

# Ecologically Significant Marine Area Assessment Sheet

Name: Waikino Inlet Marine Values

## Summary:

Waikino Inlet as a whole has been given a high ranking of ecological significance for marine values. Waikino Inlet has an array of estuarine habitats ranging from a tidal sand flats and subtidal channels to extensive mangrove saltmarsh sequences, which make up the bulk of the estuary. Taken as a whole, the estuary plays an important role in buffering the impacts of sediments and nutrients coming down the catchment.<sup>1</sup> The estuary also provides ecological linkages between the coastal waters and marine biodiversity, the estuarine habitats and fringing native bush and freshwater streams. The Waikino has generally good riparian vegetation on most of its shoreline.

*Aerial photo of Waikino Inlet Photo Credit: Apple Maps*



<sup>1</sup> 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:**

Waikino Inlet is situated in the inner Bay of Islands, to the south of Paihia and Opuā. Waikino Inlet has a full range of interconnecting marine habitat types<sup>2</sup>. These habitats include saltmarshes, mangroves, intertidal flats and channels emptying out into the inner Bay of Islands near Opuā. Each of these habitats contains distinctive plant and animal communities contributing to the ecological values.

The extent of good quality riparian margins along this estuary is notable; nearly the entire margin of the estuary is in regenerating native forest. The estuary's mangrove and saltmarsh systems extend up the catchment and connect with small wetland areas and freshwater streams enhancing the value and ecological connectivity between estuarine habitats, freshwater wetlands, stream corridors and the bush covered fringes.

## **Ecological Values**

Waikino is a relatively muddy but functioning small estuary that is in a long term period of recovery from the impacts of intensive deforestation followed by the logging and pastoral farming of the last 200 years. Waikino Inlet is a shallow estuarine system with the majority of the volume of the estuary emptying out of the system with each tide. The estuary is characterised by high quality intact sequences of mangrove forests and saltmarshes and small shallow channels. Some of the upper arms have good riparian edge environments in native forest, adding greatly to the ecological value of the estuary. While small, Waikino Inlet habitats are very good examples of their type, especially when compared to nearby areas of the inner Bay of Islands that have been affected by heavy sedimentation. Waikino Inlet's habitats would provide good buffering and filtering of nutrient and sedimentation entering its catchment.<sup>3</sup>

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

<sup>3</sup> 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.

## Assessment of Ecological Significance

Table 1 Ranking score of ecological significance of Waikino Inlet<sup>4</sup>

| Waikino Inlet 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   | L    |
|  | large example of its type   | Not a large example of its type  | L    |
| 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 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   |
| 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 tidal flats to mangrove saltmarsh system                                      | H    |
| Ecological Context   | provides or contributes to ecological linkages, networks, buffering functions   | Mangroves and saltmarsh play important buffering and ecological role in estuary                                    | H    |
|  | supports the natural functioning of freshwater or coastal ecosystems  | Shellfish beds mangroves and saltmarsh play important buffering and ecological role in estuary                     | H    |
|  | supports life stages of indigenous fauna  | Provides support for various life stages of benthic invertebrates, shorebirds and nursery for coastal fish species | M    |
| Assessed by: Vince Kerr  |   | Date: September 2015   |      |
| Information Source(s) <i>see below</i>                             |   |  | 3-7  |
| Reliability of Information <i>see below</i>                        |   |  | +    |

<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

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| 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 |