		S
Data Source: Shoreline Type GeoBC Coastal Resource Shorezone Database, 2008 Base Information 1:20,000 GeoBC Terrain Resource Information Management (TRIM) Database 1:20,000 $V \rightarrow E$ 0 0.25 0.5 1 S $V \rightarrow E$ $V \rightarrow E$ $V \rightarrow E$		
<ul> <li>Unit Break Points</li> <li>Undefined</li> <li>Immobile Substrates</li> <li>1 - Bedrock - CC 1-20 - VE</li> </ul>	Mobile/Partially Mobile Substrates 6 - Sand & Gravel - CC 24-26, 32 -SP 7 - Sand & Gravel - CC 24-26,32 - VP/P 8 - Estuary or Sand/Mud - CC 27-31 - VP/P/SP	The Habitat <sup>-</sup> been mappe
2 - Bedrock - CC 1-20 - E 3 - Bedrock/Boulder - CC 1-23, 32, 33 - SE	9 - Sediment - CC 21 - 30 - SE/E	features. Each Habitat Semi-expose biobands and How is Habit
<ul> <li>4 - Bedrock/Gravel - CC 1-23, 33 - SP</li> <li>5 - Bedrock/Gravel - CC 1-23,33 - P/VP</li> </ul>	Tidal Lagoon 11 - Bedrock or Sediment - CC 35 - VP/P/SP	Each Habitat To determine 1. □ records tl 2. □ assigns a 3. □ reviews tl 4. □ assigns tl
Rock Shore Types - characterized by a lack of clastic sediments such as gravel or sar         1       Rock Ramp, Wide         2       Rock Platform Wide         3       Rock Cliff Narrow         4       Rock Ramp, Narrow         5       Rock Platform Narrow         Rock and Sediment Shore Types - rock and pockets of clastic sediments         6       Ramp with Gravel Beach, Wide	Ind.     Sediment Shore Types - have substrates that have little or no bedcrock cropping out       21     Gravel Flat, Wide       22     Gravel Beach       23     Gravel Flat or Fan       24     Sand and Gravel Flat or Fan, Wide       25     Sand and Gravel Beach       26     Sand and Gravel Flat or Fan, Narrow       27     Sand Beach, Wide	The Habitat <sup>-</sup> detailed acro Habitat Type ∙⊡the bioban
7 Platform with Gravel Beach, Wide 8 Cliff with Gravel Beach 9 Ramp with Gravel Beach, Narrow 10 Platform with Gravel Beach, Narrow 11 Ramp with Sand and Gravel Beach, Wide 12 Platform with Sand and Gravel Beach, Wide	28     Sand Flat       29     Mud Flat       30     Sand Beach, Narrow       31     Estuaries       Man-Made     Materials       32     Man-made, permeable	•⊡the wave e •⊡the substra Legend Defir CC - Coastal
13Cliff with Sand and Gravel Beach14Ramp with Sand and Gravel Beach, Narrow15Platform with Sand and Gravel Beach, Narrow16Ramp with Sand Beach, Wide17Platform with Sand Beach, Wide18Cliff with Sand Beach19Ramp with Sand Beach19Ramp with Sand Beach, Narrow20Platform with Sand Beach, Narrow	33     Man-made, impermeable       Current Dominated       34     Channel       35     Tidal Lagoon       4     A       5     Sidal Lagoon       6     A       7     A       8     A       9     A       9     A       9     A       9     A	Wave Expos E - Exposed VE - Very Ex SE - Semi Ex P - Protected SP - Semi Pr VP - Very Pro

092M.021

#### 092M.031

# Q U E E N England Rock

### C H A R L O T T E

## O U N D

S O U T H 092M.021

P A S S A G E

#### Shoreline Habitat

t Type provides a simplified picture of the "look" of the unit overall, based on the detailed biophysical attributes that have ed. The Habitat Type category is a summary of the observations of both the unit's biologial and geomorphological at Type has a definition that includes the typical substrate, wave exposure and biobands. For example, for the ed, Immobile substrate Habitat Type, part of the definition of that class is a certain combination of the most likely ind indictor species present at a bedrock shoreline with no mobile sediment present.

itat Type determined? at Type has typical biological features (including both an indicator species list and typical associated biobands). the biservations of the biobands in the unit and looks for indicator species,

a bio-(wave) exposure category, the physical mapped information, and the Habitat Type that best describes the unit.

t Type is based on the whole unit and is similar to the physical mappers use of the 'Coastal Class' category, in that the ross-shore data are summarized into one attribute. The simplified category describes the features of the whole unit.

e is a summary of the biophysical classification of the whole shore unit, based on: ands observed,

exposure as indicated by the bands, and • □ the substrate types in the unit.

Legend Definitions CC - Coastal Classification number

Wave Exposure

E - Exposed - Very high wave exposure, open ocean swellsm usually fetches >500km VE - Very Exposed - Extreme high wave exposure SE - Semi Exposed - High wave exposure, open shorelines, areas between fully exposed and more sheltered, usually fetches 50 to 500km P - Protected - Low wave expsoure, sheltered inlets, usually fetches less than 10km SP - Semi Protected - Moderate wave expsoure, partly sheltered, usually fetches 10-50km VP - Very Protected - Very low wave exposure, fethces < 1km, sheltered anchorages at heads of bays and inletes

SUBSTRATE STABILITY	IMMOBILE SUBSTRATES			MOBILE OR PARTIALLY MOBILE SUBSTRATES			CURRENT- DOMI- NATED	TIDAL IAGOON		
MAJOR	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT	BEDROCK OR	BEDROCK OR
COASTAL	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	24 – 30, 32	24 - 30, 32	24 - 30, 31	SEDIMENT	SEDIMENT	SEDIMENT
CLASSES	1-20	1-23, 32, 33	1-23, 33	1-23, 33	no SAL band	no SAL band	has SAL band	24-30	34	35
EXPOSURE (EXP BIO)	E	SE	SP	VP, P	SP	VP, P	VP, P, SP	SE, E	VP, P, SP	VP, P, SP
COMMUNITY CODE (HAB OBS)	2	3	4	5	6	7	8	9	10	11
upper	Verrucaria	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	grasses & rushes Salicornia virginica			
	Balanus glandula	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	no visible	tidal current	Balanus glandu Fucus distichus
middle	Pollicipes polymerus Mytilus californianus	Mytilus californianus	Mytilus trossulus*	Mytilus trossulus *			Mytilus trossulus**	macrobiota due to sediment	dominated; may be a Protected wave exposure	
	Semibalanus carriosus	Semibalanus carriosus	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/ Ulvaria spp.	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/ Ulvaria spp.	Ulva/ Ulvaria	mobility	but shows an assemblage of	ponded water in lagoon creates
mid/low		The deschardless second s		••				1	indicator species from higher	narrow intertida and a reduced
	Alaria 'nana' morph	Hedophyllum sessile Phyllospadix scouleri							wave exposures. Assemblage	biota in brackis water, may hav
lower	Lessoniopsis littoralis							1	observed is	associated
		Alaria 'marginata' morph	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph	Laminaria saccharina	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph	Laminaria saccharina			'anomalous' for the wave energy of the site.	current dominated at outflow
	Lithothamnion	Lithothamnion	Lithothannion		Lithothamnion					
subtidal	Nereocystis luetkeana	Nereocystis luetkeana Macrocystis integrifolla Agarum spp. Strongylocentrotus	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus	Macrocystis integrifolia Agarum spp.	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus	Macrocystis integrifolia Agarum spp.				
		franciscanus	franciscanus Zostera marina	Zostera marina	franciscanus Zostera marina	Zostera marina	Zostera marina			



