

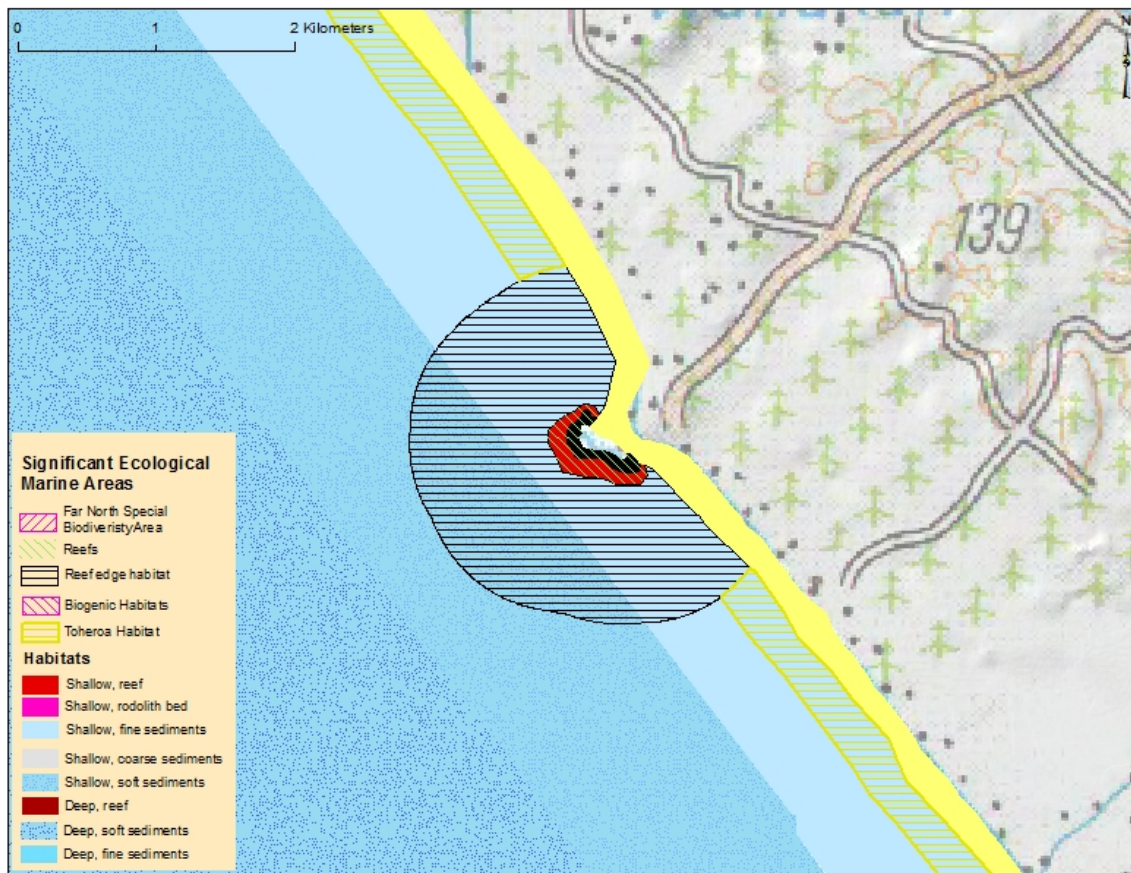
Significant Ecological Marine Area Assessment Sheet

Name: The Bluff, Ninety Mile Beach

Summary:

The intertidal and shallow rocky reefs at Bluff on Ninety Mile Beach have been assigned a high ecological ranking. The coastal fringing reefs here are a unique feature of what is otherwise a long, flat and sandy beach. The reefs at the Bluff are a significant feature of Ninety Mile beach. They are also unusual as there are few fringing reefs like this on the West Coast.

Habitat map and significant ecological areas of the Bluff



Oceanography

The area is influenced by the north-flowing Westland Current which is strongest in the winter months and grows weaker in summer. In summer months the south-flowing East Auckland Current has significant impact. Sea surface temperatures range between 15–22°C. This is a high wave-energy coast with waves of 1.5 – 2.5 m on average. There is littoral sand movement longshore to the north, largely driven by a Southern Ocean-derived swell. Due to the colder water masses that move north along this coast, its marine species are dominated by those with cooler water affinities.

An aerial view of the shallow reefs and reef platforms at the Bluff.



Ecological Values

The extent of the fringing reefs on this coast and the depth at which they transition to sand bottom habitats are not well known and require further study. The intertidal reef platform at the Bluff is a large area of highly exposed rock supporting a full range of intertidal species. The shallow reef is highly exposed and commonly subject to high wave energy. Much of the reef is scoured by moving sand.

Drift material comprising mainly algae and hydroids, with green-lipped mussel (*Perna canaliculus*) spat attached, periodically washes up on Ninety Mile Beach. It is the main source of spat for the mussel aquaculture industry. Most of the algae comprise subtidal red species, dominated by *Osmundaria colensoi* and *Rhodomyenia dichtotoma*.¹

The marine ecology values of Bluff at Ninety Mile Beach are summarised in the Nearshore Classification produced by the Department of Conservation. A further and more detailed review of review of natural features and ecology was completed by NIWA in 2005. Both publications have comprehensive references covering previous descriptive work done in Northland. More recently, regional scale marine habitat maps have been progressed by Kerr²

Northland Marine Mammals

¹ Department of Conservation, 2005. Nearshore 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

² Kerr, V., 2015. Marine habitat map of Northland's west coast, (draft). Unpublished GIS project in progress. Kerr & Associates, Whangarei, Northland. Email: vince@kerrandassociates.co.nz.

Information on the presence and conservation status of marine mammals in relation to Northland's coasts and estuaries has been reviewed by Baker.^{3 4} 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. There is a paucity of sightings of marine mammals on the West Coast but this is largely due to the remote nature of these waters. Three threatened species are amongst the species most likely to be encountered in inshore waters: Bryde's whales *Balaenoptera edni*, bottlenose dolphins *Tursiops truncates*, and Orca *Orcinus orca*. Transient New Zealand fur seals are reported occasionally in small numbers on this coast.

Assessment of Ecological Significance

Table 1 Ranking score of ecological significance of the Bluff, Ninety Mile Beach⁵

The Bluff, Ninety Mile Beach x Estuary Shorebird Values: Assessment of Ecological Significance			Rank
Overall Ranking		Notes	High
Representati on	supports most taxa expected for habitat type	Diversity is likely to be modest for its type due to high exposure and small size	DD, R
	large example of its type	Only small and shallow example of type	L
Rarity and Distinctivene ss	supports indigenous species threatened, at risk, or uncommon, nationally or within the relevant ecological scale	Not Assessed	DD, R
	supports species endemic to the Northland-Auckland region or at distributional limits within the Northland region	Level of endemism is not well known	DD,R
	distinctive of a naturally restricted occurrence	Shallow rocky reefs are rare on this	H
	developed as a result of unusual environmental factor(s) or is part of an ecological unit that occurs within an originally rare ecosystem	Very complex geological history and rare occurrence on this coast	H
	identified as nationally or regionally rare habitat(s) in MPA Plan	Not evaluated	R
Diversity and Pattern	high diversity of indigenous ecosystem or habitat types	Diversity limited.	L
	high diversity of indigenous taxa	Diversity of taxa expected to be limited	DD, R
	its composition reflects the existence of diverse natural features or ecological gradients	Diversity of taxa expected to be limited	DD, R

³ 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.

⁴ 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.

⁵ 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

	contains intact ecological sequences	Habitat sequence limited	L
Ecological Context	provides or contributes to ecological linkages, networks, buffering functions	Not known	DD, R
	supports the natural functioning of freshwater or coastal ecosystems	Not known	DD, R
	supports life stages of indigenous fauna	limited information	M,R
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			