

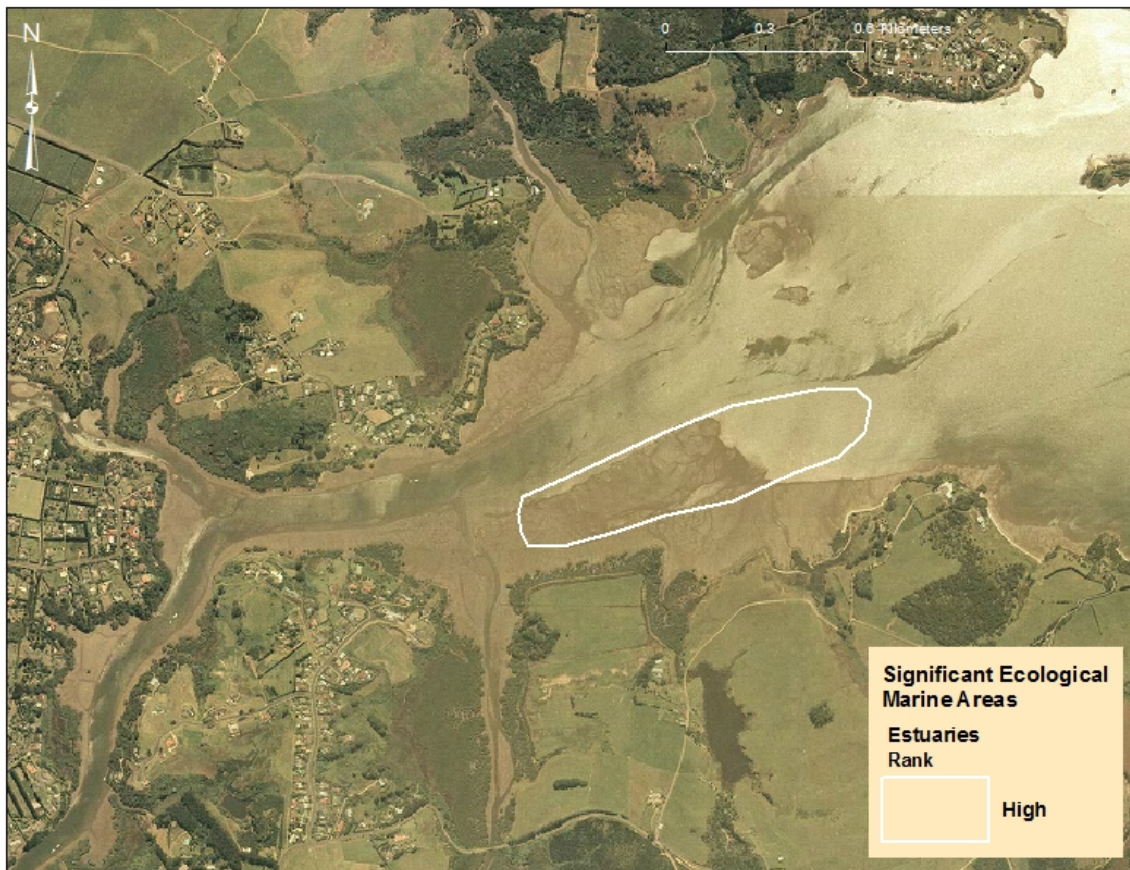
## Significant Ecological Marine Area Assessment Sheet

**Name:** Pickmere Channel Shellfish Bed

### Summary:

An extensive tidal flat and shellfish bed area locally known as Pickmere Channel, located in the Kerikeri Inlet of the Bay of Islands, has been given a high ranking of ecological significance for marine values. This tidal flat has a healthy shellfish community and is a good example of this important and productive habitat indicative of a high diversity benthic community.

*Aerial photo of the Pickmere Channel shellfish bed and SEA area.*



## Description:

The Pickmere Channel shellfish bed is situated in the central area of the Kerikeri Inlet, Bay of Islands. The Pickmere Channel shellfish bed is approximately 24 ha and is a muddy sand tidal flat habitat typical of upper harbour soft sediment habitats in estuaries where sedimentation is significant<sup>1</sup>. Tidal flats that have good shellfish beds are considered to be important because of the diversity of benthic invertebrates living as infauna in these habitats and the number of marine species and birds that feed on these benthic communities.

## Ecological Description

The tidal flats mapped as ecologically significant in the Pickmere Channel make up part of the middle area of the Kerikeri Inlet. The area is a muddy sand soft-bottom intertidal habitat. The intertidal areas mapped have extensive cockle beds *Austrovenus stutchburyi*, which have been monitored as part of the Northland Regional Council estuaries monitoring program.<sup>2</sup> In this report the cockle community is described as productive and in good health. Cockles are an indicator of a healthy estuarine soft bottom community. They are generally associated with high benthic invertebrate diversity and substrates that are not heavily impacted by sedimentation. These shellfish communities play a key role in filtering nutrients and plankton from the water column. This in turn has beneficial effects on water clarity and productivity of various algal communities that make up the biodiversity of the estuary. These shellfish and the other associated benthic invertebrates are also a major food source for shorebirds and a significant nursery and feeding area for many coastal fish species.<sup>3</sup>

## Assessment of Ecological Significance

Table 1 Ranking score of ecological significance of Ruakaka Estuary<sup>4</sup>

Ruakaka Estuary Marine Values: Assessment of Ecological Significance			Rank
Overall Ranking		Notes	High
Representation	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	M
Rarity and Distinctiveness	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	Not Assessed	NA

<sup>1</sup> Kerr, V.C., 2010. Marine Habitat Map of Northland: Ruakaka to Ahipara Vers. 1. Technical Report, Department of Conservation, Northland Conservancy, Whangarei, New Zealand.

<sup>2</sup> Griffiths 2011. Kerikeri Inlet Estuary Monitoring Programme Results from 2008- 2010. NRC technical report.

<sup>3</sup> 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.

<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

	the Northland region		
	distinctive of a naturally restricted occurrence	Typical small east coast estuary	L
	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	L
	identified as nationally or regionally rare habitat(s) in MPA Plan	Not Assessed	NA
<b>Diversity and Pattern</b>	high diversity of indigenous ecosystem or habitat types	Shellfish bed typical community of type	M
	high diversity of indigenous taxa	Shellfish bed typical community of type	M
	its composition reflects the existence of diverse natural features or ecological gradients	Not Assessed	NA
	contains intact ecological sequences	Some sequences but limited areas of habitats in estuary, some disturbed or degraded	L
<b>Ecological Context</b>	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
<b>Assessed by:</b> Vince Kerr		<b>Date:</b> September 2015	
<b>Information Source(s)</b> <i>see below</i>			<b>1-7</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			