

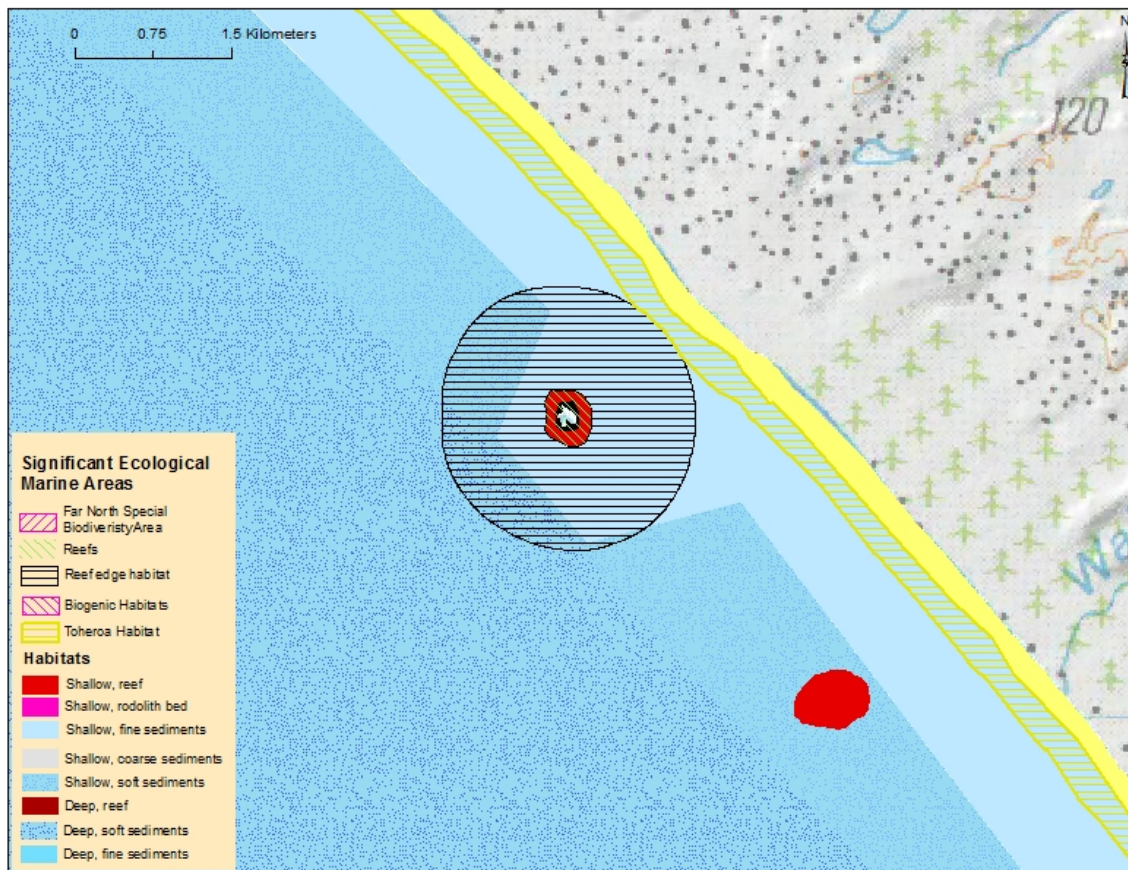
# Significant Ecological Marine Area Assessment Sheet

Name: Matapia Island Shallow Reefs

## Summary:

Matapia Island has been given a high ranking as an ecologically significant island. Offshore islands are rare on the west coast of New Zealand; there are only two in Northland. While the island is small, at 2.3 ha, it is a significant conservation site with ecological sequences on land supporting rare and endemic plants and animals. These unique terrestrial habitats are connected to the marine habitats surrounding the island. The marine habitats surrounding the islands are extremely diverse due to the varying exposure created by the island itself. Matapia is known as a fur seal haul out, and has the largest population of New Zealand fur seal in Northland for this reason.<sup>1</sup> The waters surrounding the island are also an important area for the endangered Great White Shark *Carcharodon carcharias*.

*Habitat map and mapped significant ecological area of Matapia Island*



<sup>1</sup> Department of Conservation, Undated. Far North to Mangawhai (Northland conservancy/Region) seabird sites – site description. Compiled from PNAP reports, Taylor (1989) northern offshore island inventory.

*A 3D aerial view of Matapia Island situated just offshore on the northern end of 90 mile beach. The island is surrounded by a small fringing rocky reef.*



### **Description:**

Matapia Island lies approximately 1.5 km offshore from the northern end of Ninety Mile Beach. It is 2.3ha in size; the extent of its fringing reef system is unsurveyed and unknown. The waters surrounding the island are relatively shallow, in the range of 10-20m deep. To the seaward direction the ocean bottom slopes gradually down to a depth of 50m 9km offshore. Wave energy is very high at this site and is a major influence on the shallow and deeper reef communities and intertidal organisms established there.

### **Oceanography**

The area is influenced by the north-flowing Westland Current and occasionally, in summer months, by the south-flowing West Auckland Current. Generally the high wave energy experienced on this coast would result in the water mass being clouded by fine sediments. 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. Due to the colder water masses moving north along this coast its marine species are dominated by species with cooler water affinities.

### **Ecological Values**

The Matapia Islands terrestrial values are well documented<sup>1</sup> and include endangered plants, endemic skinks and a gecko. More than 500 New Zealand fur seals use the island as a haul out site but there is no record of breeding here. Recent research has established that the area surrounding the island is a favoured site for the Great White shark; presumably this is due to the presence of the seals - a favourite prey of the Great White shark. Great White sharks are an IUCN Red Listed Threatened Species classified as Vulnerable globally. In New Zealand they are protected under the Wildlife Act 1953.

The size, extent and depth range of the reefs and biological communities surrounding Matapia Island has not been studied and described. However, due to the uniqueness of

the site, it is expected that these reefs and communities will be of great interest from a biodiversity perspective.

### 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>2 3</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. There is a paucity of sightings of marine mammals on the West Coast. 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*. The common dolphin *Delphinus delphis*, which is not threatened, is also commonly seen in estuaries and along the coast. New Zealand fur seals are reported there in significant numbers.

### Seabirds

The following threatened seabirds are supported by the habitats of Matapia Island: White-fronted tern *Sterna striata*, common diving petrel *Pelecanoides urinatrix urinatrix*, blue penguin *Eudyptula minor*, red-billed gulls *Larus novaehollandiae scopulinus*. A breeding population of black-winged petrels *Pterodroma nigripennis* (not threatened) is also supported by this island.

### Assessment of Ecological Significance

Table 1 Ranking score of ecological significance of Matapia Island Shallow Reefs

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Matapia Island Shallow Reefs 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 large for its type but only two sites studied	NA
	large example of its type	These reefs good example and a large example of type	L
Rarity and Distinctivene ss	supports indigenous species threatened, at risk, or uncommon, nationally or within the relevant ecological scale	Significant site for seabirds, NZ fur seals and Great White sharks	H

<sup>2</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>3</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>4</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

	supports species endemic to the Northland-Auckland region or at distributional limits within the Northland region	Level of endemism is not well known but these reefs system are the northern extreme of this Bioregion	DD, R
	distinctive of a naturally restricted occurrence	Rocky reefs and offshore island very rare on this coast	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 rare site and habitats	H
	identified as nationally or regionally rare habitat(s) in MPA Plan	Not evaluated as of yet	R
<b>Diversity and Pattern</b>	high diversity of indigenous ecosystem or habitat types	Marine habitats not well described	DD, R
	high diversity of indigenous taxa	Marine habitats not well described	DD, R
	its composition reflects the existence of diverse natural features or ecological gradients	Marine habitats not well described	DD, R
	contains intact ecological sequences	Marine habitats not well described, but connectivity with island terrestrial habitats is important	H
<b>Ecological Context</b>	provides or contributes to ecological linkages, networks, buffering functions	Expected to be high for this habitat	DD, R
	supports the natural functioning of freshwater or coastal ecosystems	Expected to be high for this habitat	DD, R
	supports life stages of indigenous fauna	Expected to be high for this habitat	DD,R
<b>Assessed by:</b> Vince Kerr		<b>Date:</b> September 2015	
<b>Information Source(s)</b> <i>see below</i>			<b>2-6</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			