



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
Current Dominated	
	10 - Bedrock or Sediment - CC 34 - VP/P/SP
	11 - Bedrock or Sediment - CC 35 - VP/P/SP
Tidal Lagoon	
	12 - Tidal Lagoon
CC Type	
Rock Shore Types - characterized by a lack of classic sediments such as gravel or sand.	Sediment Shore Types - have substrates that have little or no bedrock cropping out.
13 Rock Ramp, Wide	21 Gravel Flat, Wide
14 Rock Platform, Wide	22 Gravel Beach
15 Rock Cliff, Narrow	23 Gravel Flat or Fan
16 Rock Ramp, Narrow	24 Sand and Gravel Flat or Fan, Wide
17 Rock Platform, Narrow	25 Sand and Gravel Beach
18 Beach with Gravel Beach, Wide	26 Sand and Gravel Flat or Fan, Narrow
19 Platform with Gravel Beach, Wide	27 Sand Beach, Wide
20 Beach with Gravel Beach, Narrow	28 Sand Flat
21 Platform with Gravel Beach, Narrow	29 Mud Flat
22 Beach with Gravel Beach, Wide	30 Sand Beach, Narrow
23 Platform with Gravel Beach, Wide	31 Estuary
24 Beach with Sand and Gravel Beach, Wide	32 Man-made, permeable
25 Cliff with Sand and Gravel Beach	33 Man-made, impermeable
26 Beach with Sand and Gravel Beach, Narrow	34 Channel
27 Platform with Sand Beach, Wide	35 Tidal Lagoon
28 Cliff with Sand Beach	
29 Beach with Sand Beach, Narrow	
30 Platform with Sand Beach, Narrow	

## 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 units 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 across-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  
SP - Semi Protected - Moderate wave exposure, partly sheltered, usually fetches 10-50km  
VP - Very Protected - Very low wave exposure, fetches < 1km, sheltered anchorages at heads of bays and inlets

Table MIDCOAST and NORTH COAST project area which includes BIO-AREAS CC-35 and NC-35.  
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 COASTAL CLASSES EXPOSURE (OBS-REQ)	IMMOBILE SUBSTRATES				MOBILE OR PARTIALLY MOBILE SUBSTRATES				CURRENT-DOMINANT	TIDAL LAGOON
	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRANITE	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT		
1-20	1-23, 32, 33	1-23, 33	1-23, 33	1-23, 33	24-30, 32	24-30, 31	24-30, 31	24-30, 31	34	35
E	SE	SP	VP, P	VP, P	no SAL band	VP, P	VP, P, SP	SE, E	VP, P, SP	VP, P, SP
2	3	4	5	6	7	8	9	10	11	
upper	<i>Vernicaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Vernicaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Vernicaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Vernicaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Vernicaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Vernicaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Enteromorpha</i> <i>Salicornia virginica</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	no visible macroalgae due to sediment mobility	tidal current dominated; may be a Protected wave exposure but shows an overlap of indicator species from higher wave exposures. A submerged observed in "anomalous" for the wave energy of the site.	<i>Balanus glandula</i> <i>Fucus distichus</i>
middle	<i>Polysiphonia palmata</i> <i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Polysiphonia palmata</i> <i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus californianus</i> <i>Semibalanus cariosus</i>		
mid/low	<i>Alaria 'vasei' morph</i>	<i>Hydrophyllum scutell</i>	<i>Hydrophyllum scutell</i>	<i>Hydrophyllum scutell</i>	<i>Hydrophyllum scutell</i>	<i>Hydrophyllum scutell</i>	<i>Hydrophyllum scutell</i>	<i>Hydrophyllum scutell</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>	<i>Laminaria digitata</i>		
subtidal	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp. <i>Strongylocentrotus purpuratus</i> <i>Fructiceus</i>		

