

Significant Ecological Marine Area Assessment Sheet

Name: Whananaki Estuary Shorebird Values

Summary:

Whananaki Estuary as a whole has been given a high ranking of ecological significance for marine values. It is an excellent example of an East Coast small estuary. Whananaki Estuary has a full array of estuarine habitats ranging from a diverse entrance area with both shallow reefs and a sand bar, to extensive mangrove saltmarsh sequences at the top of the estuary. Tidal flats in the lower part of the estuary have established shellfish beds. Taken as a whole, the estuary plays an important role in buffering the impacts of sediments and nutrients coming down the catchment, and provides ecological linkages between the coastal waters and marine biodiversity, the estuarine habitats and freshwater streams.¹

Aerial photo of Whananaki Estuary Photo Credit: Apple Maps



¹ Morrison, M.A.; Lowe, M.L.; Parsons, D.M.; Usmar, N.R.; McLeod, I.M., 2009. A review of land-based effects on coastal fisheries and supporting biodiversity in New Zealand. *New Zealand Aquatic Environment and Biodiversity Report No. 37*. 100 p.

Description:

The Whananaki Estuary is situated just to the north of Tutukaka and Ngunguru estuaries on the Whangarei coast. Whananaki Estuary has a full range of interconnecting marine habitat types². These habitats include saltmarshes, mangroves, intertidal flats and extensive channels and an entrance sandspit adjacent to a headland with shallow rocky reef systems. Each of these habitats contains distinctive plant and animal communities contributing to the ecological values.

There is local interest in improving riparian protection in the catchment and protecting the values of this estuary. As this trend develops, riparian restoration in the catchment and the edge environments of the estuary would greatly enhance the value and ecological connectivity between estuarine habitats, freshwater wetlands, stream corridors and the bush covered fringes of the estuary. Estuarine habitats and species generally will benefit from the combined effects of buffering sediments and nutrients entering the marine environment.¹

A 3D aerial image of Whananaki Estuary looking from the sea. The Whananaki Estuary has excellent habitat sequences of fringing rocky reef near the entrance, clean sand tidal flats with productive cockle beds, extending up the estuary to mangrove and salt marsh habitats. Recently small beds of seagrass have appeared on some of the tidal flats.

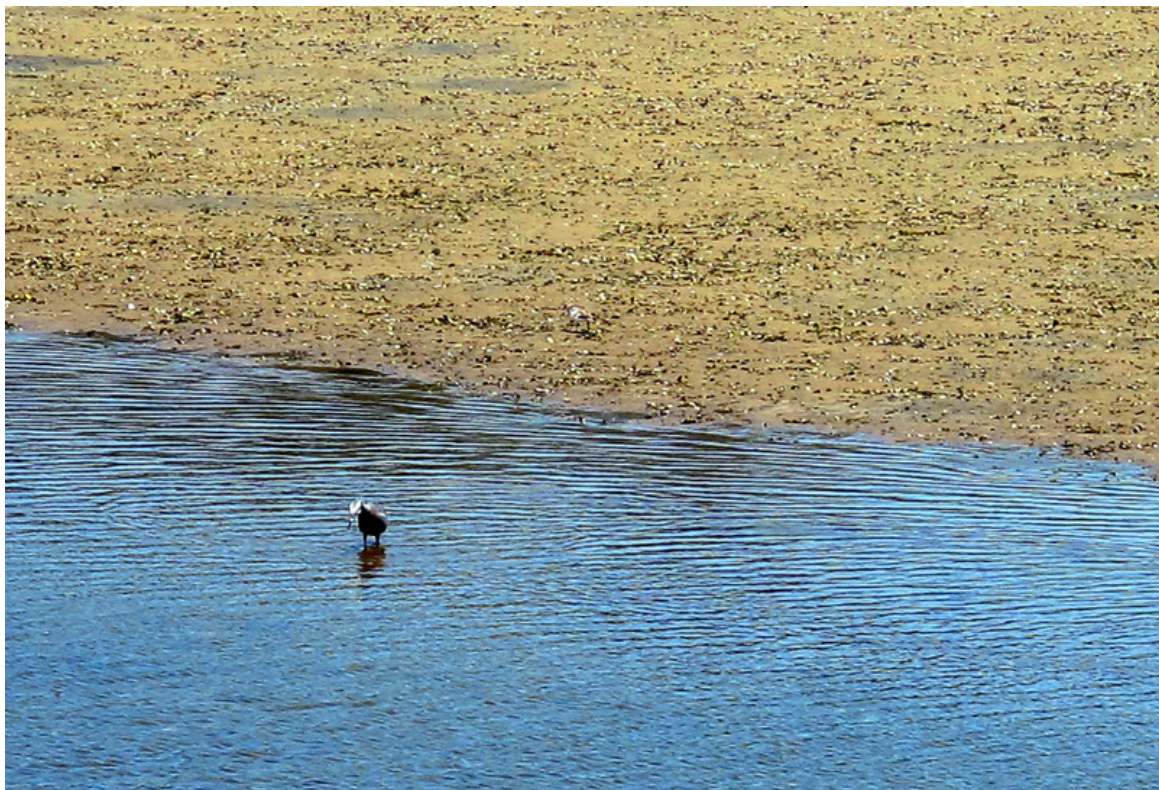


² Kerr, V.C., 2010. Marine Habitat Map of Northland: Mangawhai to Ahipara Vers. 1. Technical Report, Department of Conservation, Northland Conservancy, Whangarei, New Zealand.

*A view of the rocky reef and channel habitats of the Estuary looking towards the entrance.
Photo credit: Vince Kerr*



*A white-faced heron feeding at the channel edge of a productive cockle bed tidal flat in
the middle area of the Estuary. Photo credit: Vince Kerr*



An example of a seagrass bed establishing on the tidal flat of the Estuary. Photo credit: Vince Kerr



The middle area of the Estuary has extensive cockle bed tidal flat habitats. Photo credit: Vince Kerr



An example of the significant salt marsh habitat in the upper reaches of the Whananaki Estuary. Photo credit: Vince Kerr



Ecological Values

Whananaki Estuary is a relatively well-functioning small estuary that is in a long term period of recovery from the impacts of intensive deforestation followed by the pastoral farming of the last 200 years. Today the tidal flats have healthy shellfish beds. The shellfish beds are common on all the main tidal flats and make a major contribution to the process of enhancing water quality of the estuary ¹. Shellfish are very active, filtering plankton and nutrients from the water column with each tide cycle. Whananaki Estuary is a shallow estuarine system with the majority of the volume of the estuary emptying out of the system with each tide. The estuary has three side arms that are characterised by high quality intact sequences of mangrove forests, saltmarshes and small shallow channels. Some of the upper arms have good riparian edge environments in native forest, which adds greatly to the ecological value of the estuary. Whananaki Estuary, with its extensive tidal area and habitat sequences, can be expected to play an important role as a nursery and feeding area for coastal fishes. ³

The entrance habitats of the estuary are quite varied and significant. They include a rocky shoreline on the east side of the estuary and a channel habitat and a sand spit on the western side, which protects the estuary from large swells that occasionally wrap around the headland from the exposed coast. The sandspit connects with a long sweep beach which extends to the south. Much of the spit bordering the entrance is a reserve and covered in regenerating native scrub and pine tree plantation, adding to the conservation value of this site and connectivity of the habitats there.

Assessment of Ecological Significance

Table 1 Ranking score of ecological significance of Whananaki Estuary⁴

Whananaki Estuary Marine Values: Assessment of Ecological Significance			Rank
Overall Ranking		Notes	High
Representati on	supports most taxa expected for habitat type	Shellfish beds are typical of this habitat and good examples	M
	large example of its type	Not a large example of its type	L
Rarity and Distinctivene ss	supports indigenous species threatened, at risk, or uncommon, nationally or within the relevant ecological scale	Not Assessed	NA
	supports species endemic to the Northland-Auckland region or at distributional limits within the Northland region	Not Assessed	NA
	distinctive of a naturally restricted occurrence	Typical small east coast estuary	M
	developed as a result of unusual environmental factor(s) or is part of an ecological unit that occurs within an originally rare ecosystem	Typical small east coast estuary	M
	identified as nationally or regionally rare habitat(s) in MPA Plan	Not Assessed	NA

³ Morrison, M.A.; Jones, E.G.; Parsons, D.P.; Grant, C.M., 2014. Habitats and areas of particular significance for coastal finfish fisheries management in New Zealand: A review of concepts and life history knowledge, and suggestions for future research. New Zealand Aquatic Environment and Biodiversity Report No. 125. 202 p.

⁴ 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

Diversity and Pattern	high diversity of indigenous ecosystem or habitat types	Typical community of type	M
	high diversity of indigenous taxa	Typical community of type	M
	its composition reflects the existence of diverse natural features or ecological gradients	Typical community of type	M
	contains intact ecological sequences	Sequences outstanding from estuarine entrance rocky reefs to salt marsh	H
Ecological Context	provides or contributes to ecological linkages, networks, buffering functions	Shellfish beds play very important buffering and ecological role in estuary	H
	supports the natural functioning of freshwater or coastal ecosystems	Shellfish beds play very important buffering and ecological role in estuary	H
	supports life stages of indigenous fauna	Provides important support for various life stages of benthic invertebrates, shorebirds and nursery for coastal fish species	H
Assessed by: Vince Kerr			Date: September 2015
Information Source(s) <i>see below</i>			2-7
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			