

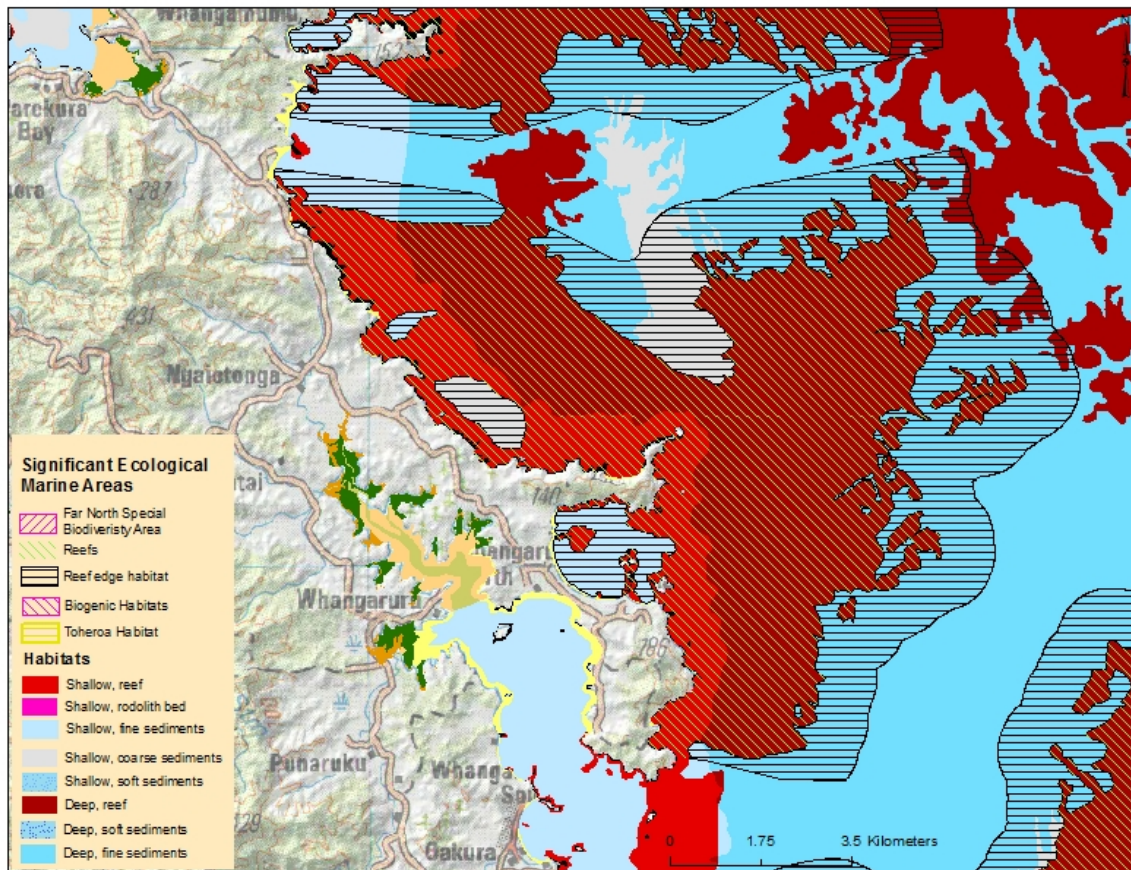
# Significant Ecological Marine Area Assessment Sheet

Name: Bland Bay Coast

## Summary:

The reef systems of Bland Bay coast and adjoining reef edges of soft bottom habitat and deep reefs extending out to sea beyond 30m have been scored as a high ranking ecological area. This exposed coast is generally rugged with complex topology; a characteristic of its volcanic origins and also a result of erosion. 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 more exposed sections of the Bland Bay coast extend out in the seaward direction; as a result these sections are influenced by the West Auckland Current which brings warm water masses and subtropical larval species to this coast, adding to the diversity here.

*Habitat map of the Bland Bay coastal area showing mapped significant ecological areas*



## Description:

The Bland Bay coast is located on Northland's northeast coast, north of Mimiwhangata. The mapped ecological area encompasses the coastline offshore from the entrance to Whangaruru Harbour to the south and Taupiri Bay (south of Whangamumu Harbour) to the north. The shallow coastal reefs extend out to sea bordered by soft bottom habitats that make up important reef edge habitats. The fringing reef is generally steep and irregular, being of broken and eroded volcanic and greywacke origins. There are a number of very small islands and stacks adding to the complexity of

this coast. As you move offshore to the deep reefs the terrain flattens out with the exception of a few localised areas of high-relief reef and one notable pinnacle, Danger Rock, which is 2km offshore and reaches up to the surface from depths of 50m. The reefs of this coast are nearly continuous and uninterrupted by soft sediment areas, with the exception of Bland Bay which has a clean sandy beach habitat. Most of the fringing shallow coastal reef system also has deep reefs (depths greater than 30m), which run out as far as 13kms off shore. <sup>1</sup>

## Oceanography

The Bland Bay coast area has strong oceanic influences. Its outer exposed shores are subject to gales and at times high wave energy from easterly storms and ocean swell. The area is regularly influenced by the West Auckland current which eddies into the coast bringing warm water from the north and, with it, larvae of subtropical species.

## Ecological Values

Bland Bay coast's shallow fringing reefs are very good examples of their type and generally in good health. In the upper exposed zone the shallow mixed weed algal communities are characterised by several *Carpophyllum* species which change to the more exposed algal communities represented by *Carpophyllum maschalocarpum* and *Lessonia variegata* at the most exposed headlands. 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 of high quality, generally quite low in sedimentation impacts and rich in invertebrate and shellfish communities; they play a key role in supporting the high diversity of the reef systems here.

Danger Rock is an impressive natural feature under the water. It rises very steeply from depths of 40-50m and at times the rock walls are vertical. This dramatic topography creates strong eddy currents and upwelling which is very attractive to plankton-feeding species and filter-feeding invertebrates. This rich biomass supports extensive reef food webs leading up to top-order predators like kingfish and sharks, which are commonly seen at Danger Rock. Taken altogether Danger Rock is a biodiversity hotspot.

At between 1.5 - 3km offshore, the reefs drop to depths beyond 30m. At these depths and beyond the light is insufficient to support the algal forests, so the reef communities become dominated by a diverse filter-feeding encrusting invertebrate community. Sponges play a key role in these communities. This invertebrate community provides protection and food sources for a complex community of marine species and trophic food webs, culminating in the top order predators who frequent these biodiversity hotspots and at times become residential.

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

The marine ecology values of the Bland Bay coast and Northland's east coast more generally are summarised in the Nearshore Classification produced by the Department of Conservation<sup>2</sup>. A further and more detailed review of natural features and ecology was

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

<sup>2</sup> 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](http://www.marinenz.org.nz/nml/files/documents/3_northland-mpa.html)

completed by NIWA in 2005.<sup>3</sup> Both publications have comprehensive references compiled 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.<sup>4 5</sup> 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 have been often reported on the Bland Bay 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 Bland Bay coast area as transient visitors.

### Assessment of Ecological Significance

Table 1 Ranking score of ecological significance of Bland Bay coast<sup>6</sup>

Bland Bay 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.	M
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

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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	Typical of Northland east coast rocky shores with small bays and estuaries	M
	identified as nationally or regionally rare habitat(s) in MPA Plan	Not evaluated yet	R
<b>Diversity and Pattern</b>	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
<b>Ecological Context</b>	provides or contributes to ecological linkages, networks, buffering functions	Shallow reef sequences connects to high value small estuaries and their catchments	H
	supports the natural functioning of freshwater or coastal ecosystems	Important ecological connection with small estuaries and streams of this coast	M
	supports life stages of indigenous fauna	High diversity reef species	H
<b>Assessed by:</b> Vince Kerr		<b>Date:</b> September 2015	
<b>Information Source(s)</b> <i>see below</i>			<b>2-7</b>
<b>Reliability of Information</b> <i>see below</i>			<b>++</b>
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			