

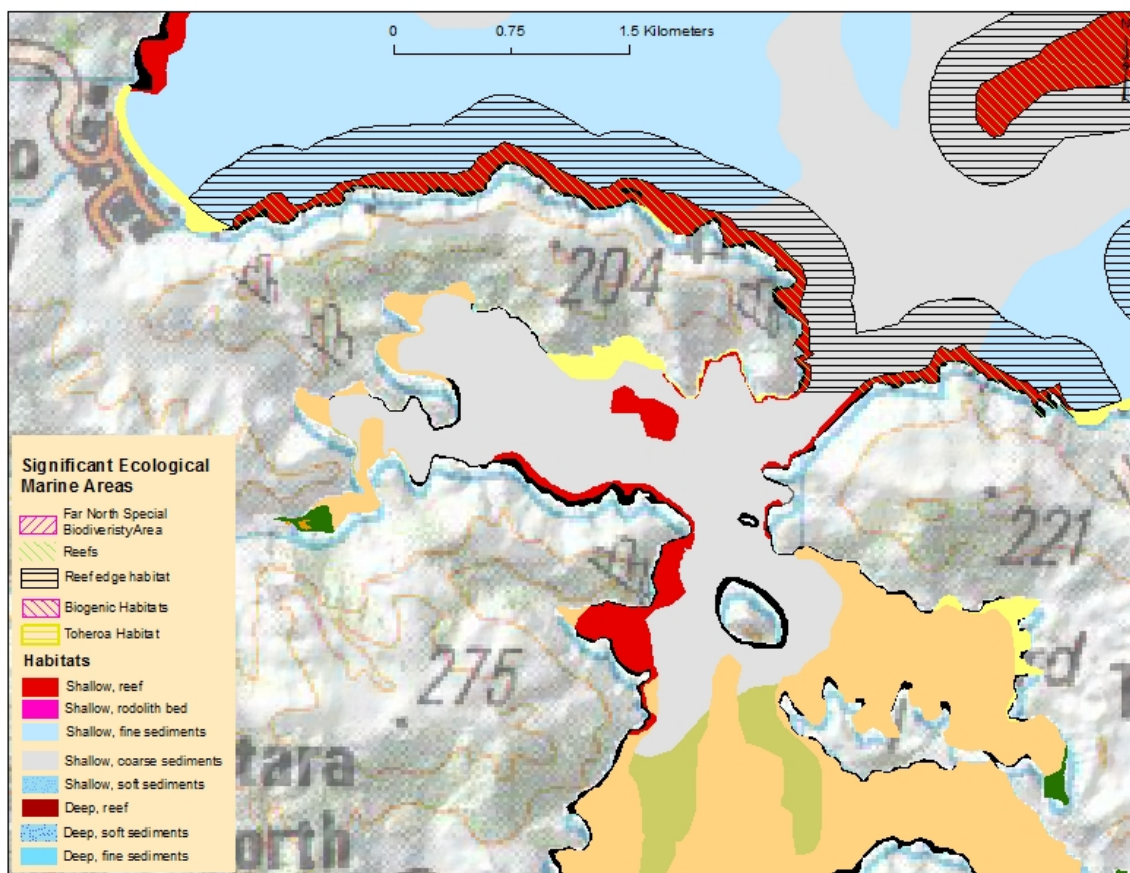
Significant Ecological Marine Area Assessment Sheet

Name: Whangaroa Coast

Summary:

The shallow fringing reef system of Whangaroa coast and adjoining reef edges of soft bottom habitats score as a high ranking ecological area. This exposed coast is generally very steep and rugged resulting from its volcanic origins. The reefs are hotspots of biodiversity, with high productivity of fish species at various life stages, and strong algal communities - both macro algae and encrusting species. The Whangaroa coast is influenced by the East Auckland Current, which brings warm water masses and subtropical larval species to this coast, adding to the diversity of these reefs.

Habitat map and significant ecological areas.



Description:

The Whangaroa coast is located Northland's Northeast coast stretching east and west from the entrance to the Whangaroa Harbour. The mapped ecological area presented here encompasses the coastline offshore from the western end of Tauranga Bay to the eastern end of Taupo Bay. The shallow coastal reefs, including the soft bottom habitats at the reef edge, extend out to sea. The fringing reef is quite steep and runs down to sand and gravel soft bottom edge habitats typically at about 15m. ¹

¹ Kerr, V. 2009: Marine habitat map of Northland: Mangawhai to Ahipara vers. 1. Northland Conservancy, Department of Conservation, Whangarei. 33 p.

The south-eastern end of Taupo Bay showing the steep exposed rocky shore habitat that extends from both ends of Taupo Bay. Photo credit: Vince Kerr



Oceanography

The Whangaroa coast area has strong oceanic influences. Its outer exposed shores are exposed to gales and, at times, high wave energy from easterly storms and ocean swell. The area is regularly influenced by the East Auckland current which eddies into the coast bringing warm water from the north and with it larvae of subtropical species. The coast also has influences of nutrients and, on occasions, silt and sediment carried out from Whangaroa Harbour. This constant stream of enriched estuarine water adds to the productivity of the area.

Ecological Values

Due to the physical nature of this coast, Whangaroa coast's shallow fringing reefs are a dramatic example of shallow fringing reef. In the upper exposed zone the shallow mixed weed algal communities are characterised by several *Carpophyllum* species. Below the shallow mixed weed zone at 3-7m depth the large brown kelp, *Ecklonia radiata* forest takes over which is very productive and home to a large, diverse reef community. Along this coast there are small breaks in the reef, with sand and sandy gravel gutters. These reef-edge soft bottom habitats are high quality habitats, rich in invertebrate and shellfish communities; they play a key role in supporting the high diversity of the reef systems.

The Whangaroa coast has traditionally been known as very productive habitat for rock lobster *Jasus edwardsii*.

The marine ecology values of the Whangaroa coast and Northland's East Coast are

summarised in the Nearshore Classification produced by the Department of Conservation². A further and more detailed review of review of natural features and ecology was completed by NIWA in 2005.³ Both publications have comprehensive references covering previous descriptive work done in Northland. The later report summarises some of the local scale habitat mapping work done in the region.

Northland Marine Mammals

Information on the presence and conservation status of marine mammals in relation to Northland's coasts and estuaries has been reviewed by Baker.^{4 5} Thirty-five species of marine mammals are known from Northland waters (within the 12 n ml limit). Some marine mammal species are resident or semi-resident and breed along the Northland coast, and others are transients. Three threatened species are amongst the species most often encountered in inshore waters: Bryde's whales *Balaenoptera edni*, bottlenose dolphins *Tursiops truncates*, and Orca *Orcinus orca*. The common dolphin *Delphinus delphis*, which is not threatened, is also commonly seen in estuaries and along the coast. All of these species are often reported on the Whangaroa coast. Less common, but occasionally encountered on Northland's east coast, are pilot whales *Globicephala spp.*, false killer whales *Pseudorca crassidens*, and some of the large baleen whales. New Zealand fur seals are present in small numbers at Whangaroa coast area as transient visitors. **Assessment of Ecological Significance**

Table 1 Ranking score of ecological significance of Whangaroa coast⁶

Whangaroa coast: Assessment of Ecological Significance			Rank
Overall Ranking		Notes	High
Representati on	supports most taxa expected for habitat type	High diversity of reef species	H
	large example of its type	Good size example of rocky coast habitat sequences.	L
Rarity and Distinctivene ss	supports indigenous species threatened, at risk, or uncommon, nationally or within the relevant ecological scale	Has significant number subtropical fish species	M
	supports species endemic to the Northland-Auckland region or at distributional limits within the Northland region	Has significant number subtropical fish species	M
	distinctive of a naturally restricted occurrence	Diversity of habitats is good	M

² Department of Conservation, 2005. Near Shore Marine Classification System. Compiled by Vince Kerr for Northland Conservancy, Department of Conservation. Revised September 6, 2005. http://www.marinenz.org.nz/nml/files/documents/3_northland-mpa.html

³ Morrison, M., 2005. An Information Review of the Natural Marine Features and Ecology of Northland. Prepared for the Department of Conservation. NIWA Client Report: AKL 2005-50.

⁴ Baker, A. N., 2005. Sensitivity of marine mammals found in northland waters to aquaculture activities. Report to the Department of Conservation, Northland Conservancy. A. N. Baker Cetacean Biology Consultant, Kerikeri.

⁵ Baker, C.S, Chilvers, B.L., Constantine, R., DuFresne, S., Mattlin, R.H., van Helden, A. & Hitchmough, R., 2010. Conservation status of New Zealand marine mammals. New Zealand Journal of Marine and Freshwater Research, 44:2, 101-115.

⁶ Table 1 details the ranking criteria and scoring that was used to determine the overall high ranking given to the ecological significance of this area. The criteria used have been adopted from Appendix 5 of the Northland Regional Council Proposed Policy Statement. See reference to Methodology report or other council documents to call up

	developed as a result of unusual environmental factor(s) or is part of an ecological unit that occurs within an originally rare ecosystem	Unusual shoreline with a very steep profile resulting from volcanic origins	M
	identified as nationally or regionally rare habitat(s) in MPA Plan	Not evaluated yet	R
Diversity and Pattern	high diversity of indigenous ecosystem or habitat types	Diversity of habitats is good	M
	high diversity of indigenous taxa	generally high diversity of fish species	H
	its composition reflects the existence of diverse natural features or ecological gradients	Good complex ecological gradients	M
	contains intact ecological sequences	good examples	M
Ecological Context	provides or contributes to ecological linkages, networks, buffering functions	Shallow reef sequences connects to areas of conservation importance	H
	supports the natural functioning of freshwater or coastal ecosystems	Important ecological connection with estuaries and catchment of Whangaroa	M
	supports life stages of indigenous fauna	High diversity reef species	H
Assessed by: Vince Kerr		Date: September 2015	
Information Source(s) <i>see below</i>			3-7
Reliability of Information <i>see below</i>			+
Rank (overall score) H = high, M = moderate, L = low, DD = data deficient, R = recommended for further investigation			
Information Source(s) 1 = quantitative report, 2 = qualitative report, 3 = habitat map or classification, 4 = expert opinion, 5 = personal communication, 6 = anecdotal information, 7 = visit and observation			
Reliability of Information expressed as a scale of confidence ranging from high (+++) to low confidence (---)			
Criteria Rank - score for each individual criteria) H = high ranking, M = moderate ranking, L = low ranking, DD = data deficient, R = recommended for further investigation, NA = not assessed for this criteria			