



**Legend**

○ Unit Break Points

— Undefined

**Immobile Substrates**

- 1 - Bedrock - CC 1-20 - VE
- 2 - Bedrock - CC 1-20 - E
- 3 - Bedrock/Boulder - CC 1-23, 32, 33 - SE
- 4 - Bedrock/Gravel - CC 1-23, 33 - SP
- 5 - Bedrock/Gravel - CC 1-23,33 - PNP

**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
- 9 - Sediment - CC 21 - 30 - SE/E
- 10 - Bedrock or Sediment - CC 34 - VP/P/SP
- 11 - Bedrock or Sediment - CC 35 - VP/P/SP

**Current Dominated**

**Tidal Lagoon**

**CC Type**

Rock Shore Types - characterized by a lack of classic sediments such as gravel or sand.

- 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 classic sediments**

- 6 Shrub with Gravel Beach, Wide
- 7 Platform with Gravel Beach, Wide
- 8 Cliff with Gravel Beach
- 9 Shrub with Gravel Beach, Narrow
- 10 Platform with Gravel Beach, Narrow
- 11 Platform with Sand and Gravel Beach, Wide
- 12 Cliff with Sand and Gravel Beach
- 13 Shrub with Sand and Gravel Beach, Narrow
- 14 Platform with Sand and Gravel Beach, Narrow
- 15 Platform with Sand Beach, Wide
- 16 Cliff with Sand Beach
- 17 Shrub with Sand Beach, Narrow
- 18 Platform with Sand Beach, Narrow

**CC Type**

Sediment Shore Types - have substrates that have little or no bedrock cropping out.

- 19 Gravel Flat, Wide
- 20 Gravel Beach
- 21 Gravel Flat or Fan
- 22 Sand and Gravel Flat or Fan, Wide
- 23 Sand and Gravel Beach
- 24 Sand and Gravel Flat or Fan, Narrow
- 25 Sand Beach, Wide
- 26 Sand Flat
- 27 Mud Flat
- 28 Sand Beach, Narrow
- 29 Shrub
- 30 Man-made, permeable
- 31 Current Dominated
- 32 Tidal Lagoon

## Shoreline Habitat

The Habitat Type provides a simplified picture of the "look" of the unit overall, based on the detailed biophysical attributes that have been mapped. The Habitat Type category is a summary of the observations of both the unit's biological and geomorphological features.

Each Habitat Type has a definition that includes the typical substrate, wave exposure and biobands. For example, for the Semi-exposed, immobile substrate Habitat Type, part of the definition of that class is a certain combination of the most likely biobands and indicator species present at a bedrock shoreline with no mobile sediment present.

How is Habitat Type determined?

Each Habitat Type has typical biological features (including both an indicator species list and typical associated biobands). To determine the Habitat Type, the biomapper looks at the along-shore Units as designated and described by the physical mapper, and

1. records the observations of the biobands in the unit and looks for indicator species,
2. assigns a bio-(wave) exposure category,
3. reviews the physical mapped information, and
4. assigns the Habitat Type that best describes the unit.

The Habitat Type is based on the whole unit and is similar to the physical mappers use of the 'Coastal Class' category, in that the detailed cross-shore data are summarized into one attribute. The simplified category describes the features of the whole unit.

Habitat Type is a summary of the biophysical classification of the whole shore unit, based on:

- the biobands observed,
- the wave 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 swells 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 exposure, sheltered inlets, usually fetches less than 10km
- VP - Very Protected - Moderate wave exposure, partly sheltered, usually fetches 10-50km
- SP - Semi Protected - Very low wave exposure, fetches < 1km, sheltered anchorages at heads of bays and inlets

Table MIDCOAST and NORTH COAST project area which includes BCO AREAS CC, JS and NC. The Species/wave exposure/ substrate table for Habitat Classification (HAB, OBS), for the Mid-coast BC study area, from Johnstone Strait/Central Coast Mapping Regions 5, 6 and 7.

SUBSTRATE STABILITY MAJOR SUBSTRATE	IMMOBILE SUBSTRATES				MOBILE OR PARTIALLY MOBILE SUBSTRATES				CURRENT-DOMINATED	TIDAL LAGOON
	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT		
COASTAL CLASSES	1-20	1-23, 32, 33	1-23, 33	1-23, 33	24-30, 32	24-30, 31	24-30, 31	24-30	34	35
EXPOSURE	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	<i>Verrucaria</i>	<i>Verrucaria</i> <i>Enteromorpha</i>	<i>Verrucaria</i> <i>Enteromorpha</i>	<i>Verrucaria</i> <i>Enteromorpha</i>	<i>Verrucaria</i> <i>Enteromorpha</i>	<i>Verrucaria</i> <i>Enteromorpha</i>	<i>grasses &amp; rushes</i> <i>Salicornia</i> <i>virginica</i>	no visible macrobenthos due to sediment mobility	tidal current dominated; may be a Protected wave exposure but shows an assemblage of indicator species from higher wave exposures. Asemblage observed is "anomalous" for the wave energy of the site.	<i>Balanus glandula</i> <i>Fucus distichus</i>
middle	<i>Balanus glandula</i> <i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Balanus glandula</i> <i>Fucus distichus</i>			
mid/low	<i>Alaria 'vasei' morph</i>	<i>Hydrophyllum scutell</i>	<i>Alaria 'vasei' morph</i>	<i>Alaria 'vasei' morph</i>	<i>Alaria 'vasei' morph</i>	<i>Alaria 'vasei' morph</i>	<i>Alaria 'vasei' morph</i>			
lower	<i>Laminaria digitata</i>	<i>Laminaria digitata</i>	<i>Laminaria digitata</i>	<i>Laminaria digitata</i>	<i>Laminaria digitata</i>	<i>Laminaria digitata</i>	<i>Laminaria digitata</i>	no visible macrobenthos due to sediment mobility	tidal current dominated; may be a Protected wave exposure but shows an assemblage of indicator species from higher wave exposures. Asemblage observed is "anomalous" for the wave energy of the site.	<i>Balanus glandula</i> <i>Fucus distichus</i>
subtidal	<i>Nereocystis lachnosa</i>	<i>Nereocystis lachnosa</i>	<i>Nereocystis lachnosa</i>	<i>Nereocystis lachnosa</i>	<i>Nereocystis lachnosa</i>	<i>Nereocystis lachnosa</i>	<i>Nereocystis lachnosa</i>			
	<i>Macrocystis integrifolia</i>	<i>Macrocystis integrifolia</i>	<i>Macrocystis integrifolia</i>	<i>Macrocystis integrifolia</i>	<i>Macrocystis integrifolia</i>	<i>Macrocystis integrifolia</i>	<i>Macrocystis integrifolia</i>			

