

APPLICATION FOR ECOLOGICAL RESERVE

1. Legal description of the area (or general "Metes and bounds" description) The Ogden Point breakwater area includes the tidal waters, the sea bed and its overlying water column. It extends a distance of 150 feet from both sides, and from the offshore end of the breakwater, as measured horizontally from the upper surface walkway. The boundary nearest Ogden Point extends due east and west from the first east side granite block to a distance of 150 feet on both sides of the breakwater.
2. Geographical location (relate to nearest settlement, mountain, river, etc.)

The breakwater extends west from Ogden Point, at the mouth of Victoria Harbour, Victoria, B.C. ($48^{\circ}24.8'N$ latitude and $123^{\circ}23.3'W$ longitude).

3. Indicate the biogeoclimatic zone of which the reserve is representative.

Ogden Point belongs to the Coastal Douglas Fir zone.

4. Approximate total acreage.

0.026 square miles

5. Purpose of the reserve.

(a) Primary (state acreage)

To conserve common and rare, accessible specimens for the continuing research and teaching programs at the University of Victoria (0.016 square miles).

(b) Others if any (state acreage)

(c) Buffer areas (state acreage)

The harbour side of the breakwater (0.01 square miles).

6. Attach a map and indicate: (a) the perimeters and acreage of the areas detailed in 5 above, and
(b) indicate the species and total timber volumes in these areas.

A list of marine species of significance to research and teaching scientists at the University of Victoria is attached. (See Attachment I).

Signature D.V. Ellis and D.J. Steele
I.B.P. Surveyor

SECTION CT: CONSERVATION OF TERRESTRIAL BIOLOGICAL COMMUNITIES

CHECK SHEET (Mark VII) FOR SURVEY OF IBP AREAS*

To be completed with reference to the GUIDE TO THE CHECK SHEET

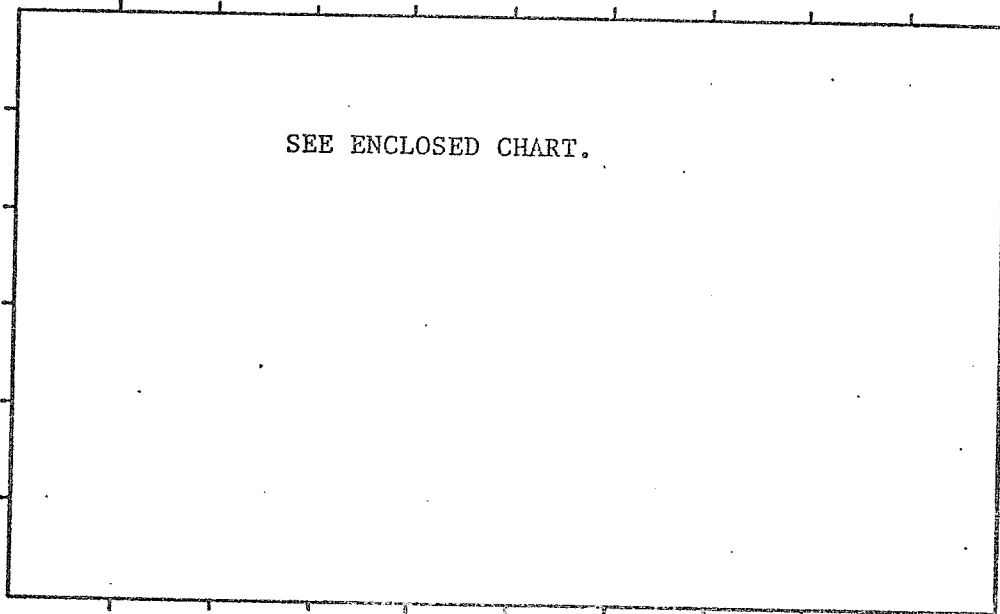
Serial Number

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For Data Centre Use only

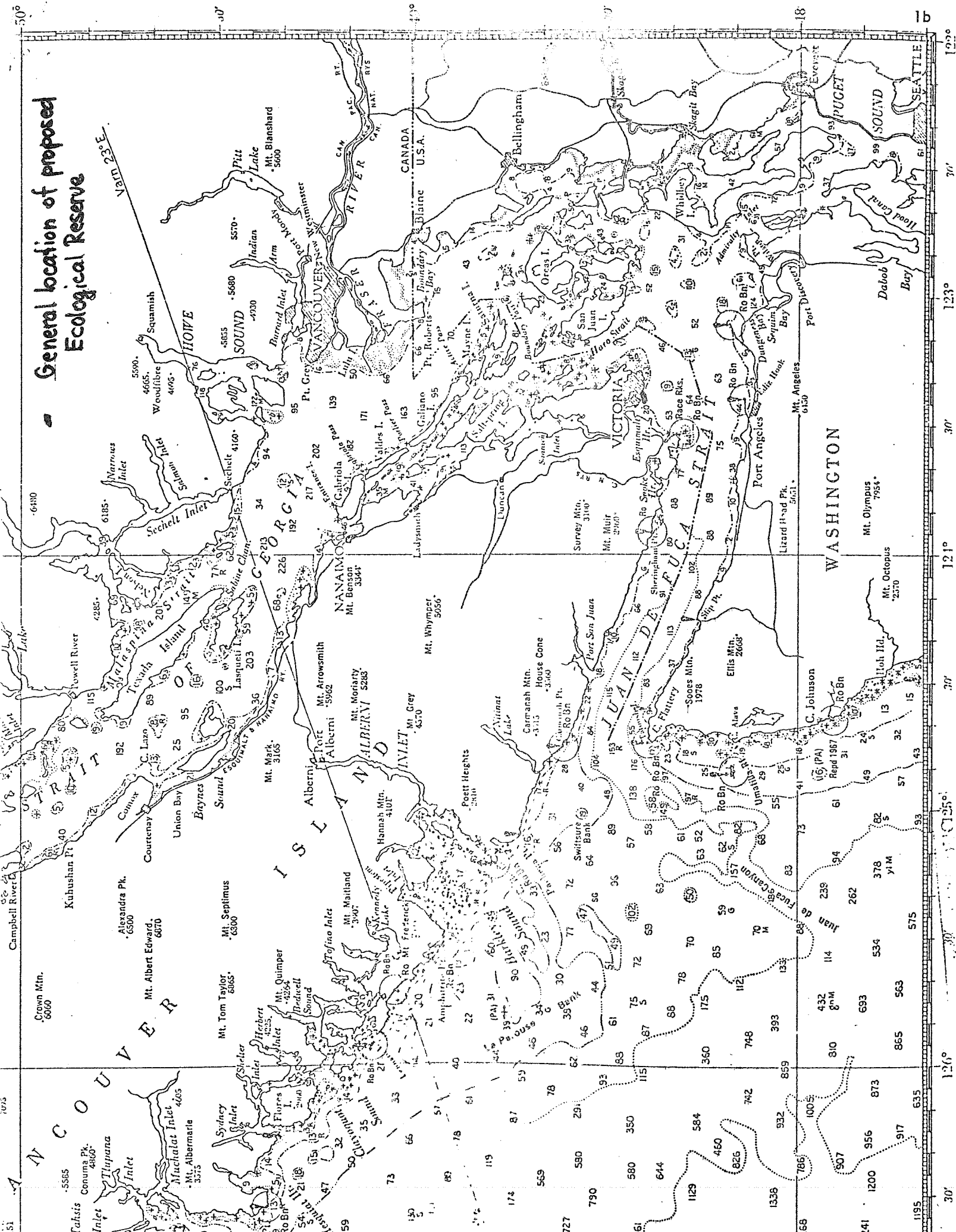
- 1.
1. Name of surveyor D.V. Ellis and D.J. Steele
 2. Address of surveyor Department of Biology
University of Victoria
Victoria, B.C.
 3. Check Sheet completed (a) on site X (b) from records X
 4. Date Check Sheet completed 5 June, 1974

- 2.
1. Name of IBP Area Ogden Point Breakwater, Victoria, B.C.
 2. Name of IBP Subdivision (or serial letter) -
 3. Map of IBP Area* showing boundaries attached? Yes X No
 4. Sketch map of IBP Area*. Please mark direction of north, the scale and grid numbers where applicable.



* For "IBP Area", read IBP Area and/or IBP Subdivision.

General location of proposed Ecological Reserve

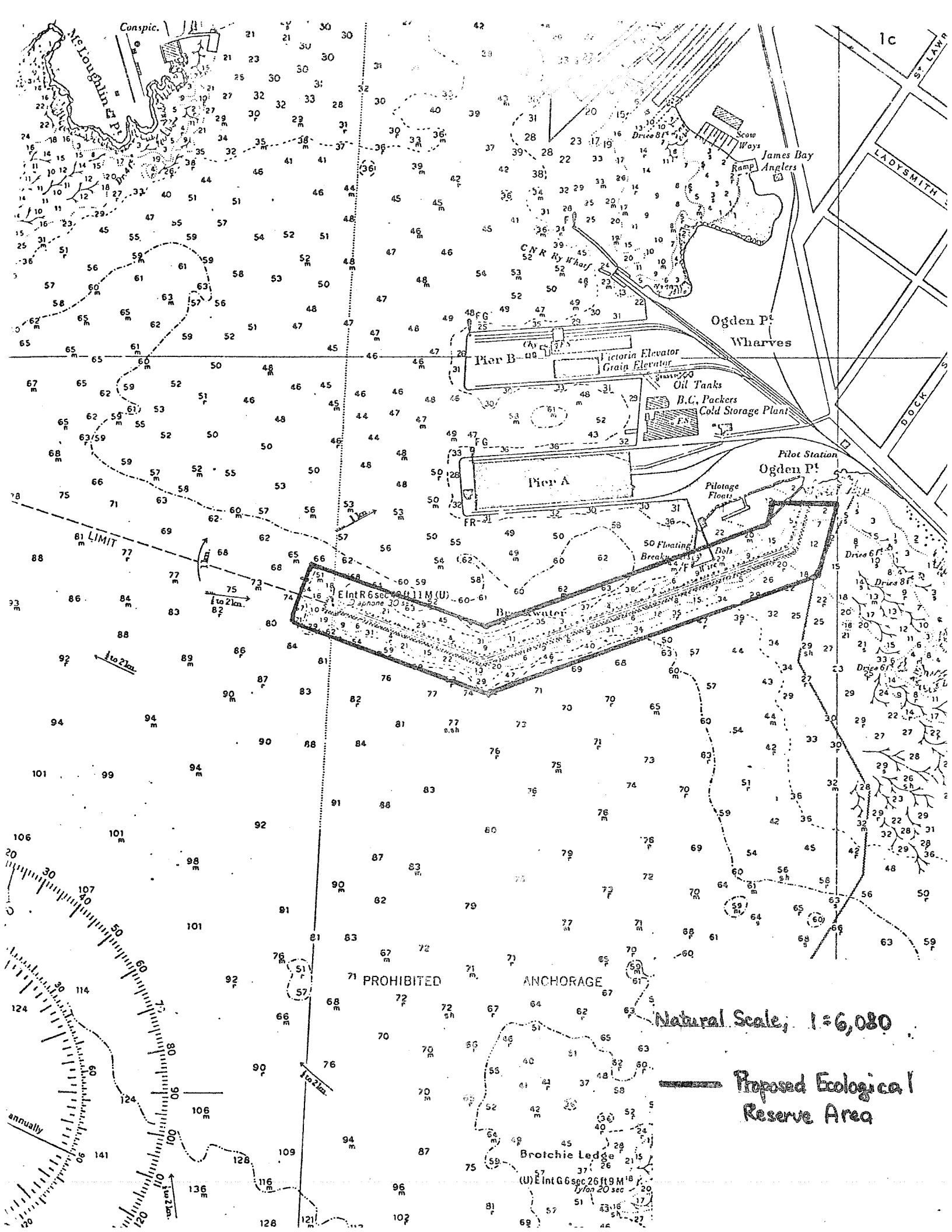


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Natural Scale; 1:6,080

Proposed Ecological Reserve Area

ATTACHMENT I - Significant marine species found at the breakwater.

A. Invertebrata

Ophiopholus aculeatea - large aggregations - only scattered elsewhere in this region

Phascalosoma agassizii - typically an open coast species

Fusitriton oregonensis -

Pteraster

Solaster dawsoni

Diodora aspera

Psolus

Chlamys hericius - large beds

Urchins (Strongylocentrotus franciscanus and S. purpuratus)

Kabarakia

Stomphia

} usually find these only in deep water
however they are found intertidally at
the breakwater

} presently decreasing in numbers
at the breakwater

B. Algae

(i) Research at cell and organismic level on the following:

- Bangia sp

Porphyra sp

Endocladia muricata

Antithamnion - epiphytic on Nereocystis luetkeana

Laurencia spectabilis

Rhodomela larix

(ii) Research at population level on the following:

tier 4
(sheltered)

1. Porphyra

diatoms

Codiolum

Endocladia patches

B. Algae (cont'd)

- | | | |
|-------------------------|----|---|
| tier 4
(exposed) | 2. | <u>Gigartina sp</u>
<u>Petrocelis sp</u>
<u>Pterysiphonia</u> |
| tier 5
(exposed) | 3. | <u>Prionitis</u>
<u>Odonthalia floccosa</u>
articulated corallines - <u>Bossiella</u> , <u>Corallina</u>
<u>vancouveriensis</u>
<u>Bangia fuscopurpurea</u>
<u>Analipus japonica</u>
<u>Fucus distichus</u> subsp <u>evanescens</u> |
| tier 6 - 7
(exposed) | 4. | <u>Alaria marginata</u>
<u>Iridaea cordata</u>
<u>Laminaria</u>
<u>Hedophyllum sessile</u>
<u>Egregia menziesii</u>
<u>Laurencia spectabilis</u>
articulated corallines
monoarticulated corallines - <u>Lithothamnion</u>
<u>Rhodomenia palmata</u> |
| Subtidal | 5. | <u>Nereocystis luetkeana</u> with epiphyte -
<u>Antithamnion sp</u> |

3. Location of IBP Area*
 1. Latitude 48° 24.8' N Longitude 123° 23.3' W
 2. Country Canada
 State or Province British Columbia CITY: Victoria
 (State or Province County)

4. Administration
National 1. Official category Crown Land
 2. Address of administration Department of Public Works
 1444 Alberni Street
 Vancouver, B.C.
 Canada

International Class

3.

Included in U.N. List	Rejected from U.N. List	Area with formal conservation status	No formal cons. status
(A)	(B)	(C)	(D) X

5. Characteristics of IBP Area*
 above mean low water - 0.004 sq. miles
 below mean low water - 0.022 sq. miles
 1. Surface area -
 2. Depth (state units of measurement) Maximum 74 feet
 Altitude (above mean low water) Maximum 20 feet

6. Climate
 Nearest climatological station :
 1. Name Esquimalt M.F.W.C.
 2. Climatological station on IBP Area*? Yes No X
 3. If (2) not, distance from edge of IBP Area* (state units) 1.5 miles
 4. Direction from IBP Area* NW
 5. Additional data sheet attached? Yes X No

FIG. 4



Taken from Roemer, H.L. 1972. Forest vegetation and environments . . .
on the Saanich Peninsula, Vancouver Island. Ph.D. Thesis. University
of Victoria.

7.

Vegetation and Soil

1

Vegetation

Community Reference Number	Vegetation Code					Intertidal Zones (give usual name using full Latin names of a species where applicable) (See Attachment II)	Area (state units)
	Primary Structural Group	Class	Group	Formation	Sub-Formation		
1						Transient zone of red algae	
2						Barnacle Zone	
3						<u>Heterophyllum</u> Zone	
4						<u>Alaria - Laminaria</u> Zone	
5						<u>Nereocystis</u> Zone	
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increasing depth

Attachment II - Conspicuous and dominant vegetation types
- Semi-exposed area.

Zones. (Upper to Lower)

1. Transient zone of red algae (Porphyra and diatoms)
- winter only
2. Barnacle Zone - intermingled with littorinids and mussels
- semi-permanent populations of aborescent reds -
Pterosiphonia
- Gigartina
3. Undercover of Corallines (articulate and non-articulate)
Overlain with Iridaea, Odonthalia, Prionitis and Petrocelis
Dominated by Heterophyllum
(b) Undercover of Corallines
Overlain with Alaria (dominant) and Laminaria saccharina
4. Nereocystis dominated zone

7.
(cont.)

2

SUBSTRATE

Community Reference Number	Substrate Type	Other notes
1	solid substrate (granite)	
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3	"	
4	"	
5	and loose fragments	
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9. Landscape

1. General Landscape (give brief description) Man-made breakwater of granite blocks,....It shelters the harbour region to its north,....It extends from Ogden Point 2,400 feet into the mouth of Victoria Harbour.....adjacent to Juan de Fuca Strait,.....

2. Relief Type

	Flat	Rock blocks	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected		50			
Gently dissected					
Incised	50				
Skeletonised					
%					100%

3. Special landscape features (list) Navigation light at end of breakwater,.....

10. Coastline of IBP Area*

1. Protected bays and/or inlets Many Few None

2. Substratum. % of coast

Rock	Boulder Beach	Shingle Beach	Sand Beach	Shell Beach	Mud	Coral	Ice
100							

3. Physiography. % of coast

Cliffed	Sloping	Flat
50		50

4. Special Coastal Features (list) Tiered breakwater,.....

5. Tide. Maximum range (state units of measurement) 10.8 feet,.....

6. Total length of coastline :

Less than 1 km. 1-10 km. Above 10 km.

11. Freshwater within IBP Area* none

	Permanent	Intermittent
1. General		
Standing		
Running		

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps				
Ponds				
Lakes				

3. Running Water

	Permanent	Intermittent
Springs, cold		
Springs, hot		
Streams		
Rivers		

4. Special freshwater features

.....

12. Salt and Brackish Water within IBP Area*

Salt Lakes	<input type="checkbox"/>	Lagoon	<input type="checkbox"/>	Ocean	<input checked="" type="checkbox"/>
Estuaries	<input type="checkbox"/>	Salt pools	<input type="checkbox"/>	<input type="checkbox"/>

13. Adjacent Water Bodies (not within IBP Area*)

1. Fresh Lake River Stream

2. Salt and Brackish

Estuary	Salt lake	Salt pool	Lagoon	Ocean	Harbour	
				X	X	

Outstanding Floral and Faunal Features

1. None
2. Fauna

	Species diversity	Abundance of individuals	Superabundance of individuals	Rare species	Threatened/Rare species	Spp. of biogeographical interest	Exceptional Associations	Breeding or Nesting Populations	Migrating Populations	Wintering Populations
Mammalia										
Aves										
Reptilia										
Amphibia										
Pisces										
Insecta										
Marine Invertebrata	X		X	X		X	X			

3. Names of main threatened, endemic, relict and rare species

Kabarakia (large polyclad) - rare species to region

Stomphia (swimming anemone) - rare

Haliotus ... decreasing in numbers due to over collecting

Octopus doefleini - unique to this coast

.....

.....

.....

4. Flora

	Species diversity	Abundance of particular species	Rare species	Threatened/rare species	Sp. of biogeographical interest	Exceptional associations	Outstanding specimens						
Angiospermae :													
trees													
shrubs													
herbs													
grass													
Gymnospermae													
Pteridophyta													
Bryophyta													
Lichens and Algae			1										

5. Names of main threatened, endemic, relic and relict species

Codium seichellense (Wulfen) Dawson

15.

Exceptional Interest of this Area*

The shoreline and shallow waters contain an unusually rich diversity of marine invertebrates both in species and in places near to Victoria. Scientists at the University used the area as a source of both common and rare species for teaching and research.

16. Significant Human Impact

1. General : None in entire IBP Area*
 None in part of IBP Area*
 Impact on entire IBP Area* P4

2. Particular

	Past impact	Present impact	Trend			
			Increasing	Decreasing	No change	No information
Cultivation						
Drainage						
Other soil disturbance						
Grazing						
Selective flora disturbance		X	X			
Logging						
Plantation						
Hunting						
Removal of predators		X	X			
Pesticides						
Introductions -- plants						
Introductions -- animals						
Fire						
Permanent habitation						
Recreation and tourism		X	X			
Research		X	X			
Fishing		X	X			

3. Additional details on each type of impact attached!

Yes No ...X.....

17. Conservation Status

	Protection			Utilisation			Conservation Management			Permitted Research		
	none	partial	total	none	controlled	uncontrolled	none	to alter status	to maintain status	experimental	observational	prohibited
Flora	X					X	X			X		
Fauna	X					X	X			X		
Non-living												
Fish		X			X			X		X		

18. References

1. List major biological/geographical references for the IBP Area.

Sheet attached? Yes No ...X.....

2. List main maps available for the IBP Area. Canadian Hydrographic Series

List attached? Yes No ...X.....

3. Aerial photographs for the IBP Area available?

For whole areaX..... For part of area None

19. Other Relevant Information

Ecological Reserve Status is requested so as to prohibit extant collecting by scuba divers. However, scuba diving should not be prohibited, and divers are to be permitted to continue using the area for viewing, provided they do not collect.

Signed D.V. Ellis, D.J. Steele
(Surveyor)