #1405105)

The proposed project is expected to begin construction following all agency approvals including but not limited to Provincial Ministry of the Environment, Transport Canada - Navigable Waters Protection Division, Environment Canada and Fisheries and Oceans Canada.

SECTION B – PROJECT DESCRIPTION

Proposed Development Plan:

Due to the enclosed and protected nature of Squirrel Cove there will be no requirement for a breakwater. No blasting in the marine environment will be required and the marina docks and moorings will be located within areas greater than -2m bathymetric depth to avoid the need to dredge. Three access points from shore to the marina (Area E) are proposed to be constructed using fixed piers on pilings with hinged gangways so that no infilling of the intertidal area is required. The floats and docks will be held in place using piles.

The proposed development will increase public access and capacity and provide safer navigation and more efficient berthing options in Squirrel Cove waters while keeping its desired open water areas, views and character. Approximately 383 designated slips, single and double-point moorings plus four anchorage areas are proposed. The following is a detailed description of the proposed development plan shown in Figure 2.

E - Entry Berthing Area: (off IR7 shoreline)

Slips & Docks for Recreational /Water Tourism Vessels

- 63 slips, range of 45' to 83' (all slips & docks w/ full electrical, water, sewer)
- a 970' side-tie long dock w /utilities for large private & charter vessels, 90'-200'+
- approximately 72 single-point moorings (45'-90' vessels)
- main float and finger docks to be held in place using concrete or steel piles

Special Use Docks for Harbour Operations, Transportation, Fueling, Public Access

- harbourmaster and water taxi dock (165' side tie)
- dinghy dock (230' side tie) (shore access for moored/anchored boat dinghies)
- fuel dock (330' side tie) with fuel dock office on dock
- floatplane dock(165') w/ berthing for 2 floatplanes on channel side, 2 on inner side

M - Middle Berthing Area:

- 35 single point moorings (45'-90' vessels)

I - Inner Berthing Area:

- 160 double point moorings (45'-90' vessels)
- anchorage area

R - Remote Berthing Area: (off IR8 shoreline)

- 330' side tie T dock
- 20 single point moorings (45'-90')

Islands Excluded in Areas R and I:

Three islands (3.7ha) located in the proposed R and I Tenure Areas are excluded from the Tenure Application. They will remain accessible to the general public.

Main Channel, Navigation Channels, Fairways and Perimeter Channels:

The total area of the navigational channels within Squirrel Cove will cover 18.42ha. The 3.2ha main entry channel to Squirrel Cove is a public access navigation channel 70m wide. It will provide adequate turning/backing distance for large vessels and the main navigation collector for vessels accessing the various mooring areas via the secondary navigation channels. It also provides an open-view approach and widened maneuvering area for the fuel dock and other specialty docks in Area E such as the floatplane dock. All project support and emergency services requiring direct public access to water and land and to and from the Entry Channel are located in Area E adjacent to this channel.

Marked 50m navigation channels with a number of turning basins at 100m, 80m and 70m will be located around and between the tenure areas. Uniform and safe access inside the berthing areas is provided by fairways between docks and open navigation fairways between and among rows of moorings.

The 12.7ha of 50m open water perimeter channels surrounding the berthing areas provide unrestricted public navigation access to the berthing areas and to the perimeter cove anchorage areas of the existing Squirrel Cove while preserving important views for navigational safety.

Orientation of Docks and Moorings:

All berths in the dock area, except for some specialty and mega-yacht berths, are oriented "wind & current normal" with their long axis (bow & stern) in a SE/NW direction. Double point moorings will be similarly oriented and single point moorings and anchorage areas will be planned to allow for 360° clear swinging circles within their buoyed limits, keeping navigation channels and fairways unobstructed.

Land Access to Docks:

Land Access to docks is provided for pedestrians and service carts via three fixed piers and hinged gangways along the IR-7 shoreline. Access to the IR-8 dock is provided by a single fixed pier and hinged gangway. All access is secured.

Anchorage Areas:

Open water areas within Area I not occupied by the Phase 1 mooring field will be available for free public anchorage use within areas marked by buoys. This area provides capacity for approximately 50-55 single-point anchored vessels at an average length of 50'. Control of anchoring will be by SCMR.

Additionally, four public anchorage coves around the perimeter of Squirrel Cove are retained outside of the perimeter public navigation channel, providing access to anchorage areas without conflict with vessels in the dock or mooring areas. These areas total approximately 4.5ha with total capacity for approximately 45-50 single-point anchored vessels at an average length of 50'.

Proposed Usage by Area:

Squirrel Cove, at high tide (HHW), has a surface of approximately 80ha. The Effective Berthing/Navigation Area (EBNWAS) is defined as those areas within the -2m depth contour and deeper as approximated from current navigation charts with a total area of approximately 56ha.

Proposed moorage tenure areas (Areas E,M,I,R) cover 32.32ha (40%) of the 80ha total surface area of Squirrel Cove at HHW and 60% of the 56ha EBNWAS area. The dock in Area R covers a surface area of 500m² while the marina docks in Area E cover an area of 5,841m². **Actual navigable water surface coverage by facilities and boats is only 7%, even if filled to capacity as noted below.**

Total open water surface area, excluding areas covered by floating docks, piers, gangways and mooring buoys (0.72ha) would be 31.6ha or 97% of the moorage tenure areas and 55.1ha or 98% of the EBNWAS. **Thus, the additional berthing facilities, while visible as a change, would be negligible as a visual impact/coverage on the overall water surface area of Squirrel Cove.**

If the SCMR berthing facilities and the various public anchorage coves, totaling a potential 450 vessels, are occupied at 100% of their capacity by vessels averaging 50' in length, the additional water surface coverage is 3.1ha, or 3.82ha with docks and mooring buoys which is

approximately 7% of the 56 acre navigable water surface. **This leaves 93% of the Squirrel Cove water surface open, preserving its unique character.**

Table 1: Area Use Summary

Component	Area (ha)	% Moorage Tenure Area	% EBNWAS (\geq -2m depth)	% Total Area
Squirrel Cove Area HHW	80ha	-	-	-
EBNWAS Area (-2m depth)	56ha	-	-	70%
Total Moorage Tenure Area:	32.32ha	100%	60%	42%
Area E	14.38ha	44%	26%	-
Area M	4.13ha	13%	8%	-
Area I	9.68ha	30%	18%	-
Area R	3.13ha	9%	8%	-
Total Area of Docks, Gangways, Piers, Moorage	0.72ha	2%	1%	<1%
Navigational Channels	18.42ha	-	33%	23%
Total Area covered if 100% Occupied Ave. 50' Vessel	3.82ha	11%	7%	5%

Metes and Bounds coordinates for Area E, M, I and R and the Navigation Channels has been provided in this management plan as Figure 3. Chatwin has also provided a cross-sectional profile of a main access float for Area E (marina) and of single point moorages illustrating the use of piles and concrete block anchors to hold the docks and moorage floats in place (See Figure 4).

Operation and Rate Structure:

SCMR will be managed and operated as an individual corporate entity created within the KFN group of companies, focused solely on this project with responsibility to record and report information in the annual Statutory Declaration and pay rents based upon:

- monthly moorage rates for various types of berthing-slips, side ties, moorings;
- amount of linear footage of berthing rented, based on actual occupancy;
- number of months of full operation (peak/shoulder seasons);
- ancillary marina uses in actual use on docks during full operation period;
- level of business operation during months of partial or full closure (off season).

A projected SCMR berthing rate structure has been estimated based upon the market comparable to existing Cortes Island Gorge Harbour Marina Resort berthing marina dock/slip rates for 2010 as published.

Separate rate structure estimations have been made for rates of single and double-point moorings, based on their rates in comparable locations in BC and elsewhere in Canada, adjusted to the proposed slip rates to provide a range of berthing pricing and choices.

Anchorage within the buoy-defined moorage areas (Areas M & I) will remain without charge to the public.

No inflation of the 2010 to 2012 rates has been included in the rate structure shown here, in order to enable comparison with existing examples.

Table 2. Proposed Rate Schedule:

Berthing Type/Size	Peak Rate-ft/mo*	Shoulder Rate-ft/mo*	Off Season Rate-ft/mo*
Slips 46'-83'			
End Ties 83'+			
Long Dock Side Ties 90'+		s.21	
Single-Point Mooring			
Double-Point Mooring			

* Actual berthing rates will be set during the last 60-90 days prior to the opening of the completed project, based upon an average or selected range of the market rates of comparable Cortes Island and regional marinas and resort harbours at that time.

Table 3. Squirrel Cove Marine Resort Projected Berthing Lineal Revenue Footage/Type

Berthing Type/Size (Approximate)	Lineal/ Revenue Footage
Designated Vessel Slips:10 @ 46'	= 460 lineal/revenue feet
9 @ 53'	= 477 lineal/revenue feet
9 @ 56'	= 504 lineal/revenue feet
9 @ 60'	= 540 lineal/revenue feet
9 @ 66'	= 594 lineal/revenue feet
9 @ 73'	= 320 lineal/revenue feet
8 @ 83'	= 664 lineal/revenue feet
Total Designated Vessel Slips (63)	3896 lineal/revenue feet
Specialty Docks (revenue-producing)	(see Ancillary Uses section below)
Long Docks (short-term revenue-producing)	=970 lineal/revenue feet
Single Point Moorings 40'-90' (160@ 50'average)	=8000 lineal/revenue feet
Double Point Moorings 40'-90' (160@ 50'average)	=8000 lineal/revenue feet

Table 4. Ancillary Uses

Ancillary Use	Lineal Footage*
• fuel dock	330' (dedicated dock)
• boat sales docks	120' (possible use of long dock or slips)
• boat rental docks	120' (possible use of long dock or slips)
• boat charter docks	300' (possible use of long dock or slips)

* "Ancillary marina uses" as defined in Appendix 3 of the Crown Land Use Operational Policy.

* Preliminary estimates are subject to change based on final design, markets and management choice.

Table 5. Operational Schedule/ Projected Occupancy Levels By Season/ Closure

Season	Duration/Months*	Projected Occupancy Levels*
• peak season	4 months / June 1-Sept 30	85%-90% occupancy
• shoulder season	2 months / May, Oct	35%-40% occupancy
• off season (closure)	6 months / Nov-April	10%-15% occupancy

* Preliminary projections-subject to change based on weather, economy and actual experience.

* Weighted annualized occupancy level 45%.

* Projected Squirrel Cove Marine Resort Operational Schedule and Projected Occupancy Schedules for the first stabilized operational year potentially year 4.

SECTION C – ADDITIONAL INFORMATION

I. ENVIRONMENTAL

A. Land Impacts

The marina development will be located within Squirrel Cove on Cortes Island. Although there will be some upland development to support the marina, it will be located solely within the KFN Reserve and therefore a detailed description of the impacts will not be included in this application. An environmental assessment report screening will be completed in accordance with the Canadian Environmental Assessment Act (CEAA) at the detailed design stage of the project which will include the up-land development portion of the project.

B. Atmospheric Impacts

The Desolation Sound Region attracts over 16,000 recreational vessels in a 4 month summer season and two shoulder seasons each year. Squirrel Cove is a naturally occurring sheltered bay that attracts 200-300 private recreational vessels and 500-800 visitors on peak days. It is currently undeveloped without support services, designated anchorages or navigational channels. The proposed development would provide berthing, moorage and anchorage for a total of 450 vessels.

Typical atmospheric impacts from recreational boats include noise, air emissions and small hydrocarbon spills. Potential impacts from a fuel dock include small and large hydrocarbon spills. Potential impacts from float planes include noise and fuel emissions.

Currently there is no on-site provision for emergency spill control or reporting, effluent discharge, speed limits, noise control or general waste management. Operation and maintenance of the proposed project will provide on-site monitoring and support services to facilitate compliance with provincial and federal environmental protection regulations. Marked navigation channels, navigational markers/lighting and posted speed limits will provide increased safety for boaters. On-site monitoring, communication, fire protection equipment, spill response equipment and personnel will provide immediate emergency response to hydrocarbon spills and other emergency situations. On-site sewage pump-out facilities and monitoring will reduce the likelihood of effluent discharge into the marine environment.

C. Aquatic Impacts

Construction phase:

Construction phase impacts include the potential of sedimentation of the marine environment and acoustic impacts to marine mammals during pile driving operations within Area E and R. Mitigation measures to protect the marine environment during construction include the following:

- Installation of the piles, docks, anchors and moorings will be completed in the Least Risk Fisheries Window for Squirrel Cove.
- Installation of proposed improvements will not be carried out during high wind and wave conditions.
- All vessels working on the job site will be required to have spill response equipment on board and an emergency spill plan in place.
- An environmental monitor will be on-site to monitor water quality and noise impacts.
- Upon the recommendation of the Environmental Monitor, implementation of a bubble curtain enclosing the pile driving operation may be required to dampen sound waves and installation of a sediment curtain may be required to control suspended sediments within the footprint of the work area.
- The Environmental monitor will have the ability to provide additional recommendations and the authority to suspend work activities if a risk to the environment is identified.

Operational phase:

As described in Section B, aquatic impacts from recreational boating include small and large spills of hydrocarbons and liquid waste discharge. Squirrel Cove is used by the KFN for aquaculture along the south, west and north shorelines and in a 3ha area in the Middle Bay. It is one of seventeen BC freshwater lakes and saltwater harbours designated as "no-discharge" water areas by the BC government, requiring, but not enforcing, the use of vessel holding tanks and pump-out facilities. Owners of the development project have proposed to include a water quality monitoring program that will be implemented on a weekly basis during peak season. The program will monitor hydrocarbons and coliform levels in the cove compared against pre-season baseline water quality levels. The program will allow the operators of the marina better control of illegal discharges of grey and black water in the harbour and the effects of hydrocarbons spills.

Marina staff will undertake emergency management training in the event of small or large hydrocarbon spills etc. as well as the daily provision of site services including power supply, water supply, sanitary treatment/disposal and waste disposal options. On-site monitoring, communication, fire protection equipment, spill response equipment and personnel will provide immediate emergency response to hydrocarbon spills and other emergency situations. On-site sewage pump-out facilities and monitoring will reduce the likelihood of effluent discharge into the marine environment.

D. Fish and Wildlife Habitat

The following section includes a review of vegetation, wildlife and fisheries resources likely to be found within the study area.

Flora (Forest Cover)

The study area is located within the Very Dry Maritime Coastal Western Hemlock Subzone (CWHxm). Elevational limits range from sea level to 700m. The CWHxm has warm, dry summers and moist mild winters with relatively little snowfall. Growing seasons are long and feature water deficits on zonal sites.

Forests on zonal sites within the region are dominated by Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*) and western red cedar (*Thuja plicata*). Dominant understory species include salal (*Gaultheria shallon*), dull Oregon grape (*Mahonia nervosa*), red huckleberry (*Vaccinium parvifolium*), step moss (*Hylocomium splendens*) and Oregon beaked moss (*Kindbergia oregana*). Less common species include vanilla leaf (*Achlys triphylla*), sword fern (*Polystichum munitum*), twinflower (*Linnaea borealis*) and bracken fern (*Pteridium aquilinum*) (Green and Klinka).

The vegetation found near the shoreline within the KFN reserve appears to be mature second growth forest dominated by western red cedar (*Thuja plicata*) and Douglas fir (*Pseudotsuga menziesii*) with lesser amounts of red alder (*Alnus rubra*). Understory species includes salal, sword fern and red huckleberry.

Birds

A large number of bird species are likely to be found within the area including raptors, songbirds, owls, woodpeckers, sea birds and migratory birds. The Coastal Resource Information System database (CRIS) indicates Squirrel Cove and surrounding area to be important for the Blue-listed marbled murrelet (Appendix B). However, the BC Conservation Data Centre identified only one nest in the area of Squirrel Cove located approximately 10km to the east on West Redonda Island (Appendix C). Areas of old growth forest located within Desolation Sound likely provide suitable habitat for the marbled murrelet.

Species identified during the site survey were limited to various gulls, great blue heron (*Ardea Herodias fasnnini*), sea ducks, belted kingfisher (*Megaceryle alcyon*), black oystercatcher (*Haematopus bachmani*), raven (*Corvus corax*) and bald eagle (*Haliaeetus leucocephalus*). Mitigation measures to offset impacts to sea ducks, bald eagles and herons during construction will be carried out.

Fauna (Wildlife)

Mammals likely to be found utilizing the marine environment in Squirrel Cove include American mink (*Mustela vison*), river otter (*Lontra canadensis*), harbour seal (*Phoca vitulina*), steller sea lion (*Eumetopias jubatus*) and white sided dolphin (*Lagenorhynchus obliquidens*). Species observed during the survey was limited to a harbour seal and a small pod of white sided dolphin. Mitigation measures to offset impacts to marine mammals during construction will be carried out.

Fisheries

Evidence of shellfish aquaculture use by the KFN within squirrel cove included oyster nets and plastic crates along the shoreline as well as an abundance of giant Pacific oysters growing in

the intertidal area. Shellfish aquaculture within Squirrel Cove may still be feasible within a newly designated area in the centre of the cove identified as KFN Aquaculture. The feasibility of this is yet to be determined.

Three Herring spawning locations are identified by the DFO within Squirrel Cove. Two are located in Area R and rated as low; the third area is located in the channel east of Protection Island and rated as high (Appendix D).

Kelp and eelgrass are considered sensitive fish habitat by the DFO. Kelp and eelgrass (*Zostera marina Linnaeus*) provide important feeding and rearing habitat for many aquatic species. Docks can block light penetration to the seafloor thus shading out eelgrass and kelp growth if present. Eelgrass is typically associated with shallow water conditions with good light penetration and water depth between the low intertidal and high subtidal zone. While most kelp species grow to a depth of 30-40', they require hard bottom surfaces, good light conditions and tidal movement. The installation of anchors for the moorings and shading from the docks themselves can also have a negative impact on the density of shellfish under the structures.

The proposed mooring system, developed and used widely as a minimal impact system, does not use bottom surface anchors but penetrating screw anchors and does not use any chains or other bottom scraping tackle, rather buoy-supported elastic and nylon mooring lines. Bottom disturbance from moorings and mooring tackle is minimal and not expanded by vessel swing or wave action on vessels/mooring lines.

A survey of Area E was completed in 2010 to determine site conditions and potential impacts to the site. It is understood that the area may have been used as a log dump at one time. The dive survey identified that sections of the seabed had an accumulation of bark waste and patches of *Beggiatoa*, a bacteria that lives in sulphur rich environments. The shoreline within the study area is comprised of a mix of substrates varying from bedrock to mud to boulder/cobble/gravel. The overall habitat value appears to be low.

The following is a description of the shoreline from south to north within the study area based on divers completing surveys along four underwater transects (Area E). The southern shoreline near the entrance to the cove is comprised of steep bedrock followed by a shallow embayed area comprised of sand and mud sea floor. The central shoreline is dominated by cobble and gravel with larger boulders followed by another shallow embayed area comprised of sand, gravel and mud. The northern portion of shoreline is bedrock. A small cabin exists in the area and roughly marks the western boundary of the KFN Reserve. The upper intertidal zone of the muddy embayed area (central shoreline) is vegetated by salt marsh grasses. One small stream approximately 1.5m in width was identified within the more northern embayed area near the cabin. The high tide line and riparian upland support a second growth forest.

A large number of moon jellies were observed throughout the embayed area during the survey. Rocky areas of the intertidal area were heavily populated with giant Pacific oysters (*Crassostrea gigas*). Other species in the intertidal zone included barnacles (*Chthamalus dalli*), purple shore crabs (*Hemigrapsus nudus*) and whelks.

Dive observations documented during the survey indicated the seabed to be characterized as a flat open plain dominated by thick bottom sediments several meters in depth deep. Observations along transects 1 and 2 also documented an accumulation of bark waste within

the sediments and scattered logs. Sand and coarse sediments were observed at a depth of 25ft and shallower. An accumulation of dead shells were found along the lower intertidal at a depth of 10ft.

Marine algae were extremely sparse and included sparse rockweed (*Fucus gardneri*) and brown filamentous algae in the intertidal area. In the sub-tidal area algae was restricted to sparse Chladophora algae, sparse turkish washcloth (*Mastocarpus papillatus*), two blades of sugar wrack (*Laminaria saccharia*), sparse green filamentous algae and one small patch of eelgrass (*Zostera marina*) approximately 150m² in size with an estimated density of 20 blades per square meter.

In the sub-tidal area hard surfaces such as sunken logs provided a firmer surface for plumose anemone (*Metridium senile*). Sand/gravel substrate areas supported the following species: red rock crab (*Cancer productus*), graceful crab (*Cancer gracilis*), moonsnail (*Lunatia heros*), ochre star (*Pisaster ochraceus*), horse clam (*Tresus capax*), butter clam (*Saxidomus gigantea*), manila clam (*Venerupis philippinarum*), cockle (*Clinocardium sp*), mahogany clam (*Nuttallia obscurata*), razor clam (*Siliqua patula*), little neck clam (*Protothaca staminea*), varnish clam (*Nuttallia obscurata*), painted star (*Orthasterias koehler*), giant pink mud star (*Asterias brevispina*), sunflower star (*Pycnopodia helianthoides*), tube dwelling anemone (*Pachycerianthus fimbriatus*), hermit crab sp, northern kelp crab (*Pugettia producta*), brown tube sponge, encrusting sponge, and coralline algae.

Fish and other marine species observed included moon jelly (*Aurelia labiata*), hydroids, bay gobi (*Lepidogobius lepidus*), buffalo sculpin (*Enophrys bison*), sturgeon poacher (*Podothecus accipenserinus*), C-o sole (*Pleuronichthys coenosus*) and Northern ronquill (*Ronquillus jordan*).

Potential Impacts:

The marina docks in Area E are expected to create shade on the sea floor covering a surface area of 5,841m² (0.58ha). The dock located in Area R will create shade on the sea floor covering a surface area of 500m² (0.05ha). Discussion of the requirements for habitat compensation will be undertaken with the DFO.

Based on observation made during Chatwin's dive survey, the placement of a marina in Area E of Squirrel Cove is not likely to negatively impact fish or fish habitat within the site. Marine habitat values observed during the survey are considered as low; however a further survey of the seabed throughout the rest of the planned areas of Squirrel Cove will need to be completed during detailed planning stages of the project including a detailed eelgrass and shellfish survey. Installation of piles and dock structures will provide surfaces for sessile marine organisms to adhere to creating a positive benefit for the area.

Areas M, I and R have not been assessed in detail however; the impact from double and single point moorings is expected to be low and limited by the low-impact penetrating mooring anchors and the buoy-suspended anchoring system. A detailed assessment by SCUBA will be required for Area R also for the proposed construction of the dock to determine the presence of sensitive fish habitat.

Species-at-Risk

The Species-at-Risk Act (SARA) is designed to prevent or reduce the likelihood of wildlife species becoming extinct or extirpated and to provide for the recovery and management of endangered, threatened and species of special concern as a result from harm by human activity. Provisions of SARA include prohibiting the taking or possession of listed species and the damaging or destruction of their residence and critical habitat.

A request for occurrences of rare or endangered terrestrial and marine plant and animal species with the British Columbia Conservation Data Centre (BC CDC) for the area within Squirrel Cove resulted in no records of species occurrence.

A review of the BC Species and Ecosystems Explorer database within the Vancouver Island – Campbell River Forest District and CWHxm biogeoclimatic sub-zone for red-listed (Extirpated, endangered or threatened) and blue-listed (special concern) and Species-at-Risk was completed. Results identified four red-listed species and eleven blue-listed species that are Species-at-risk (Appendix E).

No sensitive species were observed during the site survey.

The following includes a description of sensitive wildlife species that are likely to be found within marine environment of the Squirrel Cove area.

Great Blue Heron (*Ardea herodias fannini*): Blue-listed

Nests colonially in tall Sitka spruce, western red cedar, western hemlock, pine, red alder and black cottonwood. Isolation from disturbance appears to be an important factor in nest site selection. Foraging habitat includes aquatic areas generally less than 0.5 m deep, such as: marine intertidal areas, estuaries, riparian areas, wetlands, freshwater lakes, and muskegs. These areas are generally within 5 km of the nest site, although some areas have been identified up to 33 km. This subspecies is distributed along the coast of British Columbia with a relatively small population that is concentrated at a few breeding colonies in southern British Columbia. There is evidence of declines in productivity and it is unclear whether the population is stable or declining. Threats from eagle predation, habitat loss and human disturbance are ongoing, particularly in the southern part of the range where concentrations of birds are highest. (*British Columbia Conservation Data Centre*). Great blue heron were observed feeding in the shallow intertidal areas within Squirrel Cove. If present during construction of the marine resort, mitigation measures will be undertaken to limit disturbance.

Steller Sealion (*Eumetopias jubatus*): Blue-listed

Marine habitats include coastal waters near shore and over the continental slope; sometimes rivers are ascended in pursuit of prey. When not on land, the sea lions may congregate at nearshore traditional rafting sites, or move out to the edge of the continental shelf. While offshore, the sea lions are most often found within 35 km of shore but may range out to several hundred kilometres offshore. The most commonly used terrestrial habitat types are rookeries and haulouts. Rookeries are areas where adults congregate for breeding and pupping. These habitats generally occur on beaches of remote islands with difficult access for humans and other mammalian predators. Haulouts are areas used by adult sea lions during the non-breeding season and by non-breeding adults and sub-adults throughout the year. Haulout locations

include exposed rocks, reefs, beaches, jetties, breakwaters, navigational aids, floating docks, and sea ice (*British Columbia Conservation Data Centre*).

If present during construction of the marine resort, mitigation measures will be undertaken to limit disturbance.

Marbled Murrelet (*Brachyramphus marmoratus*): Blue-listed

A chunky seabird with a black bill and an entirely dark tail. Breeding adult is dark brown above, heavily mottled below. Inhabits coastal areas, mainly in salt water within 2 km of shore including bays and sounds; not uncommon up to 5 km offshore; occasionally also on rivers and lakes usually within 20 km of ocean (but up to 75 km), especially during the breeding season. Nests are often found in mature/old growth coniferous forest near the coast: on large mossy horizontal branch, mistletoe infection, witches broom, or other structure providing a platform high in mature conifer (e.g., Douglas-fir, mountain hemlock). Most nesting occurs in large stands of old growth. Nest sites generally have good overhead protection. Diet includes fish (sandlance, capelin, herring, etc.), crustaceans (mysids, euphausiids) and mollusks. Foraging occurs mainly in waters up to 80 m deep and up to 2 km from shore. Foraging dives may be up to about 30 m below surface (*British Columbia Conservation Data Centre*).

Northern Goshawk (*Accipiter gentilis laingi*): Red-listed

Northern goshawks are found in Southeastern Alaska and coastal British Columbia, including the Queen Charlotte Islands and Vancouver Island. Adult is a large (50-60 cm), robust hawk with a long, somewhat rounded tail and relatively short, rounded wings. The upper parts are dark bluish-slate becoming blackish on the top of the head and behind the eye, underparts are pale gray and finely barred. There is a broad white stripe over the eye. Immature birds are similar to adults but browner and the ventral markings are coarser and cover both the breast and belly. They are closely associated with extensive forests with large stands of mature trees and dense canopies, but with an open understory. Large trees are important in providing nesting and perching platforms, in allowing ample flight space between the trunks for the goshawks to manoeuvre while hunting and in providing for greater productivity of preferred prey. A closed forest canopy is believed to provide an optimal microclimate for nesting and also possibly may inhibit open-forest and forest-edge raptor predators (*British Columbia Conservation Data Centre*).

II. Socio-Community

a) Land Use

Squirrel Cove is often intensively used daily during the 4 month summer by 200-300 private recreational vessels and 500-800 visitors on peak days, but remains without established safe anchorage patterns, designated navigation channels or convenient on-water support services, shore access points or ancillary services.

Squirrel Cove is the historic and cultural home of the KFN with the KFN Reserve IR7 located along the western shore, the navigational entrance and the western foreshore of the Cove and the KFN Reserve IR8 located along the eastern shoreline. The existing KFN Community and new Community Centre are located to the southwest of the Squirrel Cove navigation entry and

are connected to the proposed marine resort project site by a newly constructed road, infrastructure corridor and pedestrian pathways. The current population of the KFN is 313 people.

Squirrel Cove is also utilized for KFN aquaculture along its south, west and north tidal shorelines and in a 3-hectare area within the Middle Bay. It is one of seventeen BC freshwater lakes and saltwater harbours designated as "no-discharge" water areas by the BC government, requiring, lightly enforced use of vessel holding tanks and pump-out facilities. The extent of shellfish farming practices by the KFN to date within the cove is not fully know.

The Management Plan enables aquaculture and recreational boating coexistence and improved human contact water quality by providing on-water and shoreside waste disposal services and facilities and enforcement in cooperation with Province agencies. Existing KFN aquaculture areas are retained throughout the harbour and enhanced by water buffers and new water quality controls. A new 3 hectare KFN aquaculture area is located in harbor center, in deep water with high tidal flushing and exchange rate due to the channel between Protection Island and Cortes Island. The remainder of the lands surrounding Squirrel Cove is Crown land used for forestry (See Figure 5).

A recently completed road connects the proposed Marina Support Uses buildings site and main docks access point with the new KFN Centre building approximately one-half kilometer to the west. This road right-of-way also serves as the utilities infrastructure corridor to the dock system in Area E, providing power, water, sewer and hard-line communications links between these two important elements. A system of pedestrian trails will also connect the support uses to the docks along the IR7 shoreline. These trails will be cart-capable for staff emergency and services uses.

Public access to the Squirrel Cove Marine Resort will be possible by water, land and air through a wide variety of routes and transportation methods:

- **water access** via Squirrel Cove entry channel (private boats, watertaxis, floatplanes)
- **land vehicular access** via the existing new road connecting the KFN Centre and harbour and leading to the KFN Community /Cortes Island road networks
- **land pedestrian access** via trails/cartways connecting the KFN Centre and Support Uses buildings, harbour
- **air access** via harbour entry, aircraft dock, emergency and vessel helipads (floatplanes, helicopters)

The Management Plan for Squirrel Cove will enable aquaculture and recreational boating co-existence and improved human-contact water quality by providing on-water and shoreside waste disposal services and facilities and enforcement in cooperation with Province agencies.

The proposed management program for Squirrel Cove will achieve the following:

- Enhance the recreation experience in Squirrel Cove.

- Provide much needed management and protection of the aquatic, intertidal and shoreline environment, specifically sustaining marine fish habitat and ensuring good quality for sustaining marine organisms.
- Ensure yachts are meeting their requirements for "no discharge" into the marine environment by providing much needed oversight, facilities and services to visitors for control for users of the cove.
- Provide the provincial and federal departments and agencies with the management programs to fulfill their objective to enhance public use and enjoyment within Squirrel Cove.
- Generate needed economic development and diversity for the KFN, Cortes Island and the Regional Economy.

b) Socio-Community Conditions

Access to the site from land is provided by existing roads from IR7. Water, sanitary and power will be provided to the resort and marina from the existing services within the IR7.

The development will create significant training, employment and revenues for the KFN and Cortes Island. It is anticipated that with this project, members currently residing off reserve will have employment opportunities that will bring them back to Squirrel Cove. The result will be a stronger KFN.

C) Public Health

This project will have positive benefits for public health by providing means to monitor and control undesirable waste discharges from yachts in Squirrel Cove that have been impacting the water quality and the ecology of Squirrel Cove.

Waste disposal will be tied into the existing IR7 system. No waste or discharge will be directed into Squirrel Cove or its surrounding waters from the proposed project. Additional services provided with the development include floatplain dock and marine fuel dock. Both additions provide improvements allowing reserve members to be transported or evacuated to main regional centres like Campbell River (i.e. regional hospitals).

D) First Nations

SCMR will be managed and operated as an individual corporate entity created within the KFN group of companies, focused solely on this project with responsibility to record and report information in the annual Statutory Declaration.

On Cortes Island, Squirrel Cove is the historic and cultural home of the KFN with the KFN Reserve IR7 located along the western shore, the navigational entrance and the western foreshore of the Cove and the KFN Reserve IR8 located along the eastern shoreline.

The existing KFN Community and new Community Centre are located to the southwest of the Squirrel Cove navigation entry and are connected to the proposed marine resort project site by a newly constructed road, infrastructure corridor and pedestrian pathways.

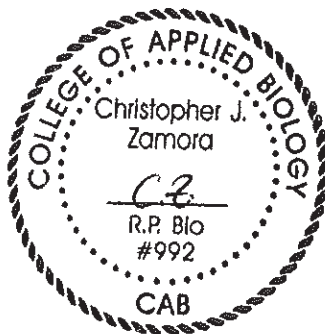
A search of the Ministry of Natural Resource Operations, Archaeology Branch was completed.

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Submitted by:

CHATWIN ENGINEERING LTD.



Chris Zamora, R.P.Bio
Manager
Environmental Services Department

SQUIRREL COVE
Photo Sheet 1



Photo 1.
Showing the
new Klahoose
First Nation
administration
building near
the entrance to
Squirrel Cove.



Photo 2. Showing the Klahoose First Nation IR7 and the narrow entrance passage into Squirrel Cove and Protection Island.

Photo Sheet 2



Photo 3. Looking across area E from the existing Klahoose First Nation dock near the entrance channel.



Photo 4. looking back across area E toward the entrance channel.

Photo Sheet 3

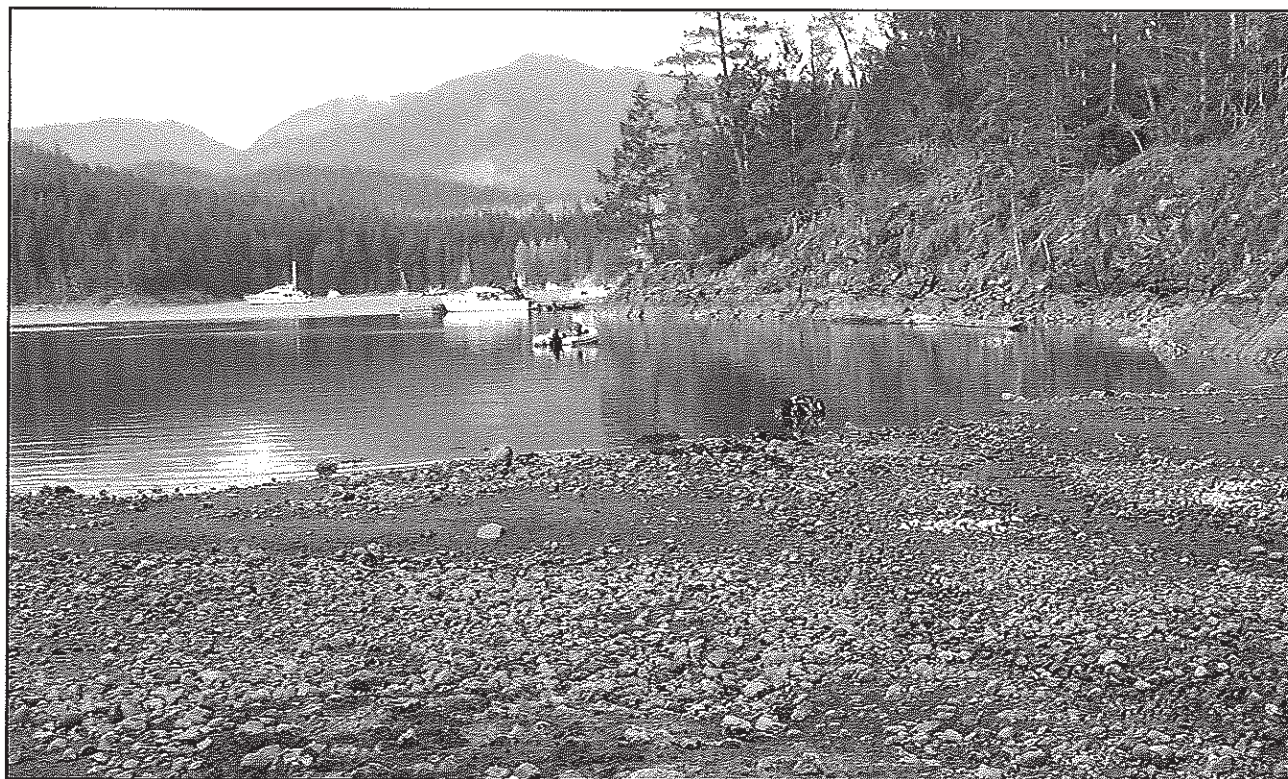
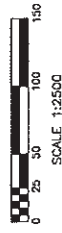
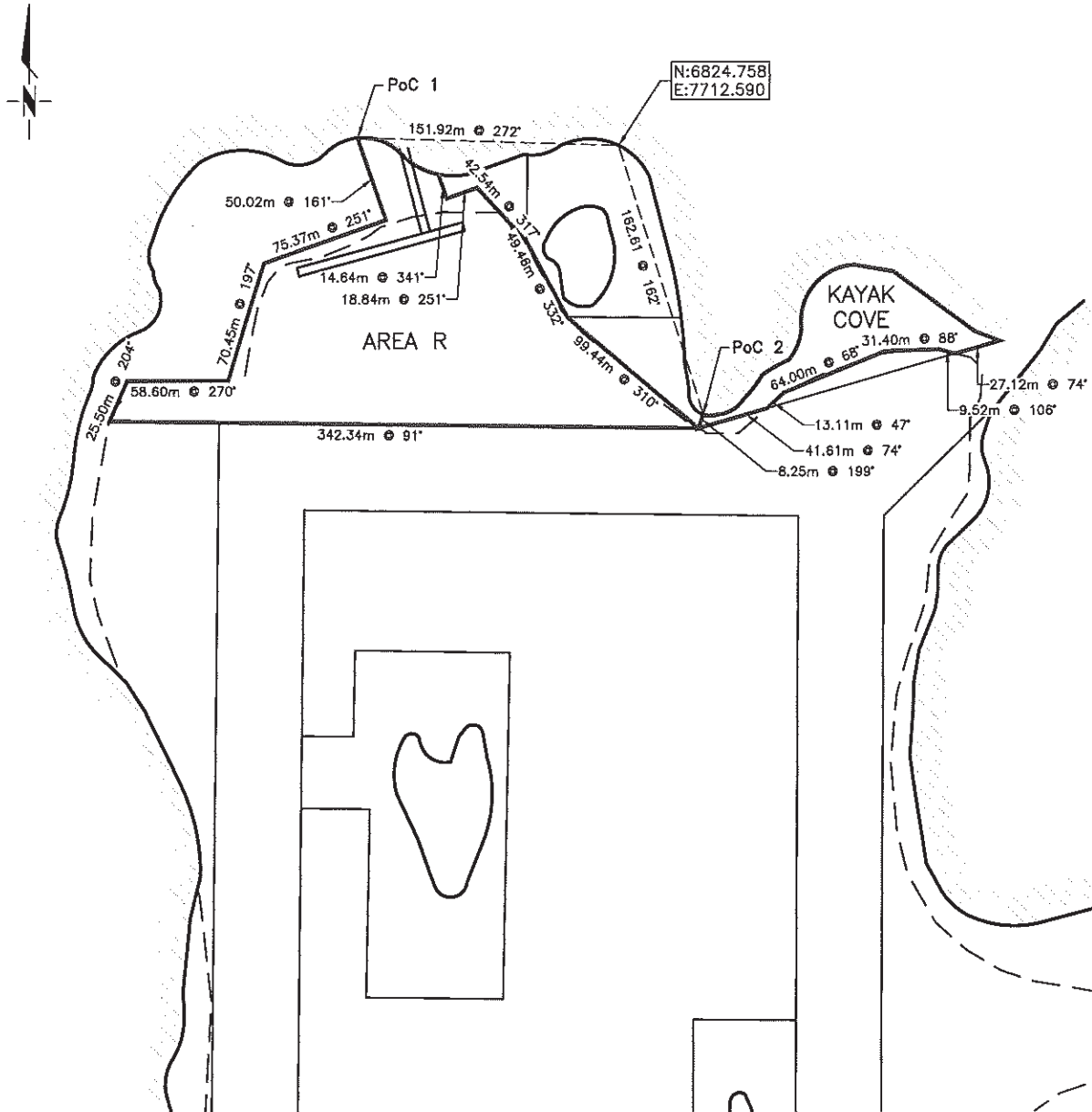


Photo 5. Looking toward the existing Klahoose First Nation dock and the eastern areas of Squirrel Cove behind.

Review



AREA R & KAYAK COVE METES AND BOUNDS



METES & BOUNDS AREA R

BEGIN AT POINT OF LAND AT
NORTHING 6824.758 &
EASTING 7712.590 THEN GO
151.92m AT 272° TO POINT OF
COMMENCEMENT 1 (PoC1)
THEN GO

50.02m AT 161°
75.37m AT 251°
70.45m AT 197°
58.60m AT 270°
25.50m AT 204°
342.34m AT 91°
99.44m AT 310°
49.46m AT 332°
42.54m AT 317°
18.84m AT 251°
14.64m AT 341°

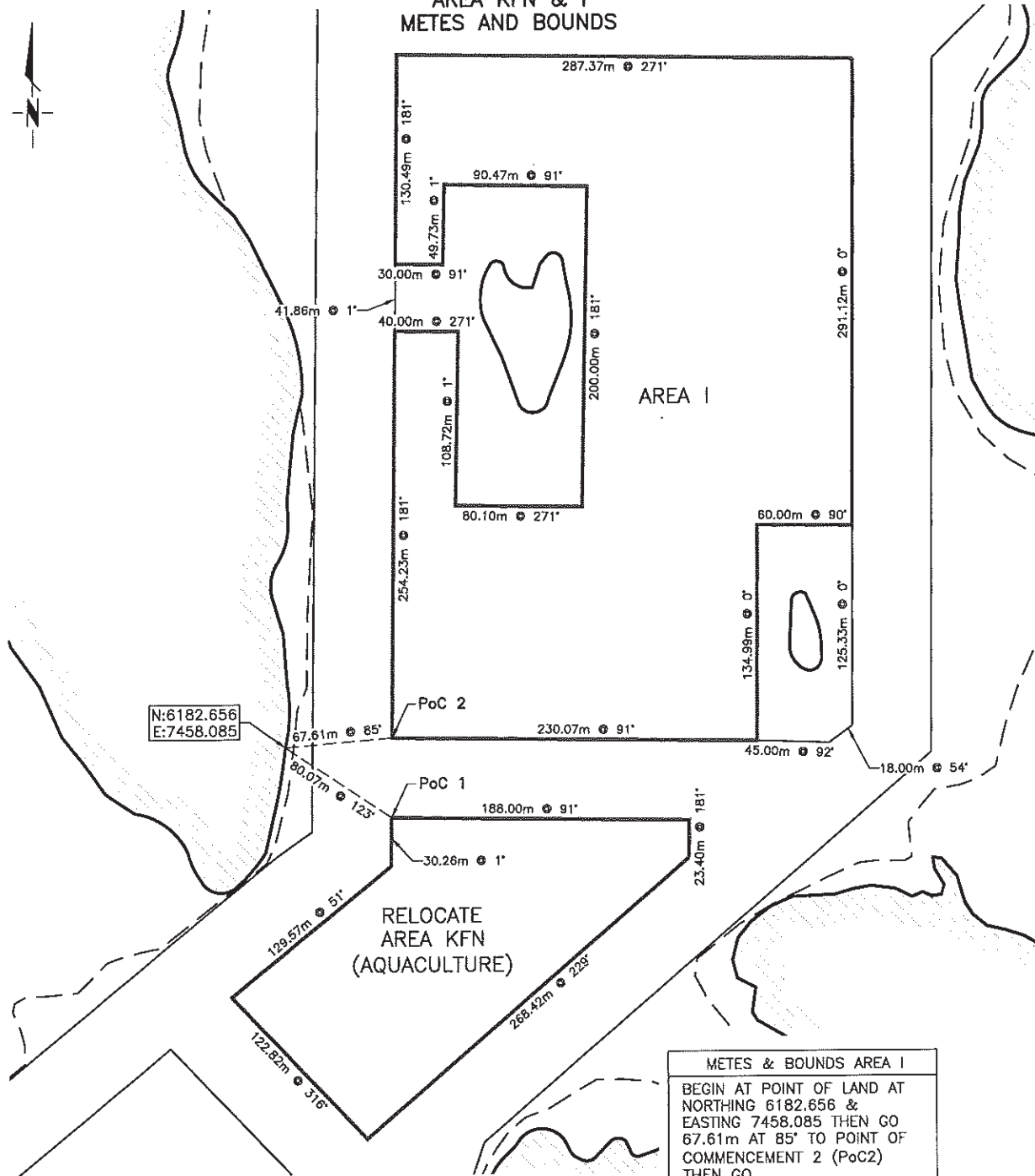
METES & BOUNDS KAYAK COVE

BEGIN AT POINT OF LAND AT
NORTHING 6824.758 &
EASTING 7712.590 THEN GO
162.61m AT 162° TO POINT OF
COMMENCEMENT 2 (PoC2)
THEN GO

8.25m AT 199°
41.61m AT 74°
13.11m AT 47°
64.00m AT 68°
31.40m AT 88°
9.52m AT 106°
27.12m AT 74°

*Revised
Apr 13/11*

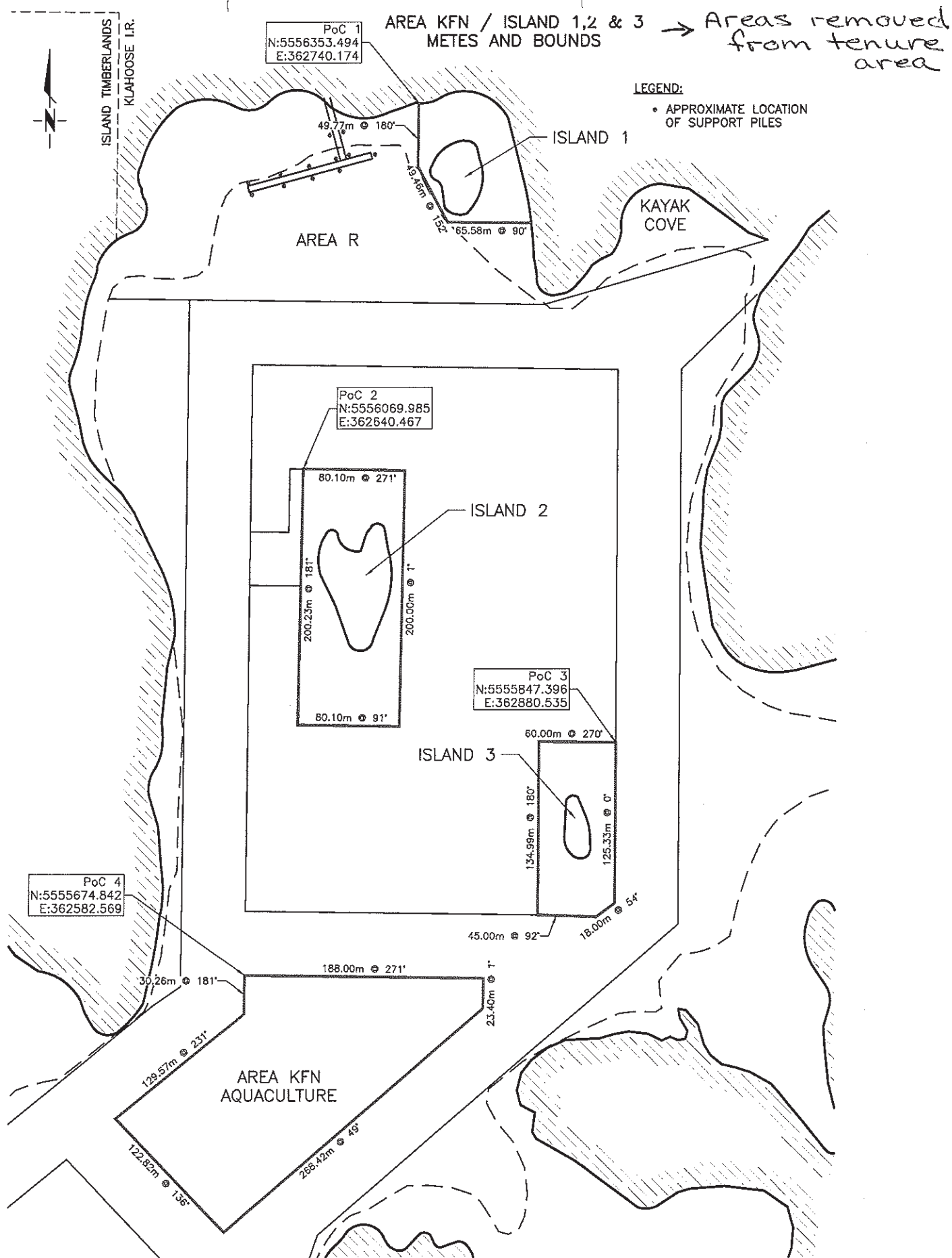
AREA KFN & I METES AND BOUNDS



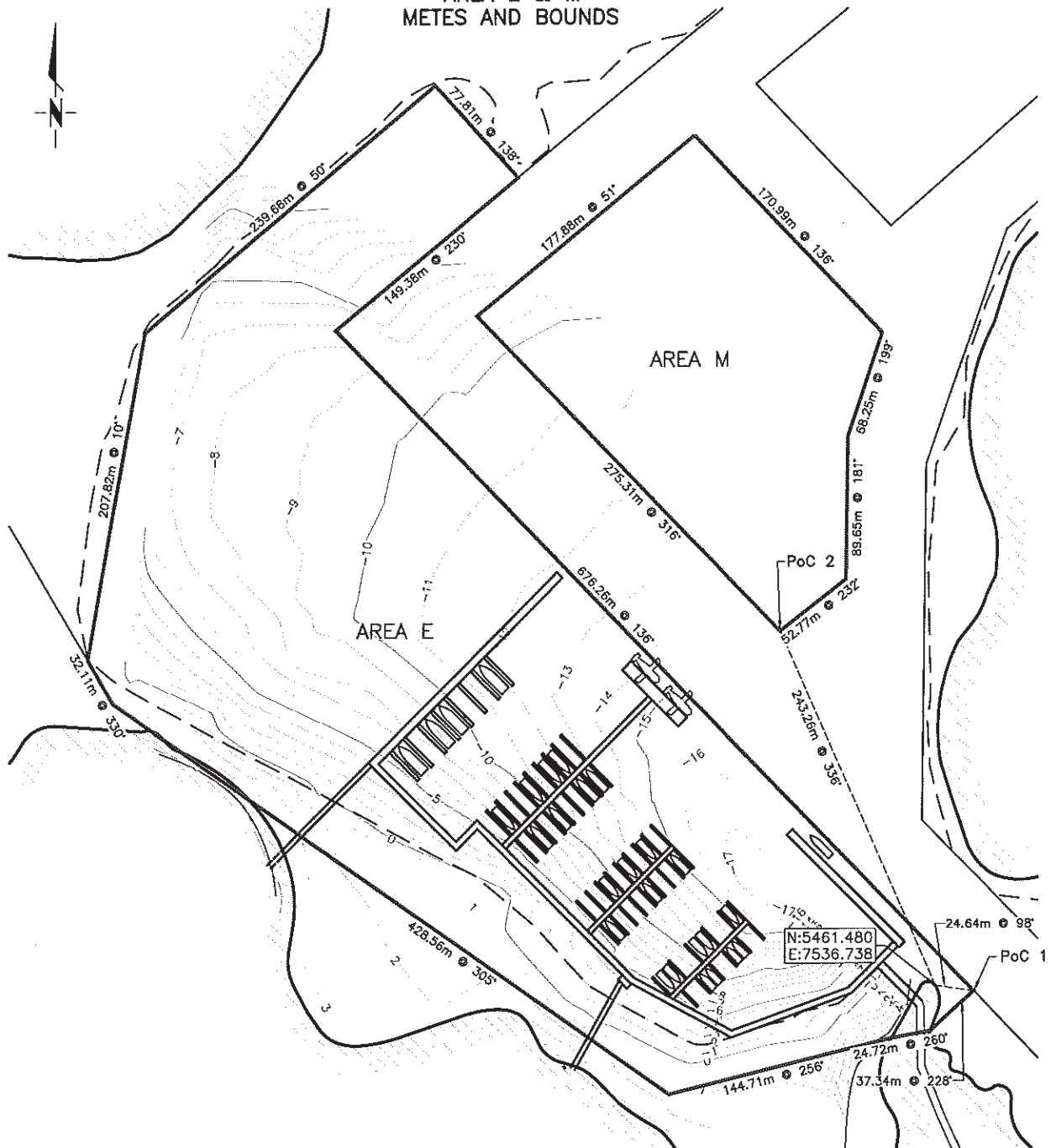
N:6182.656
E:7458.085

METES & BOUNDS AREA KFN	
BEGIN AT POINT OF LAND AT NORTHING 6182.656 & EASTING 7458.085 THEN GO 80.07m AT 123° TO POINT OF COMMENCEMENT 1 (PoC1) THEN GO	
188.00m AT 91°	
23.40m AT 181°	
268.42m AT 229°	
122.82m AT 316°	
129.57m AT 51°	
30.26m AT 1°	

METES & BOUNDS AREA I	
BEGIN AT POINT OF LAND AT NORTHING 6182.656 & EASTING 7458.085 THEN GO 67.61m AT 85° TO POINT OF COMMENCEMENT 2 (PoC2) THEN GO	
230.07m AT 91°	
134.99m AT 0°	
60.00m AT 90°	
231.12m AT 0°	
267.37m AT 271°	
130.49m AT 181°	
30m AT 91°	
49.73m AT 1°	
90.47m AT 91°	
200.00m AT 181°	
80.10m AT 271°	
108.72m AT 1°	
40m AT 271°	
254.23m AT 181°	



AREA E & M METES AND BOUNDS



METES & BOUNDS AREA M

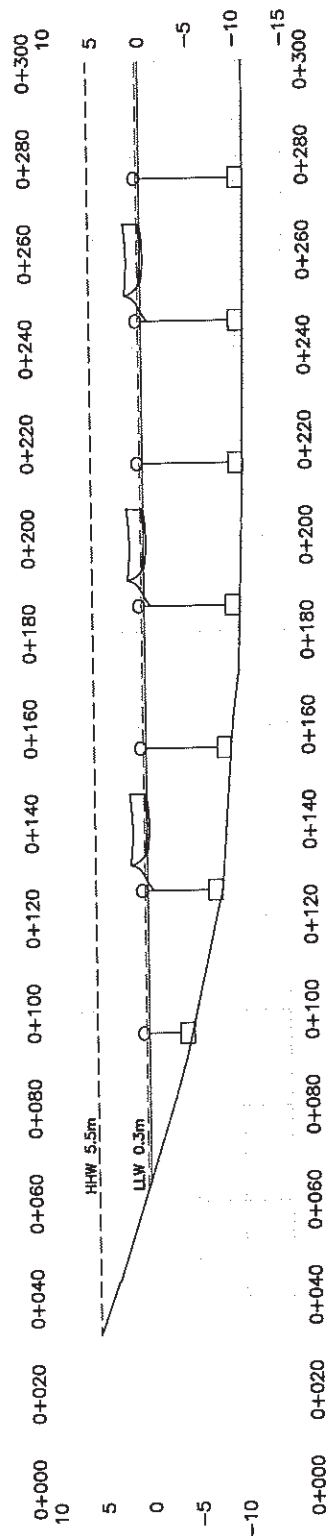
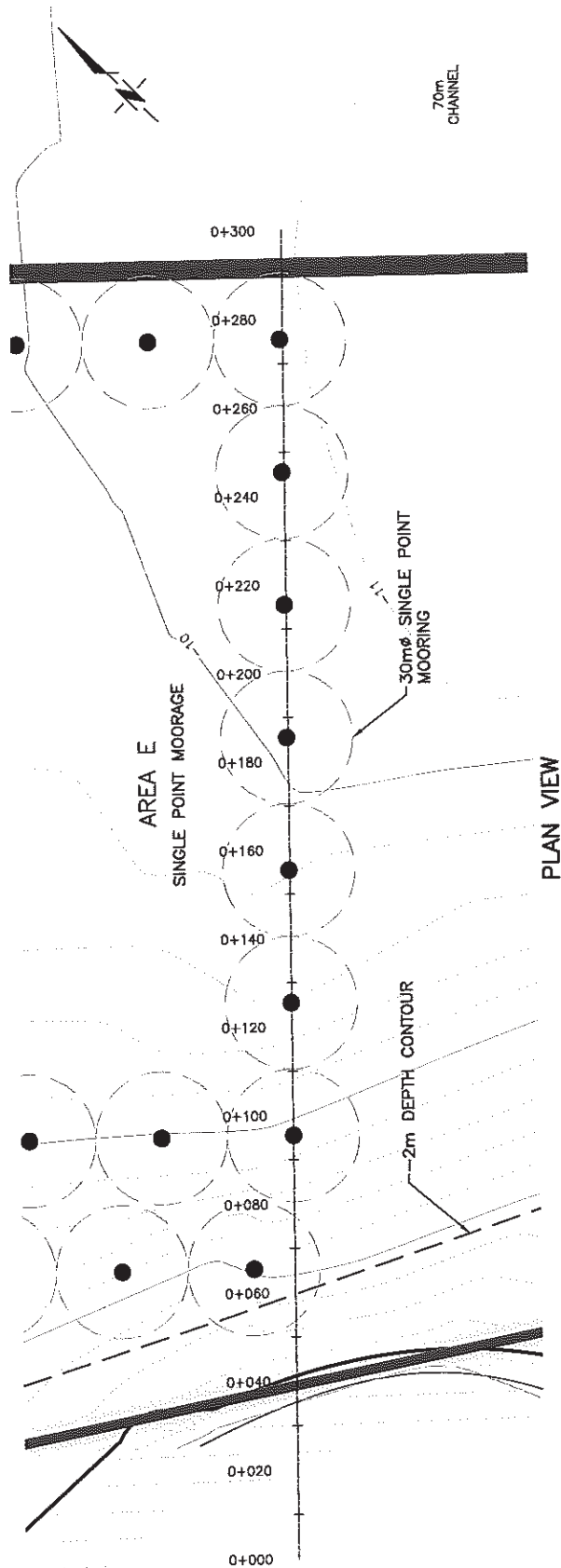
BEGIN AT POINT OF LAND AT
NORTHING 5461.480 &
EASTING 7536.738 THEN GO
243.26m AT 336° TO POINT OF
COMMENCEMENT 2 (PoC2)
THEN GO

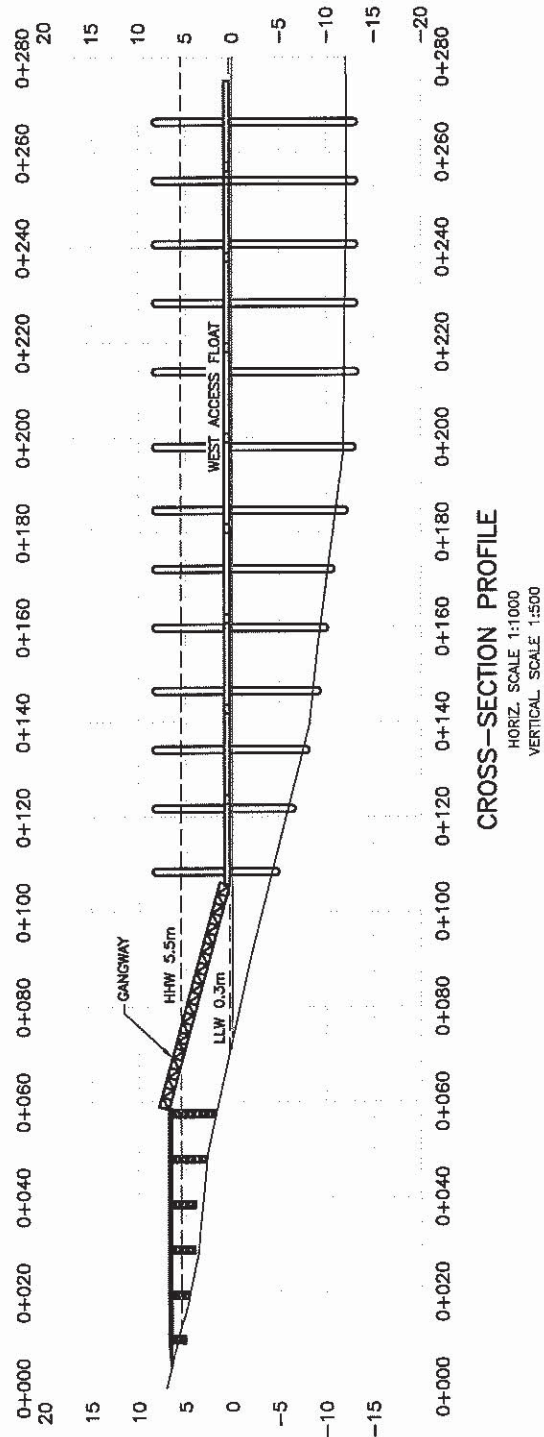
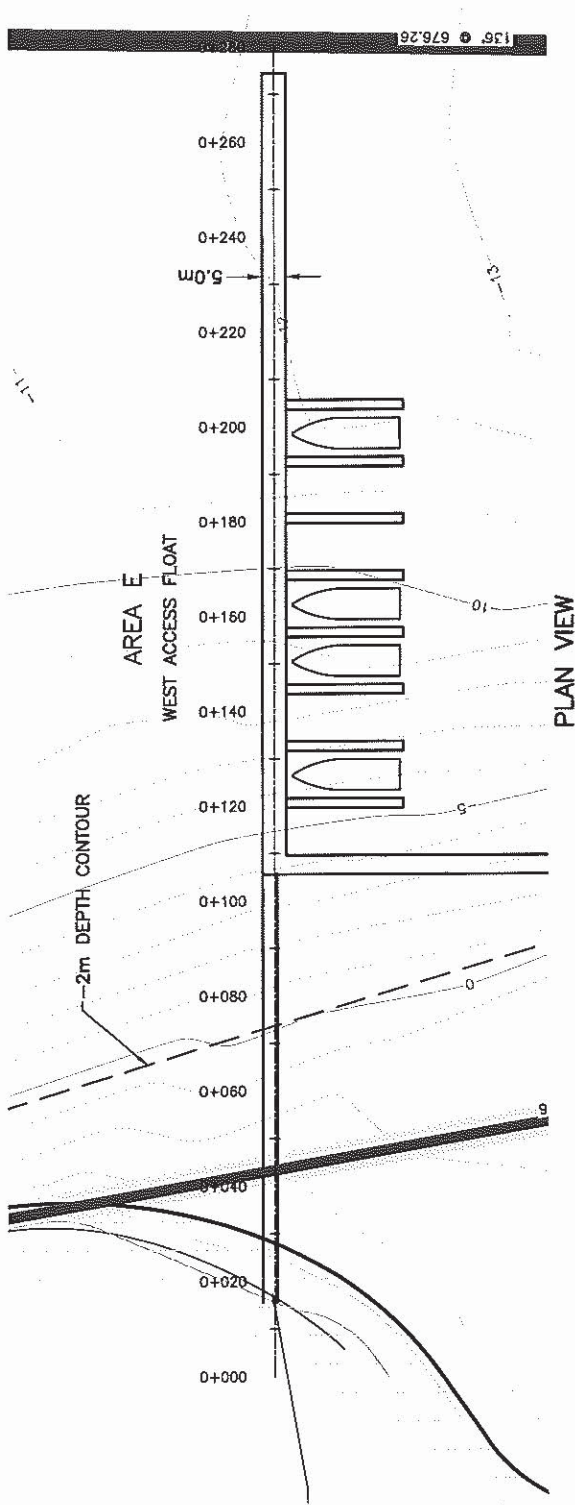
275.31m AT 316°
177.88m AT 51°
170.99m AT 136°
68.25m AT 199°
89.65m AT 181°
52.77m AT 232°

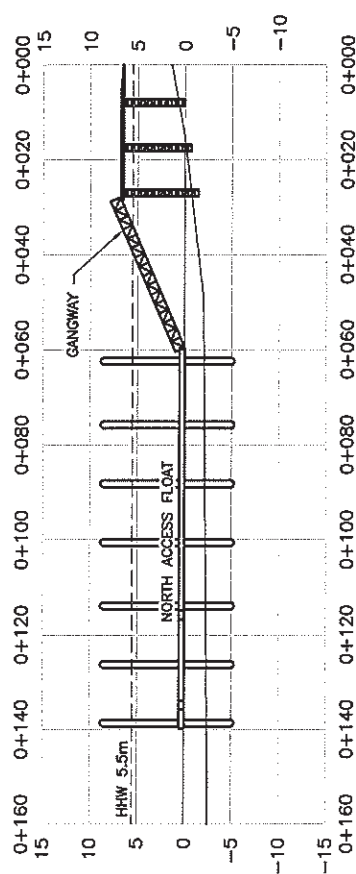
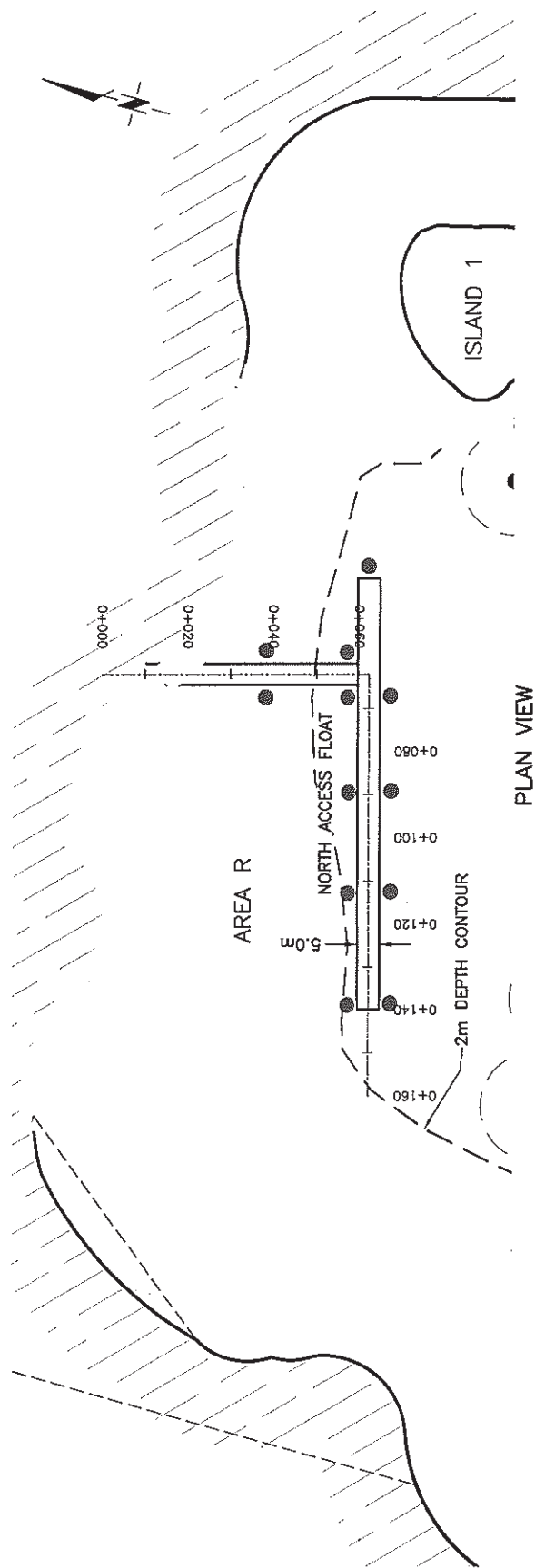
METES & BOUNDS AREA E

BEGIN AT POINT OF LAND AT
NORTHING 5461.480 &
EASTING 7536.738 THEN GO
24.64m AT 98° TO POINT OF
COMMENCEMENT 1 (PoC1)
THEN GO

37.34m AT 228°
24.72m AT 260°
144.71m AT 256°
428.56m AT 305°
32.11m AT 330°
207.82m AT 10°
239.68m AT 50°
77.81m AT 138°
149.38m AT 230°
676.26m AT 136°







APPENDIX B

CRIS DATABASE MARBLED MURRELET



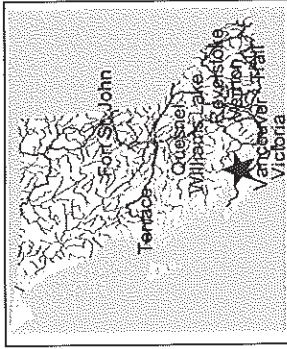
Marbled Murrelet CRIS



Map center: 50° 8' 6" N, 124° 55' 8" W

Notes: Coordinate Position
BC Albers: 1077141, 569587
Geographic: 50° 8' 12.3" N, 124° 55' 14.7" W
UTM 10N: 362739, 5555605

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



Legend

- Marbled Murrelet
- Kelp beds
- Eelgrass
- Contours (TRIM)
 - Contour - Index
 - Contour - Intermediate
 - Water - Lines (TRIM)
- River/Stream - Definite
- River/Stream - Indefinite
- Sand Bar
- Sea Wall
- Breakwater
- Bathymetry (1:250k)
 - Shallow (0-20m)
 - Photic (20-50m)
 - Mid-depth (50-200m)
 - Deep (200-1000m)
 - Abyssal (>1000m)



Scale: 1:14,977

APPENDIX C
BC CDC MARBLED MURRELET





BC Conservation Data Centre: Occurrence Report (30512)

February 14, 2011

Brachyramphus marmoratus
Marbled Murrelet

Field definition document available at

<http://www.env.gov.bc.ca/atrisk/ims.htm>

This is a summary report. For a complete record contact the CDC (cdcdata@gov.bc.ca).

Identifiers

Occurrence ID:	7009	Status:	
Shape ID:	30512	Global:	G3G4
Type:	Vertebrate Animal	Provincial:	S3B,S3N
		COSEWIC:	T (NOV 2000)
Taxonomic Class:	birds	BC List:	Blue
Data Sensitive:	N	SARA Schedule:	1

Locators

Survey Site: LLANOVER MOUNTAIN

Directions: Located about 1.5 km NNE of Llanover Mountain on West Redonda Island.

Survey Information

First Obs. Date: 2001 **Last Obs. Date:** 2001

Occurrence Data: Nest site located using radio telemetry and later accessed and confirmed by ground search. Nest was not successful (CEW 2003).

Occurrence Rank and Occurrence Rank Factors

Rank: E Verified extant (viability not assessed) **Rank Date:** 2001

Rank Comments:

Condition of Occurrence

Size of Occurrence:

Landscape Context:

Description

General Description:

Vegetation Zone:

Habitat: TERRESTRIAL: forest needleleaf, old forest

Documentation

References: Centre for Wildlife Ecology (CWE). 2003. Marbled Murrelet Project: nest site descriptions for all nests found by radio telemetry, Simon Fraser University, Burnaby. Last Update March 2003 Online. Available: <http://www.sfu.ca/biology/wildberg/mamuweb/welcome.htm#>
Centre for Wildlife Ecology (CWE). 2006. Marbled Murrelet nest site locations for all nests found by radio telemetry in the Desolation Sound area. Simon Fraser University, Burnaby.

Version

Version Date: 25-JUL-06

Mapping Information

Estimated Representation Medium

Accuracy:

Confidence Extent: N

February 14, 2011

APPENDIX D
DFO HERRING LOCATIONS MAP



Fisheries and Oceans
CanadaPêches et Océans
Canada

Canada

[Home](#) > [Pacific](#) > [Science and Research](#) > [Aquatic Species Research](#) > [Pelagic Fish](#) > [Herring Geographical Bulletin](#)

Section 151, Redonda Islands Herring Spawn Records

- [Composite Map](#)
- [Time-series map or Spawn Table](#)

[Return to BC Search Map](#) or <<< [Previous page](#)

Click an area on the habitat map to see spawn records within each pool (S=surface D=dive).

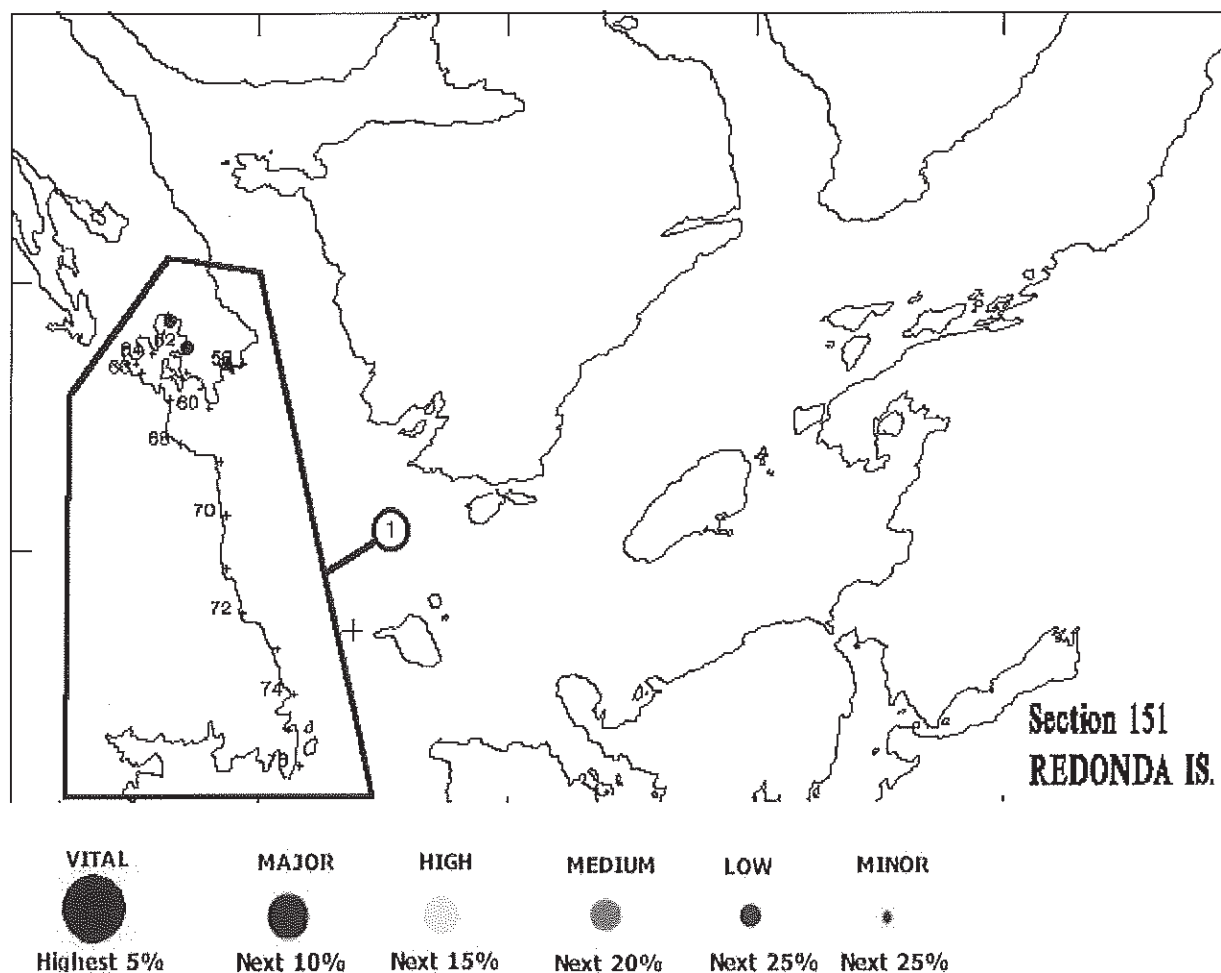


Figure 1. Cumulative spawn shown at [km positions](#) (1928-2001).

[View map revised to current year](#) or browse other [cumulative spawn maps](#).

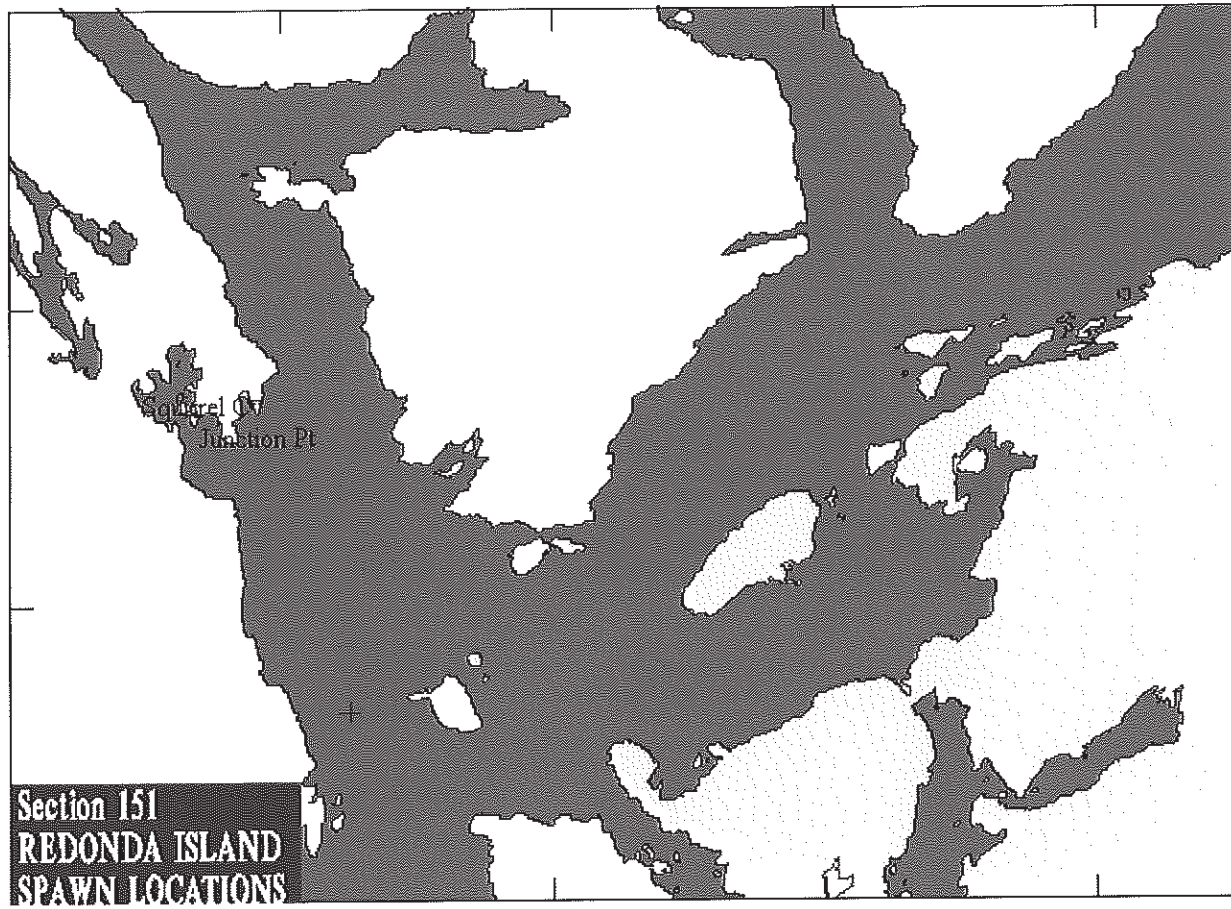


Figure 2. Location Map.

Catch & Spawners - Section 151 (Redonda Islands)

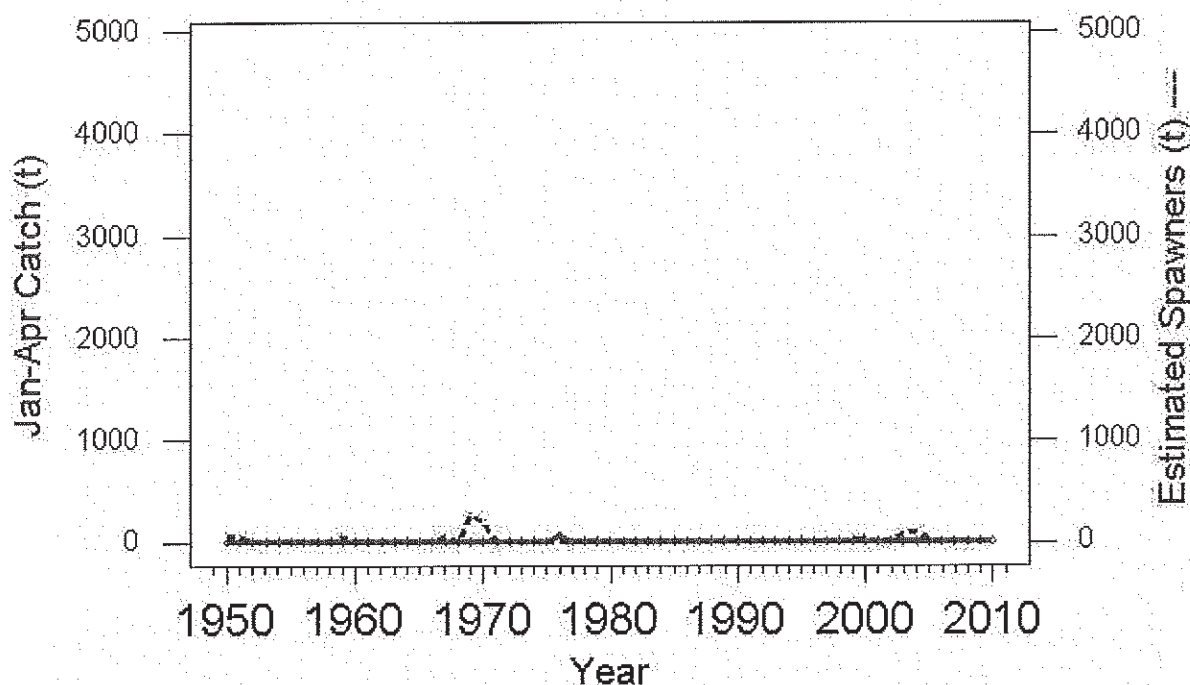


Figure 3.

Herring spawners (red dash line) were estimated by apportioning spawner biomass (SB) as determined for each region and year in [Stock assessment and management advice for the British Columbia herring fishery, 2009 assessment and 2010 forecasts](#) (or a more recent PSARC document) to each [assessed herring section](#) using an area-specific, [spawn habitat index \(SHI\)](#). Spawners in non-assessed, herring sections were estimated using a SHI versus SB linear regression equation of post-1950 spawn records (insufficient spawn deposition records and/or catch bio-sampling in some peripheral sections). Some inter-annual fluctuations shown on the graph may indicate migratory movements to adjacent herring sections (see-saw effect). Other inter-annual fluctuations may suggest changes in overall, coastal abundance. Most section boundaries in BC do **not** delineate discretely defined, spawning stocks (Hay et al. CSAS 2007/086).

Only herring catches accomplished close to the spawning season (Jan 1 - Apr 30) were plotted on the graph (blue line). Most of these herring, had they not been intercepted, would likely have spawned within the section of capture or possibly at spawning sites in adjacent herring sections. Catches accomplished during other seasons of the year (May 1 - Dec 31) were **not** plotted on the graph. Summer, fall and winter catches often represented significant proportions of total annual herring landings prior to 1982 but such catches were negligible after 1982. See [catch tables](#) or [mixed-stock graph](#). Most herring schools captured between the months of May and December would have potentially spawned in other sections, apart from the section of capture and for that reason were not plotted on section plots. These herring were often intercepted while feeding on, or migrating from, offshore banks (summer distribution) or while en route (inshore stop-over or over-wintering "holding areas") to spring [spawning areas](#). Investigate the rationale and basis for [regional stock assessments](#) or view [catch and spawner plots](#) aggregated at a regional or statistical area scale.

Figure 4.

Spawn magnitude by km - Section 151 (Redonda Islands)

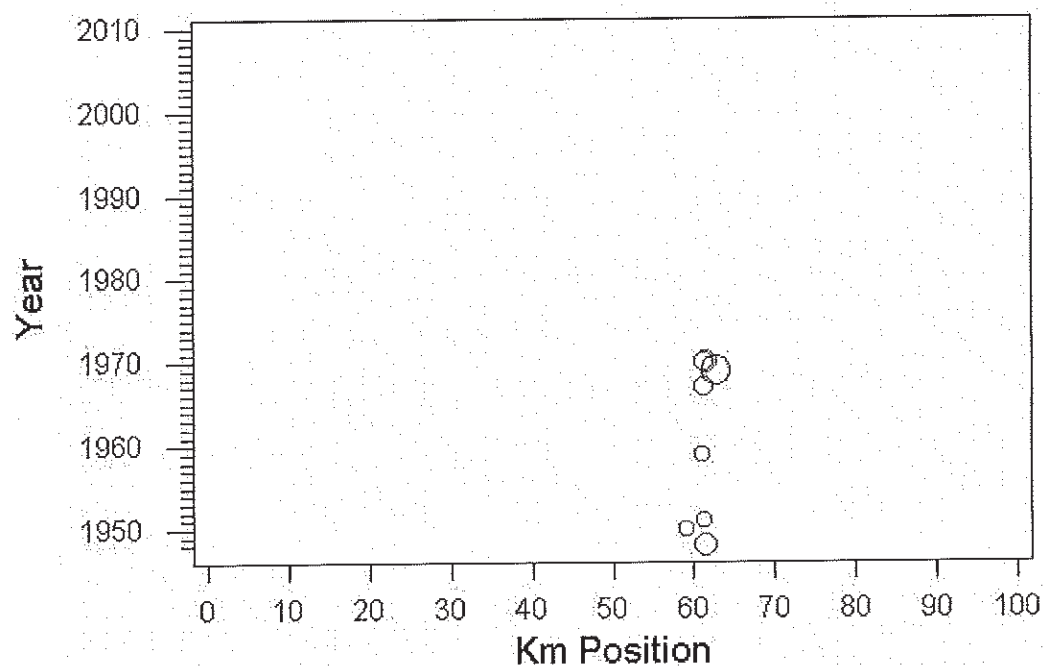


Figure 5.

Spawning Frequency - Section 151 (Redonda Island)

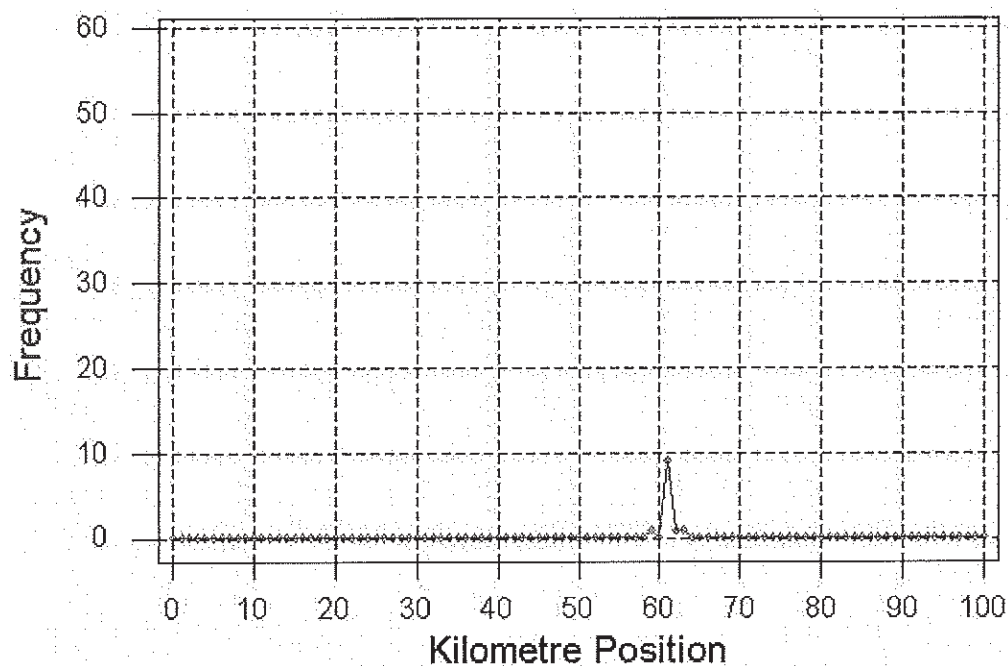


Figure 6.

Spawning dates (Day Of Year) - Section 151 (Redonda Islands)

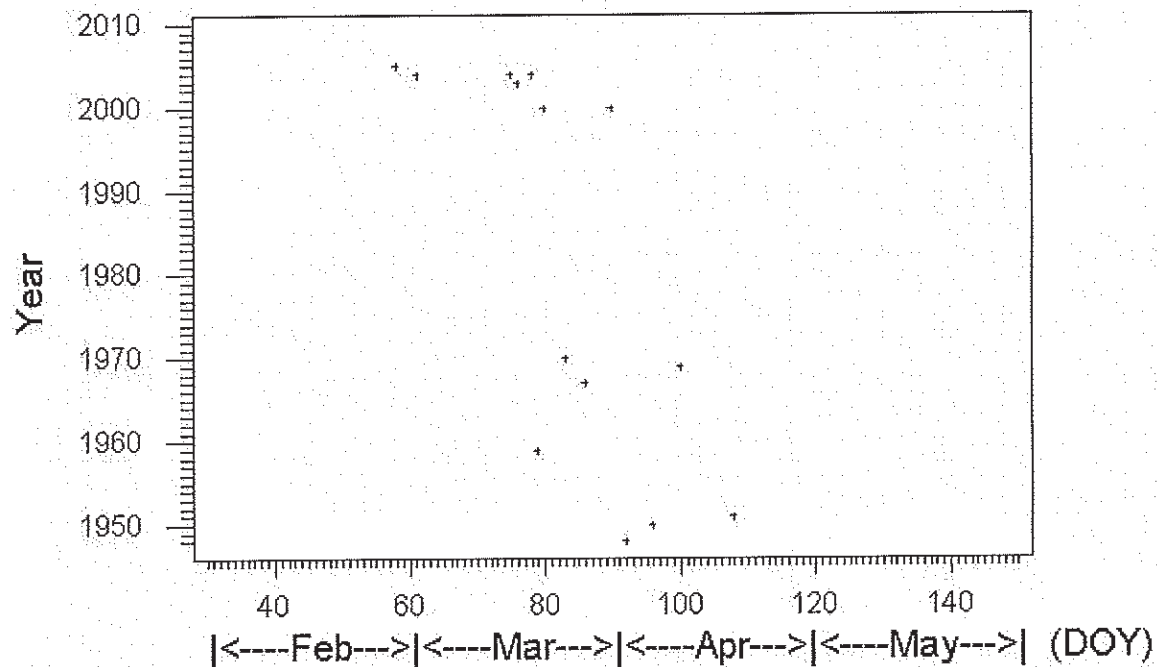


Figure captions 1 to 6 Strait of Georgia Search Map

Date Modified: 2010-09-13

1

APPENDIX E

BC CDC ECOSYSTEM EXPLORER RESULTS



BC Species and Ecosystems Explorer Search Results

Status

Scientific Name	English Name	RISC Code	Provincial	BC List	COSEWIC	Global	CF	Priority
<i>Accipiter gentilis laingi</i>	Northern Goshawk, <i>laingi</i> subspecies	B-NOGO-LA	S2B (2010)	Red	T (2000)	G5T2 (2008)		1
<i>Ardea herodias fannini</i>	Great Blue Heron, <i>fannini</i> subspecies	B-GBHE-FA	S2S3B,S4N (2009)	Blue	SC (2008)	G5T4 (1997)		1
<i>Balsamorhiza deltoidea</i>	deltoid balsamroot	BALSDEL	S1 (2009)	Red	E (2009)	G5 (1988)		1
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	B-MAMU	S3B,S3N (2010)	Blue	T (2000)	G3G4 (2008)		1
<i>Contopus cooperi</i>	Olive-sided Flycatcher	B-OSFL	S3S4B (2009)	Blue	T (2007)	G4 (2008)		2
<i>Euphyes vestris</i>	Dun Skipper	IL-EUPVES	S3 (2006)	Blue	T (2000)	G5 (2006)		2
<i>Falco peregrinus pealei</i>	Peregrine Falcon, <i>pealei</i> subspecies	B-PEFA-PE	S3B (2005)	Blue	SC (2007)	G4T3 (1997)		1
<i>Heterodermia sitchensis</i>	seaside centipede	HETESIT	S1 (2007)	Red	E (2006)	G2G3 (2006)		1
<i>Megascops kennicottii kennicottii</i>	Western Screech- Owl, <i>kennicottii</i> subspecies	B-WSOW-KE	S3 (2009)	Blue	SC (2002)	G5T4 (2003)		1
<i>Nephroma occultum</i>	Cryptic Paw	NEPHOCC	S2S3 (2007)	Blue	SC (2006)	G4 (2007)		2
<i>Rana aurora</i>	Northern Red-legged Frog	A-RAAU	S3S4 (2007)	Blue	SC (2004)	G4 (2008)		1
<i>Tyto alba</i>	Barn Owl	B-BNOW	S3 (2009)	Blue	SC (2001)	G5 (1996)		2

Search Summary

Time Performed Tue Sep 21 10:29:31 PDT 2010

Results 12 records.

Search Criteria Species Group:Plants & Animals
AND BC Conservation Status:Red (Extirpated, Endangered, or Threatened) OR Blue (Special Concern)
AND SARA Schedule 1 Status:True
AND Forest Districts:Campbell River Forest District (DCR) (Restricted to Red, Blue, and Legally designated species)
AND MOE Regions:1- Vancouver Island (Restricted to Red, Blue, and Legally designated species)
AND Regional Districts:Strathcona (SRD) (Restricted to Red, Blue, and Legally designated species)
AND Habitat Types:Terrestrial
AND BGC Zone:CWH
Sort Order:Scientific Name Ascending

Notes 1. Citation: B.C. Conservation Data Centre. 2010. BC Species and Ecosystems Explorer. B.C. Minst. of Environ. Victoria, B.C. Available: <http://a100.gov.bc.ca/pub/eswp/> (accessed Sep 21, 2010).

2. Forest District, MoE Region, Regional District and habitat lists are restricted to species that breed in the Forest District, MoE Region, Regional District or habitat (i.e., species will not be placed on lists where they occur only as migrants).

[Modify Search](#) | [New Search](#) | [Results](#)

BC Species and Ecosystems Explorer Search Results

Status

Scientific Name	English Name	RISC Code	Provincial	BC List	COSEWIC	Global	CF	Priority
<i>Accipiter gentilis laingi</i>	Northern Goshawk, <i>laingi</i> subspecies	B-NOGO-LA	S2B (2010)	Red	T (2000)	G5T2 (2008)		1
<i>Alopecurus carolinianus</i>	Carolina meadow- foxtail	ALOPCAR	S2 (2000)	Red		G5 (1986)		3
<i>Balsamorhiza deltoidea</i>	deltoid balsamroot	BALSDEL	S1 (2009)	Red	E (2009)	G5 (1988)		1
<i>Cercyonis pegala incana</i>	Common Wood- nymph, <i>incana</i> subspecies	IL-CERPEG-IN	S2 (2006)	Red		G5T4T5 (2003)		2
<i>Claytonia multiscapa</i> ssp. <i>pacifica</i>	Rydberg's spring beauty		S1 (2010)	Red		G5T3 (1998)		1
<i>Deroceras hesperium</i>	Evening Fieldslug	IM-DERHES	SH (2008)	Red	DD (2003)	G2 (2004)		2
<i>Geum schofieldii</i>	Queen Charlotte avens	GEUMSCH	S2 (2000)	Red		G2Q (1994)		1
<i>Gulo gulo vancouverensis</i>	Wolverine, <i>vancouverensis</i> subspecies	M-GUGU-VA	SH (2006)	Red	SC (1989)	G4T1Q (1997)		2
<i>Heterodermia sitchensis</i>	seaside centipede	HETESIT	S1 (2007)	Red	E (2006)	G2G3 (2006)		1
<i>Myotis keenii</i>	Keen's Myotis	M-MYKE	S1S3 (2006)	Red	DD (2003)	G2G3 (2006)		1
<i>Nearctula</i> sp. 1	Threaded Vertigo	IM-NEASP1	S2 (2008)	Red	SC (2010)	G3G5 (2006)		2
<i>Poa nervosa</i>	coastal bluegrass	POA NER	SH (2000)	Red		G3? (2000)		2
<i>Selaginella oregana</i>	Oregon selaginella	SELAORE	S1S3 (2005)	Red		G4 (1994)		2
<i>Speyeria zerene bremnerii</i>	Zerene Fritillary, <i>bremnerii</i> subspecies	IL-SPEZER-BR	S2 (2006)	Red		G5T3T4 (1998)		2
<i>Trillium ovatum</i> var. <i>hibbersonii</i>	dwarf trillium	TRILOVA2	S2 (2008)	Red		G5T2Q (2009)		1

Search Summary

Time Performed Tue Sep 21 10:25:57 PDT 2010

Results 15 records.

Search Criteria Species Group:Plants & Animals
AND BC Conservation Status:Red (Extirpated, Endangered, or Threatened)
AND Forest Districts:Campbell River Forest District (DCR) (Restricted to Red, Blue, and Legally designated species)
AND MOE Regions:1- Vancouver Island (Restricted to Red, Blue, and Legally designated species)
AND Regional Districts:Strathcona (SRD) (Restricted to Red, Blue, and Legally designated species)
AND Habitat Types:Terrestrial
AND BGC Zone:CWH
Sort Order:Scientific Name Ascending

Notes 1. Citation: B.C. Conservation Data Centre. 2010. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <http://a100.gov.bc.ca/pub/eswp/> (accessed Sep 21, 2010).

2. Forest District, MoE Region, Regional District and habitat lists are restricted to species that breed in the Forest District, MoE Region, Regional District or habitat (i.e., species will not be placed on lists where they occur only as migrants).

[Modify Search](#) | [New Search](#) | [Results](#)

BC Species and Ecosystems Explorer Search Results

					Status		
Scientific Name	English Name	RISC Code	Provincial	BC List	COSEWIC	Global	CF Priority
<i>Abronia latifolia</i>	yellow sand-verbena	ABROLAT	S3 (2002)	Blue		G5 (1988)	1
<i>Allium amplexans</i>	slimleaf onion	ALLIAMP	S3 (2001)	Blue		G4 (1988)	2
<i>Anagallis minima</i>	chaffweed	ANAGMIN	S3 (2008)	Blue		G5 (1984)	2
<i>Ardea herodias fannini</i>	Great Blue Heron, <i>fannini</i> subspecies	B-GBHE-FA	S2S3B,S4N (2009)	Blue	SC (2008)	G5T4 (1997)	1
<i>Asio flammeus</i>	Short-eared Owl	B-SEOW	S3B,S2N (2009)	Blue	SC (2008)	G5 (2008)	2
<i>Asplenium adulterinum</i>	corrupt spleenwort	ASPLADU	S2S3 (2000)	Blue		G3? (2000)	2
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	B-MAMU	S3B,S3N (2010)	Blue	T (2000)	G3G4 (2008)	1
<i>Calystegia soldanella</i>	beach bindweed	CONVSOL	S3 (2008)	Blue		G5 (1988)	2
<i>Carex pansa</i>	sand-dune sedge	CAREPAN	S2S3 (2000)	Blue		G4 (1990)	3
<i>Carychium occidentale</i>	Western Thorn	IM-CAROCC	S2S3 (2008)	Blue		G3G4 (2002)	2
<i>Cerastium fischerianum</i>	Fischer's chickweed	CERAFIS	S2S3 (2000)	Blue		G4 (1994)	6
<i>Cervus canadensis roosevelti</i>	Roosevelt Elk	M-CECA-RO	S3 (2006)	Blue		G5T4 (1997)	2
<i>Contopus cooperi</i>	Olive-sided Flycatcher	B-OSFL	S3S4B (2009)	Blue	T (2007)	G4 (2008)	2
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	M-COTO	S3 (2006)	Blue		G4 (1996)	2
<i>Eleocharis rostellata</i>	beaked spike-rush	ELEOROS	S2S3 (2000)	Blue		G5 (2000)	3
<i>Eucephalus paucicapitatus</i>	Olympic mountain aster	ASTEPAU	S3 (2006)	Blue		G3? (2000)	2
<i>Euphyes vestris</i>	Dun Skipper	IL-EUPVES	S3 (2006)	Blue	T (2000)	G5 (2006)	2
<i>Falco peregrinus pealei</i>	Peregrine Falcon, <i>pealei</i> subspecies	B-PEFA-PE	S3B (2005)	Blue	SC (2007)	G4T3 (1997)	1
<i>Fratercula cirrhata</i>	Tufted Puffin	B-TUPU	S3B,S4N (2005)	Blue		G5 (2003)	2
<i>Glaucidium gnoma swarthi</i>	Northern Pygmy-Owl, <i>swarthi</i> subspecies	B-NPOW-SW	S3 (2009)	Blue		G4G5T3Q (1996)	1
<i>Gulo gulo luscus</i>	Wolverine, <i>luscus</i> subspecies	M-GUGU-LU	S3 (2006)	Blue	SC (2003)	G4T4 (1996)	2
<i>Hirundo rustica</i>	Barn Swallow	B-BASW	S3S4B (2009)	Blue		G5 (1996)	2
<i>Isoetes nuttallii</i>	Nuttall's quillwort	ISOENUT	S3 (2001)	Blue		G4? (1995)	2
<i>Juncus oxymeris</i>	pointed rush	JUNCOXY	S2S3 (2000)	Blue		G5 (1993)	3

<i>Lasthenia maritima</i>	hairy goldfields	LASTMAR	S2S3 (2000)	Blue		G4 (1998)	3
<i>Megascops kennicottii kennicottii</i>	Western Screech-Owl, <i>kennicottii</i> subspecies	B-WSOW-KE	S3 (2009)	Blue	SC (2002)	G5T4 (2003)	1
<i>Monadenia fidelis</i>	Pacific Sideband	IM-MONFID	S3S4 (2008)	Blue		G4G5 (2002)	2
<i>Mustela erminea anguinae</i>	Ermine, <i>anguinae</i> subspecies	M-MUER-AN	S3 (2006)	Blue		G5T3 (1996)	2
<i>Nephroma occultum</i>	Cryptic Paw	NEPHOCC	S2S3 (2007)	Blue	SC (2006)	G4 (2007)	2
<i>Parnassius smintheus olympiannus</i>	Rocky Mountain Parnassian, <i>olympiannus</i> subspecies	IL-PARSMI-OL	S2S3 (2006)	Blue		G5T4 (2001)	2
<i>Patagioenas fasciata</i>	Band-tailed Pigeon	B-BTPI	S3S4B (2009)	Blue	SC (2008)	G4 (2000)	2
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	B-DCCO	S3B (2005)	Blue	NAR (1978)	G5 (1999)	2
<i>Pleuropogon refractus</i>	nodding semaphoregrass	PLEUREF	S3 (2001)	Blue		G4 (1997)	2
<i>Pristiloma johnsoni</i>	Broadwhorl Tightcoil	IM-PRIJOH	S2S3 (2008)	Blue		G2G3 (2004)	2
<i>Progne subis</i>	Purple Martin	B-PUMA	S2S3B (2005)	Blue		G5 (1996)	3
<i>Prophyaon vanattae</i>	Scarletback Tildropper	IM-PROVAN	S3S4 (2008)	Blue		G4 (2002)	4
<i>Ptychoramphus aleuticus</i>	Cassin's Auklet	B-CAAU	S2S3B,S4N (2005)	Blue		G4 (1996)	2
<i>Rana aurora</i>	Northern Red-legged Frog	A-RAAU	S3S4 (2007)	Blue	SC (2004)	G4 (2008)	1
<i>Rubus nivalis</i>	snow bramble	RUBUNIV	S3? (2008)	Blue		G4? (1990)	2
<i>Tyto alba</i>	Barn Owl	B-BNOW	S3 (2009)	Blue	SC (2001)	G5 (1996)	2
<i>Ursus arctos</i>	Grizzly Bear	M-URAR	S3 (2006)	Blue	SC (2002)	G4 (2000)	2
<i>Viola biflora ssp. carlottae</i>	Queen Charlotte twinflower violet	VIOLBIF1	S3 (2004)	Blue		G5T3 (1994)	2

Search Summary

Time Performed Tue Sep 21 10:26:35 PDT 2010

Results 42 records.

Search Criteria Species Group:Plants & Animals
AND BC Conservation Status:Blue (Special Concern)
AND Forest Districts:Campbell River Forest District (DCR) (Restricted to Red, Blue, and Legally designated species)
AND MOE Regions:1- Vancouver Island (Restricted to Red, Blue, and Legally designated species)
AND Regional Districts:Strathcona (SRD) (Restricted to Red, Blue, and Legally designated species)
AND Habitat Types:Terrestrial
AND BGC Zone:CWH
Sort Order:Scientific Name Ascending

Notes 1. Citation: B.C. Conservation Data Centre. 2010. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <http://a100.gov.bc.ca/pub/eswp/> (accessed Sep 21, 2010).

2. Forest District, MoE Region, Regional District and habitat lists are restricted to species that breed in the Forest District, MoE Region, Regional District or habitat (i.e., species will not be placed on lists where they occur only as migrants).

BC Species and Ecosystems Explorer Search Results

Status

Scientific Name	English Name	RISC Code	Provincial	BC List	COSEWIC	Global	CF	Priority
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	B-MAMU	S3B,S3N (2010)	Blue	T (2000)	G3G4 (2008)		1
<i>Eumetopias jubatus</i>	Steller Sea Lion	M-EUJU	S2S3B,S3N (2006)	Blue	SC (2003)	G3 (2004)		2
<i>Falco peregrinus pealei</i>	Peregrine Falcon, <i>pealei</i> subspecies	B-PEFA-PE	S3B (2005)	Blue	SC (2007)	G4T3 (1997)		1
<i>Fratercula cirrhata</i>	Tufted Puffin	B-TUPU	S3B,S4N (2005)	Blue		G5 (2003)		2
<i>Haliotis kamtschatkana</i>	Northern Abalone	IM-HALKAM	S2 (2002)	Red	T (2000)	G3G4 (2008)		2
<i>Oncorhynchus clarkii clarkii</i>	Cutthroat Trout, <i>clarkii</i> subspecies	F-ONCL-CL	S3S4 (2004)	Blue		G4T4 (1997)		2
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	B-DCCO	S3B (2005)	Blue	NAR (1978)	G5 (1999)		2
<i>Ptychoramphus aleuticus</i>	Cassin's Auklet	B-CAAU	S2S3B,S4N (2005)	Blue		G4 (1996)		2
<i>Salvelinus malma</i>	Dolly Varden	F-SAMA	S3S4 (2004)	Blue		G5 (2000)		2

Search Summary

Time Performed Tue Sep 21 10:24:29 PDT 2010

Results 9 records.

Search Criteria Species Group:Plants & Animals
AND BC Conservation Status:Red (Extirpated, Endangered, or Threatened) OR Blue (Special Concern)
AND Forest Districts:Campbell River Forest District (DCR) (Restricted to Red, Blue, and Legally designated species)
AND MOE Regions:1- Vancouver Island (Restricted to Red, Blue, and Legally designated species)
AND Regional Districts:Strathcona (SRD) (Restricted to Red, Blue, and Legally designated species)
AND Habitat Types:Marine
AND BGC Zone:CWH
Sort Order:Scientific Name Ascending

Notes 1. Citation: B.C. Conservation Data Centre. 2010. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <http://a100.gov.bc.ca/pub/eswp/> (accessed Sep 21, 2010).
2. Forest District, MoE Region, Regional District and habitat lists are restricted to species that breed in the Forest District, MoE Region, Regional District or habitat (i.e., species will not be placed on lists where they occur only as migrants).

[Modify Search](#) | [New Search](#) | [Results](#)

APPENDIX F

ARCHAEOLOGICAL SEARCH RESULTS
BC SITE INVENTORY FORM(S)



s.18



British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Map Reference:

GIS Populated

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
			s.18	

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone

Map Sheet

Number	Spatial Accuracy
s.18	1:20K
	1:20K

Accuracy Remarks

Location not changed based on 1:20k site sketch (actual 1:33k). Geometry changed based on dimensions.

Site Location:

Description

Site Access

s.18

Street Address:

Street Number

Street Name

City

Postal Code

Site Dimensions:

Length (m)

Width (m)

Site Area

Comments

s.18

Environment:

Elevation (metres above Sea Level)

User Elevation

GIS Elevation

Elevation Comments

s.18

Biogeography

Type

Name

Description

GIS VegetationZone

CWHxm1

GIS VegetationZone

Minor Drainage

N/A See Description

STRAIT OF GEORGIA - MINOR PACIFIC OCEAN - MAJOR

GIS Drainage

COMOX

GIS EcoRegion

Georgia-Puget Basin

British Columbia Site Inventory Form

Borden Number: s.18

Tenure/Reserves:

<i>Jurisdiction</i>	<i>Tenure/Reserves T</i>	<i>Description</i>	<i>Tenure Remarks</i>
GIS LandDistricts		Sayward District	
GIS Municipalities		Comox-Strathcona, Subd. A	
GIS RegionalDistrict		Comox-Strathcona	

Site Typology:

<i>Class</i>	<i>Type</i>	<i>Sub Type</i>	<i>Descriptor</i>
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s.18

Feature Description Table

<i>Feature #</i>	<i>Length</i>	<i>Width</i>	<i>Dia.</i>	<i>Depth</i>	<i>DBS from</i>	<i>DBS To</i>	<i>Shape</i>	<i>Orientation</i>	<i>Berm/Rim</i>	<i>Colour</i>
------------------	---------------	--------------	-------------	--------------	-----------------	---------------	--------------	--------------------	-----------------	---------------

Feature Remarks

<i>Class</i>	<i>Type</i>	<i>Sub Type</i>	<i>Descriptor</i>
--------------	-------------	-----------------	-------------------

s.18

Feature Description Table

<i>Feature #</i>	<i>Length</i>	<i>Width</i>	<i>Dia.</i>	<i>Depth</i>	<i>DBS from</i>	<i>DBS To</i>	<i>Shape</i>	<i>Orientation</i>	<i>Berm/Rim</i>	<i>Colour</i>
------------------	---------------	--------------	-------------	--------------	-----------------	---------------	--------------	--------------------	-----------------	---------------

Feature Remarks

British Columbia Site Inventory Form

Borden Number: s.18

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	21/Aug/1972	U of Victoria			Arch		Mitchell, Donald H.

Project Description:

Initial recording. Unable to associate with any report or permit #

Remarks:

Date	Remarks
	s.18

Attached Documents:

Type	Description	Filename
Document	Site_Map	s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Map Reference:

GIS Populated

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
s.18				

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone

Map Sheet

Number	Spatial Accuracy
s.18	1:20K
	1:20K

Accuracy Remarks

Location changed based on 1:20k site sketch (actual 1:33k). Geometry changed based on dimensions.

Site Location:

Description

Site Access

s.18

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18	s.18		

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
	s.18	

Biogeography

Type	Name	Description
GIS VegetationZone	CWHxm1	
Minor Drainage	N/A See Description	STRAIT OF GEORGIA - MINOR PACIFIC OCEAN - MAJOR
GIS Drainage	COMOX	
GIS EcoRegion	Georgia-Puget Basin	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Sayward District	
GIS RegionalDistrict		Comox-Strathcona	

British Columbia Site Inventory Form

Borden Number: s.18

Site Typology:

Class	Type	Sub Type	Descriptor
<div style="text-align: center; color: red;">s.18</div>			

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
Feature Remarks										

Class	Type	Sub Type	Descriptor
<div style="text-align: center; color: red;">s.18</div>			

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
Feature Remarks										

British Columbia Site Inventory Form

Borden Number: s.18

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	21/Aug/1972	U of Victoria			Arch		Mitchell, Donald H.

Project Description:

Initial recordind. Unable to associate with any report or Permit #

Remarks:

Date	Remarks
------	---------

s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Map Reference:

GIS Populated					Historic Source				
Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
s.22									
Map Sheet									
Number		Spatial Accuracy							
s.18		1:20K							
		1:20K							
Accuracy Remarks									
Location not changed based on 1:20k site sketch (actual 1:33k). Geometry changed based on dimensions.									

Site Location:

Description	Site Access
s.18	

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18	s.18		

Environment:**Elevation (metres above Sea Level)**

User Elevation	GIS Elevation	Elevation Comments
s.18		

Biogeography

Type	Name	Description
GIS VegetationZone		
Minor Drainage	N/A See Description	STRAIT OF GEORGIA - MINOR PACIFIC OCEAN - MAJOR
GIS Drainage	COMOX	
GIS EcoRegion	Georgia-Puget Basin	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS IndianReserves	Indian Reserve	SQUIRREL COVE	
GIS LandDistricts		Sayward District	
GIS RegionalDistrict		Comox-Strathcona	

British Columbia Site Inventory Form

Borden Number: s.18

Site Typology:

Class	Type	Sub Type	Descriptor
<div style="text-align: center; color: red;">s.18</div>			

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Bern/Rim	Colour
Feature Remarks										

Class	Type	Sub Type	Descriptor
<div style="text-align: center; color: red;">s.18</div>			

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Bern/Rim	Colour
Feature Remarks										

British Columbia Site Inventory Form

Borden Number: s.18

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	21/Aug/1972	U of Victoria			Arch		Mitchell, Donald H.

Project Description:

Initial recording. Unable to associate with any report or Permit #

Remarks:

Date	Remarks
------	---------

s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Map Reference:

GIS Populated

Latitude	Longitude	UTM	UTM	UTM Zone	Latitude	Longitude	UTM	UTM	UTM Zone
		Easting	Northing				Easting	Northing	
			s.18						

Map Sheet

Number	Spatial Accuracy
s.18	1:20K
	1:20K

Accuracy Remarks

Location not changed based on 1:20k site map (1:33k actual). Geometry changed based on dimensions s.18

s.18

Site Location:

Description

Site Access

s.18

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18	s.18		

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
s.18		

Biogeography

Type	Name	Description
Minor Drainage	N/A See Description	STRAIT OF GEORGIA - MINOR PACIFIC OCEAN - MAJOR
GIS VegetationZone	CWHxm1	
GIS Drainage	COMOX	
GIS EcoRegion	Georgia-Puget Basin	
GIS VegetationZone		

British Columbia Site Inventory Form

Borden Number: s.18

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS IndianReserves	Indian Reserve	SQUIRREL COVE	
GIS LandDistricts		Sayward District	
GIS RegionalDistrict		Comox-Strathcona	

Site Typology:

Class	Type	Sub Type	Descriptor
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s.18

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
Feature Remarks										

Class	Type	Sub Type	Descriptor
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s.18

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
Feature Remarks										

Class	Type	Sub Type	Descriptor
-------	------	----------	------------

s.18

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
Feature Remarks										

British Columbia Site Inventory Form

Borden Number: s.18**Site Visit:**

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	21/Aug/1972	U of Victoria			Arch		Mitchell, Donald H.

Project Description:

Initial recording. Unable to associate with any report or Permit #

Remarks:

Date	Remarks
	s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Map Reference:*GIS Populated*

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
			s.18	

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone

Map Sheet

Number	Spatial Accuracy
s.18	1:20K
	1:20K

Accuracy Remarks

Location changed based on 1:20k site map (1:33k actual). Geometry changed based on dimensions.

Site Location:*Description**Site Access*

s.18

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18	s.18		

Environment:*Elevation (metres above Sea Level)*

User Elevation	GIS Elevation	Elevation Comments
s.18		

Biogeography

Type	Name	Description
GIS VegetationZone		
Minor Drainage	N/A See Description	STRAIT OF GEORGIA - MINOR PACIFIC OCEAN - MAJOR
GIS Drainage	COMOX	
GIS EcoRegion	Georgia-Puget Basin	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Sayward District	
GIS Municipalities		Comox-Strathcona, Subd. A	
GIS RegionalDistrict		Comox-Strathcona	

British Columbia Site Inventory Form

Borden Number: s.18

Site Typology:

Class	Type	Sub Type	Descriptor
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s.18

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Bern/Rim	Colour
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Feature Remarks

Cultural Material :

Type	Status	Repository	Date
Artifact	Collected	Unknown	21/Aug/1971

Details

s.18

British Columbia Site Inventory Form

Borden Number: s.18

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	21/Aug/1972	U of Victoria			Arch		Mitchell, Donald H.

Project Description:

Initial recording. Unable to associate with any report or permit #

Remarks:

Date	Remarks
------	---------

s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Map Reference:

GIS Populated

					Historic Source				
Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
			s.18						

Map Sheet

Number	Spatial Accuracy
s.18	1:20K
	1:20K

Accuracy Remarks

s.18

Site Location:

Description

Site Access

s.18

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18	s.18		

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
s.18		

Biogeography

Type	Name	Description
GIS VegetationZone	CWHxm1	
Minor Drainage	N/A See Description	STRAIT OF GEORGIA - MINOR PACIFIC OCEAN - MAJOR
GIS Drainage	COMOX	
GIS EcoRegion	Georgia-Puget Basin	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Sayward District	
GIS RegionalDistrict		Comox-Strathcona	

British Columbia Site Inventory Form

Borden Number: s.18

Site Typology:

Class	Type	Sub Type	Descriptor
-------	------	----------	------------

s.18

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Born/Rim	Colour
-----------	--------	-------	------	-------	----------	--------	-------	-------------	----------	--------

Feature Remarks

British Columbia Site Inventory Form

Borden Number: s.18

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	20/Aug/1972	U of Victoria			Arch		Mitchell, Donald H.

Project Description:

Initial recording. Unable to associate with any report or permit #

Remarks:

Date	Remarks
------	---------

s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Map Reference:*GIS Populated*

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
s.18				

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
s.18				

Map Sheet

Number	Spatial Accuracy
s.18	1:20K
	1:20K

Accuracy Remarks

s.18

Site Location:*Description**Site Access*

s.18

Street Address:*Street Number**Street Name**City**Postal Code***Site Dimensions:***Length (m)**Width (m)**Site Area**Comments*

s.18

s.18

Environment:*Elevation (metres above Sea Level)**User Elevation**GIS Elevation**Elevation Comments*

s.18

Biogeography*Type**Name**Description*

GIS VegetationZone

CWHxm1

GIS VegetationZone

Minor Drainage

N/A See Description

STRAIT OF GEORGIA - MINOR PACIFIC OCEAN - MAJOR

GIS Drainage

COMOX

GIS EcoRegion

Georgia-Puget Basin

British Columbia Site Inventory Form

Borden Number: s.18

Tenure/Reserves:

<i>Jurisdiction</i>	<i>Tenure/Reserves T</i>	<i>Description</i>	<i>Tenure Remarks</i>
GIS IndianReserves	Indian Reserve	TORK	
GIS LandDistricts		Sayward District	
GIS Municipalities		Comox-Strathcona, Subd. A	
GIS RegionalDistrict		Comox-Strathcona	

Site Typology:

<i>Class</i>	<i>Type</i>	<i>Sub Type</i>	<i>Descriptor</i>
		s.18	

Feature Description Table

<i>Feature #</i>	<i>Length</i>	<i>Width</i>	<i>Dia.</i>	<i>Depth</i>	<i>DBS from</i>	<i>DBS To</i>	<i>Shape</i>	<i>Orientation</i>	<i>Berm/Rim</i>	<i>Colour</i>
<i>Feature Remarks</i>										

British Columbia Site Inventory Form

Borden Number: s.18

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	21/Aug/1972	U of Victoria			Arch		Mitchell, Donald H.

Project Description:

Initial recording. Unable to associate with any report or permit #

Remarks:

Date	Remarks
------	---------

s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
s.18		Simonsen, Bjorn	26/Apr/2000

Legislative Authority:

Government	Legal Instrument	Act / section	Protection Type	Reference Number	Start Date	Expiry Date	Description
Provincial	Land Title Act	S. 219 (1)	Covenant				Covenant removed, see 25000-80/CORT3

Map Reference:

<i>GIS Populated</i>					<i>Historic Source</i>										
Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone						
s.18															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Map Sheet Number</th> <th style="text-align: left;">Spatial Accuracy</th> </tr> </thead> <tbody> <tr> <td>s.18</td> <td>1:5K</td> </tr> <tr> <td></td> <td>1:5K</td> </tr> </tbody> </table>										Map Sheet Number	Spatial Accuracy	s.18	1:5K		1:5K
Map Sheet Number	Spatial Accuracy														
s.18	1:5K														
	1:5K														
Accuracy Remarks <div style="text-align: center;">s.18</div>															

Site Location:

Description	Site Access
s.18	

Legal Description:

Legal Type	Legal Description
s.18	

British Columbia Site Inventory Form

Borden Number: s.18

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18			

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
s.18		

Biogeography

Type	Name	Description
s.18		

GIS VegetationZone

GIS EcoRegion Georgia-Puget Basin

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Sayward District	
GIS Municipalities		Comox-Strathcona, Subd. A	
GIS RegionalDistrict		Comox-Strathcona	
s.18			

Site Typology:

Class	Type	Sub Type	Descriptor
s.18			

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Bern/Rim	Colour
Feature Remarks										

British Columbia Site Inventory Form

Borden Number: s.18

Site Condition:
Condition

Assessed By	Assessment Date	Permit Number	Issuing Agency	Recommendation
Simonsen, Bjorn	26/Apr/2000	2000		

Disturbance History

History	Factor	Remarks
	s.18	

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	26/Apr/2000	Bastion Group			Arch		Simonsen, Bjorn

Project Description:
References:

Report Title	Report Date	Report Authors	Comments
2000, From Bjorn Simonsen to D. Hutchcroft. 2000/05/22	Jan/2000	Simonsen, Bjorn;	

Images:

Type	Repository	Photographer	Image Date	Description	Image Caption
Photograph	Bastion Group	Simonsen, Bjorn	26/Apr/2000	s.18	

Decision History:

History Date	Decision	Criteria	Person	Description	Recommended By	Recommended Date
07/Mar/2006	status change	auto	HRBOLSTE	s.18		

Attached Documents:

Type	Description	Filename
Document	Site_Area	
Document	Site_Area	s.18
Document	Site_Map	

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: NO

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
s.18		Simonsen, Bjorn	26/Apr/2000

Map Reference:

GIS Populated					Historic Source				
Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
s.18									

Map Sheet

Number	Spatial Accuracy
s.18	1:5K
	1:5K

Accuracy Remarks

s.18

Site Location:

Description	Site Access
s.18	

Legal Description:

Legal Type	Legal Description
s.18	

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18			

British Columbia Site Inventory Form

Borden Number: EaSf-39

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
s.18		

Biogeography

Type	Name	Description
GIS VegetationZone		
GIS Drainage	COMOX	
GIS EcoRegion	Georgia-Puget Basin	
Micro Topography	Landform	s.18

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Sayward District	
GIS Municipalities		Comox-Strathcona, Subd. A	
GIS RegionalDistrict		Comox-Strathcona	
	s.18		

Site Typology:

Class	Type	Sub Type	Descriptor
		s.18	
	s.18		

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Bern/Rim	Colour
s.18										
Feature Remarks										
										s.18

British Columbia Site Inventory Form

Borden Number: s.18

Site Condition:**Condition**

Assessed By	Assessment Date	Permit Number	Issuing Agency	Recommendation
Simonsen, Bjorn	26/Apr/2000	2000		

Disturbance History

History	Factor	Remarks
	s.18	

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	26/Apr/2000	Bastion Group I			Arch		Simonsen, Bjorn

Project Description:**References:**

Report Title	Report Date	Report Authors	Comments
2000, From Bjorn Simonsen to D. Hutchcroft. 2000/05/22	Jan/2000	Simonsen, Bjorn;	

Images:

Type	Repository	Photographer	Image Date	Description	Image Caption
Photograph	Bastion Group	Simonsen, Bjorn	26/Apr/2000	s.18	

Remarks:

Date	Remarks
09/Mar/2006	s.18

Decision History:

History Date	Decision	Criteria	Person	Description	Recommended By	Recommended Date
09/Mar/2006	status change	auto	DSUTTILL	s.18		

Attached Documents:

Type	Description	Filename
Document	Site_Area	
Document	Site_Area	s.18

British Columbia Site Inventory Form

Borden Number: s.18

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
s.18		Simonsen, Bjorn	26/Apr/2000

Legislative Authority:

Government	Legal Instrument	Act / section	Protection Type	Reference Number	Start Date	Expiry Date	Description
s.18							

Map Reference:

GIS Populated					Historic Source				
Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
s.18									

Map Sheet

Number	Spatial Accuracy
s.18	1:5K
	1:5K

Accuracy Remarks

s.18

Site Location:

Description	Site Access
s.18	

Legal Description:

Legal Type	Legal Description
s.18	

British Columbia Site Inventory Form

Borden Number: s.18

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
s.18			

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
s.18		

Biogeography

Type	Name	Description
GIS VegetationZone	CWHxm1	
GIS VegetationZone		
GIS EcoRegion	Georgia-Puget Basin	
Micro Topography	Landform	

s.18

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Sayward District	
GIS Municipalities		Comox-Strathcona, Subd. A	
GIS RegionalDistrict		Comox-Strathcona	

s.18

Site Typology:

Class	Type	Sub Type	Descriptor

s.18

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Bern/Rim	Colour

Feature Remarks

British Columbia Site Inventory Form

Borden Number: s.18

Site Condition:

Condition					Disturbance History		
Assessed By	Assessment Date	Permit Number	Issuing Agency	Recommendation	History	Factor	Remarks
Simonsen, Bjorn	26/Apr/2000	2000					s.18

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording	26/Apr/2000	Bastion Group			Arch		Simonsen, Bjorn
Project Description:							

References:

Report Title	Report Date	Report Authors	Comments
2000, From Bjorn Simonsen to D. Hutchcroft. 2000/05/22	Jan/2000	Simonsen, Bjorn;	

Images:

Type	Repository	Photographer	Image Date	Description	Image Caption
Photograph	Bastion Group	Simonsen, Bjorn	26/Apr/2000	s.18	

Decision History:

History Date	Decision	Criteria	Person	Description	Recommended By	Recommended Date
07/Mar/2006	status change	auto	HRBOLSTE	s.18		

Attached Documents:

Type	Description	Filename
Document	Site_Area	
Document	Site_Map	
Document	Site_Area	s.18