

*Held by Stephanie Turner
NORTHE-RO*



**COASTAL RESOURCE INVENTORY
FIRST ORDER SURVEY**

NORTHLAND CONSERVANCY

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**CONSERVATION
TE PAPA ATAWHAI**

Published by:

**Department of Conservation
P.O. Box 10420
Wellington**

October 1990

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**ISBN: 6-478-01236-5
ISBN: 0-478-01238-1**

PREFACE

The Coastal Resource Inventory (CRI) programme is an ongoing project of the Department of Conservation. The programme is organized into First, Second and Third Order Surveys which span the coastal zone of New Zealand. The First Order Survey provides the basis for a national overview of coastal conservation values and is derived from information on the physical, biological and human resources of the coastal zone. The Second Order CRI Surveys will provide regional overviews for each of the Departments Conservancies. Third Order Surveys will provide detailed information at a site specific level for a specific purpose.

The coastal zone covered by the Coastal Resource Inventory is an area bounded by the outer limits of the New Zealand Territorial Sea, 12 nautical miles offshore and the landward limit of marine influence. The latter varies from place to place depending on site specific physical, biological and human factors.

The First Order Coastal Resource Inventory presented here covers the coastal zone of one of the thirteen coastal conservancies of the Department. It is based on existing information compiled by conservancy staff from regional and national databases, published and unpublished reports, limited field surveys and personal or anecdotal information from various experts. The information has been compiled according to guidelines and standards set by the Departments' Coastal Resource Inventory Taskforce.

As one might expect, the First Order Survey has revealed a substantial variation in the quality and quantity of information between Conservancies and also between information categories. In general there is more information about the resources and attributes of the landward part of the coastal zone than the seaward part, especially offshore. Conservancies with large metropolitan centres such as Auckland have more information than the remote coastal areas of New Zealand such as the East Coast. This does not mean that the latter areas are lower in coastal conservation values or resources. Rather, it simply reflects the lack of knowledge and possible directions for further work, so that a balanced national overview of coastal conservation values and resources is eventually obtained.

The First Order CRI provides essential information for managers, planners and users of the coastal zone of New Zealand. The national overview provided by the First Order Survey will be updated from time to time by the Department as new information comes to hand.



Bill Mansfield
DIRECTOR GENERAL
DEPARTMENT OF CONSERVATION

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NATIONAL OVERVIEW

INTRODUCTION

The Coastal Resource Inventory (CRI) programme was initiated in 1987 as the Department of Conservation's principal tool for breaking the cycle of reactive management that has characterised coastal management in New Zealand in the past. CRI provides important information on the physical, biological, recreational, cultural, historic, archaeological, human modification, uses, protection and threats to the coast.

The First Order Survey consists of thirteen volumes, one from each coastal conservancy (Northland, Auckland, Waikato, Bay of Plenty, East Coast, Hawke's Bay, Wanganui, Wellington, Nelson/Marlborough, Canterbury, West Coast, Otago, Southland). Each volume includes a brief description of the conservancies' coastal zone, a summary of the conservation values, a list of issues of concern and recommendations for further work. The information is described on site sheets and plotted on maps at a scale of 1:250 000 to give a broad, overall impression of the coastal conservation values within each conservancy.

In addition to its primary use for coastal management, First Order CRI information will help identify areas suitable for marine reserves and aid in the advocacy role of the Department at both the national and conservancy level.

Mission Statement:

The primary mission of the First Order Survey was:

"To provide information for the maintenance, enhancement and restoration of natural character and qualities of coasts and their sensitive use."

The following specific tasks were developed to achieve the mission:

1. *"To identify coasts with important natural, scientific, historic, cultural and spiritual values;*
2. *to identify coasts currently protected and warranting protection;*
3. *to identify coastal conservation values susceptible to existing and potential threats;*
4. *to identify human modification and uses of coasts".*

METHODS

The information for the First Order Survey has been collated and mapped in six major categories: natural, historic, cultural, existing threats, human modification and use, and existing protection.

1. Natural Values:

Information on known areas of physical, biological and ecological value in the coastal zone under the following headings:

- a - High degree of naturalness
- b - Rare/unique species, communities or habitats
- c - Important breeding/feeding/roosting/haulout/nursery areas
- d - Fragile/environmentally sensitive areas
- e - Unique or unusual landforms
- f - Representativeness
- g - Known scientific value
- h - National or international importance
- i - Other

2. Cultural Values:

Areas of important Maori and non-Maori cultural values in the coastal zone under the following headings:

- a - Traditional values
- b - Aesthetic value
- c - Landscape (seascape) value
- d - Spiritual value
- e - Educational value
- f - Other

3. Historic Values:

Areas of important historic and archaeological value in the coastal zone under the following headings:

- a - Known historic value
- b - Archaeological value - Maori origin
- c - Archaeological value - Non-Maori origin
- d - Shipwrecks and wreck sites
- e - Known national or international significance
- f - Other

Explanatory Notes

- (i) The decision to include the attributes "high degree of naturalness", "representativeness", aesthetic value", "land/seascape value" and "spiritual" value was based on the experience of the data recorder.

The Natural, Cultural and Historic categories of information were combined to form the Conservation Value overlay map, where all features of natural, historic or cultural value were overlaid then amalgamated to form sites of conservation value (Conservation Sites). For each of these sites a brief description was provided on the Site Record Form. The Site Record Form contains details of the conservation values mapped and includes the following three other categories (4-6) that impact on these values:

4. Existing Threats:

Threats may be natural or human induced activities that are or have a history of damage or destruction of the coastal resources. Information on the following was collated and mapped:

- a - Erosion, flooding, landslip
- b - Siltation
- c - Noxious and invasive exotic plants
- d - Noxious or farmed animals
- e - Water pollution
- f - Mining
- g - Shore stabilisation works
- h - Aquaculture
- i - Fishing techniques
- j - Spoil and refuse dumping
- k - Recreation
- l - Coastal subdivision
- i - Other

Explanatory Notes

- (ii) The inclusion of "recreation", "mining", "aquaculture" and "fishing techniques" in the "Existing Threats" category was only used where these activities threatened conservation values. It is acknowledged that there are many places where these activities do not pose a threat.

5. Human Modification and Use:

Information on the following was collated and mapped:

- a - Land development

- b - Reclamations and causeways
- c - Commercial port areas
- d - Small boat harbours and moorings
- e - Outfalls, major pipelines and cables
- f - Artificial cuts
- g - Beach replenishment
- h - Shoreland-based recreation
- i - Water-based recreation
- j - Traditional Maori use
- k - Other

6. Existing Protection:

Areas of varying protection status in the coastal zone were mapped, including:

- a - National protected areas
- b - Regional protected areas
- c - Local protected areas
- d - Protective zonings
- e - Marine parks
- f - Private protected areas
- g - Voluntary protection of areas
- h - Rahui
- i - Other

Evaluating Site Importance

Evaluation of site importance was largely species based using the following criteria: The criteria for fauna (Bell, 1986) and flora (Given et al, 1987 and Wilson and Given 1989) are based on the IUCN Red Data list.

1. If a species of plant or animal is listed as endangered and it is an endemic species, then the place(s) where this plant or animal still remain are of INTERNATIONAL importance.
2. If a species of plant is vulnerable or rare, then the site where it naturally occurs is of NATIONAL importance. Similarly if a species of animal is classified as threatened or rare then the site is of NATIONAL importance.
3. For a species of animal that is classified as threatened regionally only, the site has regional importance.
4. Where sufficient information allowed the Ramsar convention was used to determine site importance in Wellington, East Coast and Bay of Plenty. The Ramsar convention states; *"a site is of international importance if 1% of the total population of a species or subspecies is found there or if the area supports 1% of*

breeding pairs".

5. Other information on site importance from the historic or cultural categories which is documented in the literature was also used.
6. The highest level of importance for any category located within a site is given to the whole site.

Explanatory Notes

(iii) The site importance is not a ranking system for the sites. It merely indicates whether there is a feature present at the site which is of known importance. The Conservation Sites identified in the First Order Survey vary considerably in size and importance.

(iv) Wildlife which have an established international conservation status in New Zealand include the terrestrial mammals, birds, reptiles and amphibians and terrestrial arthropods and molluscs. There is no established status list for fish, marine invertebrates and marine mammals. This means that the assessment of comparative site importance in this survey has an unavoidable bias towards the importance of terrestrial wildlife.

(v) Archaeological site information was presented here without comment on its comparative importance. This was necessary because:

(a) authority to assess archaeological site importance under the Historic Places Act 1980 rests with the New Zealand Historic Places Trust, for the purpose of regulating site damage.

(b) No methodology is recognised for assessing comparative importance in a similar manner applied to the other resources described here.

NORTHLAND CONSERVANCY

COASTAL RESOURCES INVENTORY

STAGE ONE

SUMMARY CHAPTER

1.0 INTRODUCTION

This survey is based on existing information and covers about 1700 kilometres of coastline and adjacent areas. Data were obtained mostly from Ogle (1984), New Zealand Land Inventory maps (Department of Lands and Survey 1981), and the Coastal Wetlands Inventory (Department of Conservation unpublished report). Additional information is from Adams and Nelson (1985), Falla et al (1989), Wilson and Given (1989), Ayling and Cox (1982), Francis (1988), Powell (1979), and staff of the Department of Conservation in Whangarei.

A large amount of information is available on aspects of natural, cultural and historic values, existing threats, human modification and use, and existing protection, for most of Northland's coastline and terrestrial coastal areas. Very few data are available on natural values of, and issues affecting, subtidal habitats and biotas.

This survey was carried out over a period of six weeks, and consequently only a part of the existing information was able to be collated and synthesised. No field checks were undertaken. The conservation value overlays presented here identify geographically discrete sites within which there are areas of known importance.

It should be noted that conservation values are markedly heterogeneous within the identified sites. It is possible that those parts of the coastline not included within sites (less than 5% of total coastline) may in fact contain important natural, cultural or historic sites.

2.0 SUMMARY OF THE CONSERVATION VALUES OF THE COASTLINE

2.1 General Description of the Area

Northland is an elongate, northwest-trending land mass bounded to the west by the Tasman Sea, and to the east by the Pacific Ocean. The western coastline is practically straight between Kaipara Harbour mouth and Tauroa Point, and curvilinear along Ninety Mile Beach. A sandy coastline backed by Pleistocene and Holocene dunes extends between Kaipara Harbour mouth and Maunganui Bluff and along Ninety Mile Beach, whereas from Maunganui Bluff to Ahipara, and north of Scott Point, sandy beaches alternate with rocky headlands and intertidal reefs. Islands are present close inshore at the northern end of Ninety Mile Beach (Matapia Island) and at Cape Maria Van Diemen (Motuopao Island), and a group of small islands is present 55 kilometres northwest of Cape Reinga (Three Kings Islands).

The west coast is exposed to almost continuous onshore oceanic swells that cause turbulence, turbidity and sediment movement in shallow marine and intertidal habitats. Harbours occupying drowned river valleys open onto the west coast in the Hokianga, Whangape and Herekino areas. They have narrow, shallow sandy entrances, and contain extensive intertidal mudflats.

The east coast of Northland has a more complex geomorphology than the west coast, and is only periodically affected by onshore oceanic swells. Sandy beaches with intervening rock headlands dominate the open coast northwest of Doubtless Bay, and between Ngunguru and Bream Bays. In contrast, the coastline between

Doubtless and Ngunguru Bays is predominantly rocky, albeit with sandy and gravelly beaches locally. Islands are common inshore between Houhora and Bream Head, and are present further offshore in the southern part of the region (ie Poor Knights Islands, Hen and Chicken Islands). Harbours and estuaries within drowned river valleys are common along the east coast of Northland. Most are similar to those on the west coast, but Parengarenga, Houhora and Rangaunu Harbours differ in having extensive intertidal sand flats and shell banks in their lower reaches.

Indigenous terrestrial coastal vegetation in Northland has been largely removed and modified by human influences. Coastal forest is very rare, being present on some islands, and at a few localities on the mainland. Indigenous dune field vegetation is similarly rare, and is typically highly modified. Much of the coastline is backed by pasture, exotic dune vegetation, forestry plantations, exotic scrub, and indigenous scrub. Extensive areas of mangrove forest and saltmarsh are present in harbours on the east and west coasts of Northland.

The Northland coastline was extensively settled by prehistoric Maori, and was used as a source area for food, fibre-producing plants and timber. Historic human influences in coastal areas have included timber extraction, fishing, agriculture, plantation forestry, aquaculture, reclamation, residential subdivision, and mining of sand, shell and gravel deposits. The coast is presently also used extensively for recreational purposes.

2.2 Coastal Areas of Outstanding Value in Northland

This survey identifies sites containing areas of outstanding conservation value. Areas are considered to be of international significance if they contribute significantly to the survival of migratory species, contain local endemics, or are of international scientific significance. Areas that have been little modified, or that contain species that are rare, threatened or of local distribution are considered to be of national significance, as are important archaeological sites.

AREAS OF INTERNATIONAL SIGNIFICANCE

- (a) Roosts, breeding areas and feeding grounds for migratory birds. Areas of importance for migratory waders such as golden plover (Pluvialis fulva), eastern bar-tailed godwit (Limosa lapponica baueri), turnstone (Arenaria interpres interpres), Siberian tattler (Tringa brevipes) are located on intertidal flats, beaches and wetlands in Hokianga, Herekino, Parengarenga, Houhora, Rangaunu, Ngunguru and Whangarei Harbours (ie within sites 5, 8, 12, 14, 15, 31, 35). Breeding areas for migratory seabirds such as white-faced storm petrel (Pelagodroma marina maoriana), grey-faced petrel (Pterodroma macroptera gouldi), Pycroft's petrel (Pterodroma pycrofti), fairy prion (Pachyptila turtur), Buller's shearwater (Puffinus bulleri) are largely restricted to offshore islands including Matapia, Motuopao, Three Kings, Simmonds, Moturoa, Stephenson, Cavalli, Motukokako, Poor Knights, and Hen and Chickens Islands (ie within sites 9, 10, 11, 13, 16, 21, 25, 30, 38).
- (b) Terrestrial habitats containing locally endemic species and/or races. These are present on offshore islands such as Motuopao, Three Kings, Motukokako, Poor Knights and Hen and Chickens Islands (ie within sites 10, 11, 25, 30, 38), and in forest and coastal scrub on the mainland in the Cape Reinga to North Cape, Cape Karikari and Whangaroa areas (ie sites 10, 17, 20). Endemic taxa include land snails (eg Placostylus spp, Rhytida spp, Liarea spp, Allodiscus spp - see Powell 1979), reptiles (eg Leiolopisma fallai), birds such as Three Kings Bellbird (Anthornis melanura obscura), and plants (eg Tecomathe speciosa, Pennantia baylisiana, Elingamita johnsonii, Asplenium pauperequitum, Pittosporum michei, Metrosideros bartletti, Pseudopanax gilliesii).

- (c) Geological features of significance in determining Pleistocene and Holocene global sealevel changes. These include paleobeach and subtidal deposits and marine cut surfaces such as are present in Hokianga, Whangape, Parengarenga, Houhora, Rangaunu, and Whangarei Harbours, and at Kawerua, Ahipara, Waikuku Beach, Tokerau Beach, Bay of Islands and Bream Bay (ie within sites 4, 5, 7, 9, 10, 12, 14, 15, 23, 35, 36).
- (d) Marine habitats containing locally endemic species and New Zealand endemics that are very rare elsewhere are present at Three Kings Islands and in the Cape Reinga area (ie within sites 10, 11). Significant taxa include the Three Kings butterflyfish (Odax cyanoallix), molluscs (eg Gomphina maorum, Venericardia reinga, Cominella regalis, Marginella aupouria, Marginella valei), and algae (eg Sargassum johnsonii, Perisporochnus regalis).

AREAS OF NATIONAL SIGNIFICANCE

- (a) Forest remnants on the mainland coast. These are present in a number of areas including Maunganui Bluff, Hokianga, Whangape, Ahipara, Houhora, Orongo Point, Whangaroa, Bay of Islands, Whangaruru, Mimiwhangata, Bream Head and Bream Tail (ie sites 3, 4, 5, 6, 7, 14, 18, 19, 20, 22, 24, 25, 26, 27, 29, 31, 33, 34, 37).

The forest remnants are important refuges for a number of coastal restricted species including plants (Hebe speciosa, Myoporum laetum, Metrosiderus excelsa, Pseudopanax lessonii, Planchonella novaezelandiae) and land snails (eg Placostylus hongii).

- (b) Beach and dunefield habitats are nationally significant in several respects. Beaches are roosting, nesting and feeding areas for coastal birds such as the threatened endemic New Zealand dotterel (Charadrius obscurus), and the rare and endemic variable oystercatcher (Haematopus unicolor). Endangered taxa that are present locally in coastal dunes include several plant species (eg Leptinella rotundata, Euphorbia glauca, Eleocharis neozelandica, Theleophyton billardierei, and Hibiscus diversifolius), and the land snail Austrosuccinea archeyi. Coastal forest was formerly widespread on dunefields in Northland but is now restricted to small remnants near Herekino Harbour mouth, and The Bluff in Ninety Mile Beach. Swamps and lakes within dunefields locally contain endangered and restricted species such as the plants Lycopodium serpentinum, Phylloglossum drummondi, Cyclosorus interruptus, Thelypteris confluens, Thelymitra matthewsii, Cryptostylus subulata, Corybas unguiculatus, Colochilus campestris, Hydatella inconspicua and Myriophyllum robustum. The black mudfish Neochanna diversus is present locally. Swamps and lakes are also important feeding areas for birds such as the threatened endemic New Zealand dabchick (Podiceps rufopectus), bittern (Botaurus stellaris poiciloptilus), New Zealand scaup (Aythya novaeseelandiae), fernbird (Bowdleria punctata vealeae) and spotless crake (Porzana tabuensis plumbea).

Unvegetated transverse dunefields north of Hokianga Harbour mouth at Tauroa Point and near Scott Point are of geomorphological significance as remnants of a landform that was formerly widespread in the Northland coast.

Nationally significant beach and dune habitats and features are present in sites, 2, 3, 4, 6, 9, 10, 12, 13, 14, 15, 17, 22, 27, 31, 32, 33, 36.

- (c) Estuaries and coastal wetlands. These are important as feeding and breeding areas for a number of fish species including galaxiids, snapper (Chrysophrys auratus) and yellow eyed mullet (Aldrichetta forsteri), and also for birds such as banded rail (Rallus Phillipensis assimilis), bittern, spotless crane, endangered and endemic brown teal (Anas aucklandica chlorotis), marsh crane (Porzana pusilla affinis), fernbird, endangered and endemic black stilt (Himantopus novaezealandiae), and white heron (Egretta alba modesta).

Important estuarine and coastal wetland areas are present at Whangape, Mangonui, Whangaroa, Takau, Bay of Islands, Whangaruru, Whananaki, Matapouri, Pataua, Ruakaka and Waipu (ie within sites 7, 18, 20, 22, 23, 24, 26, 28, 29, 31, 32, 36).

- (d) Coastal marine areas influenced by the East Auckland current. That current contains subtropical water masses derived from the northwestern Tasman Sea, and flows southeastwards adjacent to eastern Northland. It impinges on Three Kings Islands, North Cape, Moturoa Islands, Cape Karikari, Stephenson Island, Cavalli Islands, Cape Brett and Poor Knights Islands (ie within sites 10, 11, 16, 17, 21, 25, 30). Several endemic New Zealand species and Indo-Pacific species are present in those and adjacent areas, but are rare or absent elsewhere around the New Zealand coast. Endemics include the coral Oculina virgosa, and a number of molluscan species (eg Morula palmeri, Liratilia sinuata, Macrozafra enwrighti). Indo-Pacific species include several species of mollusc (eg Bursa verrucosa, Volva longirostrata), echinoids (eg Heliocidaris tuberculatus, Tripneustes gratilla), and a variety of fish including clown toado (Canthigaster callisterna), rainbow fish (Suezichthys arguatus), combfish (Coris picta), painted moki (Cheilodactylus ephippium), Lord Howe coralfish (Amphichaetodon howensis), and toadstool grouper (Trachypoma macracanthus).

2.3 Existing Protection

Very few of the coastal areas in Northland that are identified here as being of international significance are within existing reserves. Terrestrial habitats at Motuopao, Three Kings, Cavalli, Poor Knights and Hen and Chickens Islands are protected as Scenic and Scientific Reserves, and parts of the Cape Reinga and North Cape areas are protected within a Farm Park and Scientific and Scenic Reserve. Important terrestrial habitats at Matapia, Moturoa, Stephenson and Motukokako Islands, and in the Spirits Bay area, are privately owned and lack legal protection. Migratory wader habitat and significant geomorphological features in Hokianga, Whangape, Herekino, Parengarenga, Houhora and Rangaunu Harbours similarly lack protection, but Wildlife Refuges are present in parts of Whangarei and Ngunguru Harbours. Endemic marine biotas and habitats in the Three Kings Islands and Cape Reinga areas are unprotected.

Of the nationally significant areas of coastal forest, some are within existing Scenic Reserves (eg in Maunganui Bluff, Cape Karikari, Whangaroa, Bay of Islands, Whangaruru and Bream Head areas), but other important forest remnants are on private land and lack protection (eg those in Houhora, Berghans Point and Cape Brett areas). Only a small proportion of nationally significant dunefield habitats are within existing reserves (ie parts of Hokianga, Cape Reinga, North Cape, and Rangaunu areas). Estuary and coastal wetland habitats at Waipu, Ruakaka and Matapouri are partly protected within Wildlife Refuges, but similar protection is lacking in harbours and estuaries elsewhere in Northland. The only nationally significant subtidal habitats in Northland that are protected within a marine reserve are at Poor Knights Islands.

3.0 SPECIFIC ISSUES RELATING TO THE NORTHLAND COAST

Broad issues of concern to the Department of Conservation in Northland include the following:

- modification of harbours and estuaries
- modification of beach and dune systems
- modification and removal of coastal forest
- modification of intertidal and subtidal rocky reef biotas

3.1 Modification of Harbours and Estuaries

Specific issues are:-

- (a) Increased water turbidity and intertidal and subtidal mud deposition resulting from removal of vegetation cover in adjacent fluvial catchments. All harbours and estuaries within Northland are affected in this way to some degree, but Kaipara, Hokianga, Whangaroa, inner Bay of Islands, and Whangarei Harbours are probably most affected.
- (b) Changes in local intertidal and subtidal sedimentation and erosion caused by manmade structures (eg causeways, stopbanks, breakwaters) has occurred in Whangarei, Tutukaka, inner Bay of Islands, Mangonui and Hokianga Harbours.
- (c) Destruction of mangrove forest and saltmarsh as a result of reclamation, and grazing and trampling by farm animals. This has occurred in Kaipara, Hokianga, Whangape, Herekino, Bay of Islands and Whangarei Harbours.
- (d) Reduced water quality resulting from contamination by industrial wastes (eg Whangarei Harbour) and by residential and agricultural effluent (most harbours and estuaries, albeit to varying degrees).

- (e) Invasion of intertidal substrates by exotic Spartina grass species (eg in Parengarenga, Houhora, Rangaunu and Hokianga Harbours).
- (f) Spoil and refuse dumping, mostly for waste disposal, but locally as an attempt to prevent coastal erosion (eg at Te Hapua, Kaimaumu, One Tree Point).

Marine farms are an important coastal policy issue elsewhere in New Zealand. Aquaculture occurs in Northland in Kaipara, Parengarenga, Whangaroa and Bay of Islands Harbours, but its environmental impact in those areas is unknown. The environmental effects of other fishing methods in harbours and estuaries in Northland are similarly not known.

3.2 Modification of Beach and Dune Systems

Specific issues are:-

- (a) Modification of dunes and destruction and disturbance of indigenous biotas, archaeological sites, and subfossil deposits as a result of fire, residential subdivision, offroad vehicles, forestry plantation, and interference by introduced grazing animals.
- (b) Destruction and disturbance of interdune wetlands by fire, agricultural development (eg Kaipara and Aupouri and Karikari peninsulas), and peat mining (eg Kaimaumu).
- (c) Disturbance of nesting birds on beaches by vehicles, humans, dogs and stock.
- (d) Erosion of sandy coasts as a consequence of natural or human induced processes.

3.3 Modification and Removal of Coastal Forest

Specific issues are:-

- (a) Removal of indigenous coastal forest for agricultural purposes, timber extraction, exotic forestry plantation, and residential subdivision.
- (b) Modification of indigenous biotas in coastal forest by exotic plants and animals. Browsing mammals such as possums, pigs, goats and cattle hinder forest regeneration and lead to reduced abundances of some plant species (eg Metrosideros excelsa, Meterosideros robusta, Dysoxylum spectabile, Pseudopanax arborea). Predators such as rats, cats, mustelids and pigs are inferred to have caused reduced abundances and local extinctions of some animal species (eg Placostylus spp, brown teal, New Zealand dotterel, variable oystercatcher, grey-faced petrels).

3.4 Modification of Intertidal and Subtidal Rocky Reef Biotas

Populations of kina (Evechinus chloroticus), paua (Haliotis iris), crayfish (Jasus edwardsii) and edible non-pelagic fish species such as red moki (Cheilodactylus spectabilis), hapuka (Polyprion oxygeneios), snapper (Chrysophrys auratus), blue cod (Paraperchis colias), butterflyfish (Odax pullus) and leatherjacket (Parika scaber) have locally been severely depleted in rocky reef areas as a result of commercial and recreational fishing pressure.

No data are available on modification of subtidal soft substrates, but it is likely that sand dredging, and commercial trawling for scallops (Pecten novaezelandiae) and benthic finfish have had a significant effect on habitats and biotas at least locally. Depletion of scallop stocks has occurred in many inshore areas as a result of recreational fishing.

4.0 DIRECTIONS FOR SECOND ORDER SURVEY

Because this survey was carried out over a relatively short period, only a small amount of the available information was able to be collated and synthesised. As a result, there are significant gaps in the coverage of data on conservation values, threats, modification and use that will need to be addressed during the second stage of the coastal resources inventory. In particular there is a lack of detailed and general information on marine natural values, and threats to marine biotas and habitats.

In view of this, and because of the emphasis presently being given to creation of marine reserves, the second stage of the coastal survey should pay particular attention to obtaining information on subtidal and intertidal biotas and habitats of harbours, estuaries and other coastal areas. Determination of the location and extent of unique habitats and endemic Northland species and biotas will be of particular importance.

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INSTRUCTIONS FOR USE OF THE COASTAL RESOURCE INVENTORY

This folder consists of an introduction, summary, site record forms, and maps. The site record form gives written information on each site and is to be used with corresponding maps for that site.

Read the site record form with its corresponding maps by following these steps:

SITE RECORD FORMS

1. Turn to the site record forms.
2. Find the site number in the top right-hand corner of the page e.g. CRI 01 0001. The number 01 represents a conservancy coastline. Refer to map of New Zealand below e.g. 01= Northland Conservancy. The number 0001 refers to a particular site e.g. Firth of Thames.
3. Each site record form gives written information on the following:

natural values cultural values historic values	}	site of conservation value
--	---	-------------------------------

existing threats
 human use and modification
 existing protection

4. Letter codes (a,b,c,d,e,f,g) give detail for each part of the information on the site record form. A key is provided on the maps and the codes are listed in the "Methods" section.

MAPS

5. Turn to the map index overleaf. The index gives the site number and its corresponding maps.
6. Find the corresponding maps in the second part of the folder.
7. Accompanying the maps are two transparent map overlays:
 - i) CONSERVATION VALUES overlay
 - ii) BASE MAP overlay
8. The BASE MAP and CONSERVATION VALUES overlays are designed to lift out and overlay onto each of the previous pages (i.e. natural, cultural, historic, human modification and use, existing threats, existing protection etc.)
9. To accurately overlay the base map with each page, use register marks which are found on each map.

i.e.  overlays on 

DEPARTMENT OF CONSERVATION COASTAL CONSERVANCIES

- | | |
|------------------|------------------------|
| 1. Northland | 8. Wellington |
| 2. Auckland | 9. Nelson/ Marlborough |
| 3. Waikato | 10. Canterbury |
| 4. Bay of Plenty | 11. West Coast |
| 5. East Coast | 12. Otago |
| 6. Hawkes Bay | 13. Southland |
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GLOSSARY

archaeological site	Any place in New Zealand associated with human activity which occurred more than 100 years before that time.
historic place	A place which is associated with the past. This includes archaeological sites, traditional sites, buildings, natural objects and historic areas.
holostratotype	A geological term describing the type section that has become the time definition for a New Zealand stage.
tombolo	A bar connecting an island with the mainland or with another island.
type locality	The place where a geological formation is named, and is typically displayed.
ventifact	Rock cut by wind-blown sand.

BIOLOGICAL TERMS:

endangered	Species in danger of extinction and whose survival is unlikely if the causal factors continue operating. Included are those whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are considered to be in immediate danger of extinction.
threatened/ vulnerable	Species believed to likely to move into the endangered category in the near future if the causal factors continue operating.
regionally threatened	Where species are considered to be threatened regionally.
rare	Species with small world populations that are not at present endangered or vulnerable, but are at risk. These are usually localised within restricted geographic areas or habitats or are thinly scattered over a more extensive range.
indeterminate	This category is used for plants thought to be extinct, endangered, vulnerable or rare, but for which there is insufficient information to allow allocation to a category.

In New Zealand a category additional to those used by IUCN (International Union for the Conservation of Nature and Natural Resources) has been found useful:

local	This category includes plants not under threat but potentially threatened, and hence deserving some level of monitoring and possibly protection. Included are regional endemics, plants of potentially vulnerable habitats, and species occurring as frequent but small populations.
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endemic	A species which is confined to New Zealand and is not found elsewhere.
endemic subspecies	A subspecies or geographic race which is confined to New Zealand.
introduced	A species which has been transported to New Zealand, and helped establish by humans.

MAORI**ENGLISH**

hāngi hapū	earth oven section of large tribe, clan, subtribe
iwi	nation, people; tribe that traces its history back to a common ancestor
kai moana kāinga kaitiaki Kaumātua kōhatu/ toka	food from the sea dwelling place, village guardian, keeper adult, old man or woman stone, rock
mātaitai mahinga mātaitai mahinga kai mana mana whenua marae mauri midden moana Moriōri	food resources from the sea the areas from which these resources are gathered sites for harvesting kai moana according to tribal customary values authority, control; influence, prestige, power; psychic force customary authority exercised by a tribe in an identified area enclosed space in front of a meeting house, courtyard life principle which is latent in all things Māori shell deposits sea tangata whenua of Rēkohu (Chatham Islands)
pā	fortified place
rāhui rūnanga	control/ restriction (e.g. fishing control) assembly/ council
taiāpure	area of coastal water set aside under the Maori Fisheries Act 1989 as a local fishery because of its special significance to an iwi or hapū, either as a source of food or for spiritual or cultural reasons
Tangaroa Tangata whenua tapu tauranga waka tupuna/ tipuna	god of the sea indigenous people sacred, forbidden (tapu consists of different levels of prohibitions) original canoe landing site ancestor/ grandparent
urupā	burial place
wāhi tapu waka whānau	sacred site canoe; supra-tribal grouping family

Site Record Forms

SITE NAME: Wairoa River SITE NO: CRI/01/0001

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: P08/25970,65710 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This includes coastline along the Wairoa River between Kelly's Bay and Dargaville. Adjacent areas are mostly farmed, and extensive areas of reclamation are present. Mangrove, saltmarsh and freshwater wetlands are present locally.

CONSERVATION VALUES: Natural - bcdh Cultural - a Historic - ab

Comment:

This area is important for birdlife, with coastal and freshwater wetlands supporting dabchick (Podiceps rufopectus), bittern (Botaurus stellaris poiciloptilus), fernbird (Bowdleria punctata vealeae), and banded rail (Rallus philipensis assimilis). Intertidal areas are important for seabirds and waders such as caspian tern (Hydroprogne caspia), New Zealand dotterel (Charadrius obscurus), golden plover (Pluvialis fulva), pied oystercatcher (Haematopus ostralegus finschi), pied stilt (Himantopus himantopus leucocephalus), and godwit (Limosa lapponica baueri) (Ogle 1984).

The Wairoa was an important waterway in both the prehistoric and early historic periods. Apart from Pouto Peninsula there have been no extensive surveys of the area but a number of pa, pits and terrace sites have been recorded on hills and promontories overlooking the river. It may be assumed that the extensive river flats were used for Maori cultivations as vast crops of kumara and other vegetables are currently produced here.

Surveyed areas on the Pouto coast contain a variety of pa, midden and historic sites (Brassey & Spring-Rice 1985). Behind the coast a strip of Red Hill sands runs down the peninsula. It is covered with a dense concentration of pa and large groups of pits - from 50-200 pits per square mile (Harnett 1972:189). These soils were obviously important for prehistoric agriculture.

European settlement on the Wairoa began in the 1860's based on the timber and kauri gum trades. Many gum digging camps, gumstores and timber mills were located on and near to the river banks.

The NZ Historic Places Trust has classified 32 buildings in the area. Most of these are considered of local importance, but the Post Office and Central Hotel in Dargaville are denoted as buildings of regional significance.

SITE IMPORTANCE: International

Comment:

Intertidal areas frequented by migratory waders are of international importance. Coastal and freshwater wetlands are nationally important.

EXISTING THREATS: Type - c

Comment:

Dense swards of the exotic reed Zizania latifolia are present on brackish and freshwater margins of the Wairoa River (P Anderson pers. comm. 1990).

HUMAN MODIFICATION AND HUMAN USE: Type - abcdj**Comment:**

Coastal areas have been modified by removal of indigenous vegetation and development of pastoral farming. Extensive residential and commercial development has occurred in the Dargaville area, and a small commercial port and boat moorings are present there also. The Wairoa River area contains sites of traditional Maori use.

EXISTING PROTECTION: Type - a**Comment:**

A small area of coastal wetland near Kelly's Beach is included within a reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 2 <u>3</u>	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	1 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Braney R, Spring-Rice W, 1985 : Archaeological survey of potential barging terminal locations, Pouto Peninsula. Unpublished New Zealand Forest Service report.

Harnett I K, 1972 : A preliminary report on the prehistory of North Kaipara Head. MA thesis, University of Auckland Library.

Ogle C L, 1984 : Wildlife and Wildlife Values of Northland, New Zealand Wildlife Service Fauna Survey Report No. 30.

RECORDED ON EXISTING DATABASES:	1. WERI
	<u>2. SSWI</u>
	3. PNA
	4. Geopreservation
	5. HPT County Inventories
	6. Other
	7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Baylys Beach SITE NO: CRI/01/0002

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: P08/25820,65770 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This includes the area between Black Rocks and Moremonui Gully on the west coast. A sandy beach is backed at high tide level by moderately high cliffs cut in Pleistocene dunesands. Dune lakes and swamp are present locally in gullies and depressions inland from the coast. Pastoral farming occurs over much of the area.

CONSERVATION VALUES: Natural - ceh Cultural - abc Historic - b

Comment:

Lakes and freshwater swamps in this area are important for birdlife. Species present include spotless crane (Porzana tabuensis plumbea), bittern (Botaurus stellaris poiciloptilus), dabchick (Podiceps rufopectus), scaup (Aythya novaeseelandiae), fernbird (Bowdleria punctata vealeae), marsh crane (Porzana pusilla affinis), pied shag (Phalacrocorax varius varius), black shag (Phalacrocorax carbo novaehollandiae), and little shag (Phalacrocorax melanoleuros brevirostris). Important wetland plant associations are present locally (Ogle 1984). Lignite seams and paleosols exposed in coastal cliffs are of scientific importance for determining Pleistocene climates and floral composition. The toheroa (Paphies ventricosa) is present locally in intertidal areas. Areas of traditional value are likely present, and the coastline has high aesthetic and landscape value.

There have been no archaeological surveys of this stretch of coastline. Only a few pa and midden have been recorded in the area, most of these in the vicinity of Moremonui Gully. Other west coast surveys indicate that this section probably contains numerous middens in the dunes, and a broad strip of Red Hill sands behind the dunes will almost certainly be covered in pit sites. Agricultural evidence in the form of extensive prehistoric drains was noted along this coast in the 19th century. An area survey of the coast and its immediate hinterland is required. The corvette l'Alcmene was wrecked off Baylys Beach in 1851.

SITE IMPORTANCE: National

Comment:

This site includes nationally important wetlands and geological features.

EXISTING THREATS: Type - aek

Comment:

Coastal cliffs are subject to wave erosion. Effluent disposal is a threat adjacent to residential settlements, and recreational vehicles and illegal harvesting pose a threat to toheroa beds.

HUMAN MODIFICATION AND HUMAN USE: Type - ahj

Comment:

The coastline has been modified most by removal of indigenous vegetation, and the development of pastoral farming.

EXISTING PROTECTION: Type - a

Comment:

An area of coastline near Glinks Gully and a wetland at Omamari have reserve status.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	1 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Harding E, 1928 : Prehistoric drains on the Kaipara west coast. Journal of the Polynesian Society 37 : 367-368

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Maunganui Bluff	SITE NO:	CRI/01/0003
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	007/25640,65020	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This includes Maunganui Bluff and the Kai-iwi Lakes area to the southeast. Maunganui Bluff is a prominent rock headland that is flanked to the north and south by sandy coasts backed by extensive Pleistocene and Holocene dunefields.

CONSERVATION VALUES: Natural - abcgh Cultural - c Historic - b

Comment:

Maunganui Bluff hosts an important coastal forest remnant with one of the few pohutukawa stands on the west coast, and is a site for the plants Leptinella rotundata, Hebe speciosa, Fuschia procumbens and Metrosideros carmesina (L Forester pers. comm. 1990). Birds present include pied tit (Petroica macrocephala toitoi), New Zealand pigeon (Hemiphaga novaeseelandiae novaeseelandiae), kiwi (Apteryx australis mantelli), tui (Prosthemadera novaeseelandiae novaeseelandiae), and grey warbler (Gerygone igata igata), and bats (Chalinolobus tuberculatus) have been reported. Blue penguins (Eudyptula minor iredalei) and black shags (Phalacrocorax carbo novaehollandiae) nest on the coastal edge. Swamps and lakes in the Kai-iwi Lakes area support a variety of threatened bird species including bittern (Botaurus stellaris poiciloptilus), fernbird (Bowdleria punctata vealeae) and dabchick (Podiceps rufopectus), and the more widespread mallard (Anas platyrhynchos platyrhynchos), grey duck (Anas superciliosa superciliosa), shoveler duck (Anas clypeater), grey teal (Anas gibberifrons gracilis), and little shags (Phalacrocorax melanoleucos brevirostris). The endangered water plant Hydatella inconspicua is present in some lakes (Ogle 1984).

Maunganui Bluff has high landscape and aesthetic value and is of great traditional significance to Ngati Whatua people. It contains pa, undefended living sites and stone features associated with Maori agriculture. Only one prehistoric site, a badly eroded pa, has been recorded near Kai-iwi Lakes but the area has not been thoroughly inspected for archaeological sites. There is extensive evidence of gundigging in the area.

SITE IMPORTANCE: National

Comment:

The presence of endangered plant species and a number of threatened bird species makes this area nationally important.

EXISTING THREATS: Type - cd

Comment:

Goats, possums and cattle are damaging vegetation on Maunganui Bluff, and stock are threatening Hydatella inconspicua in dune lakes. Dune lakes are being invaded by exotic plants.

HUMAN MODIFICATION AND HUMAN USE: Type - ahij**Comment:**

Much of the coastal forest in this area has been removed, and pastoral farming is now widespread. Some wetlands have been drained. There is a small settlement at Aranga Beach and a camping ground at Kai-iwi Lakes. The area is important for traditional use and shoreland-based recreation.

EXISTING PROTECTION: Type - ac**Comment:**

The seaward part of Maunganui Bluff is within the Maunganui Bluff Scenic Reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Kawerua SITE NO: CRI/01/0004

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 006/25510,66180 DATE: 23.4.89

BRIEF DESCRIPTION OF SITE:

Includes the coastline between Maunganui Bluff and Hokianga. The southern part of the area comprises a sandy coastline backed by Pleistocene dunefields, whereas from Kawerua northwards sandy beaches are interspersed with rock headlands and extensive intertidal reefs. Two moderately large rivers drain onto the coast in this area (ie Waipoua and Waimamaku Rivers). Coastal areas are mostly planted in pasture and pine forest, but indigenous forest extends close to the coast north of Kawerua and indigenous scrub and dunefield vegetation are present locally.

CONSERVATION VALUES: Natural - abcdegh Cultural - abc Historic - abd

Comment:

Natural - The area is important for bird life. Beaches are nesting areas for New Zealand dotterel (Charadrius obscurus) and blue penguin (Eudyptula minor iredalei), grey faced petrels (Pterodroma macroptera gouldi) nest on Hokianga South Head, and fernbirds (Bowdleria punctata vealeae) are present in regenerating scrub and wetlands. A dense raupo-flax swamp in Muriwai stream contains high numbers of bittern (Botaurus stellaris poiciloptilus) and spotless crane (Porzana tabuensis plumbea) (Ogle 1984). Coastal vegetation locally includes the plants Fuschia procumbens, Spiranthes sinensis, Loxosoma cunninghami, Pittosporum pimeleoides, Chionocloa conspicua and Pimelea tomentosa. Hokianga South Head is the only known locality for an undescribed species of Hebe (L Forester pers. comm. 1990). Pleistocene wave-cut terraces, intertidal deposits and dunes are of geomorphologic significance.

Cultural - The area was extensively populated by Maori and contains sites of traditional value. It also has significant aesthetic and landscape value.

Historic - Pa, pits and midden have been recorded along the coastline with sites tending to cluster near river and stream mouths (Atwell et al 1973, Puch 1974).

Major river valleys draining to the coast contain evidence of dense prehistoric occupation. Intensive surveys have concentrated on Waipoua Valley which is largely covered with archaeological landscapes of stone structures and garden areas. Features include stone walls, mounds and alignments, pits, terraces, house sites and drains (c.f. Lawlor 1984, Taylor 1986). (14 dates from excavations in the valley indicate that the area was well occupied by the 15th century (Taylor 1988)).

Timber and gum industries were of major importance in the early European period, and remains of gum digging are common in the Kawerua and Waipoua areas.

Historic sites also include the hotel at Kawerua and remnants of the old signal station at South Hokianga Head. This was built in 1864 although signal flags had been in use to guide ships across the bar since 1830 (Spring-Rice 1986).

SITE IMPORTANCE: International

Comment:

Habitat of the undescribed, locally endemic Hebe at Hokianga South Head is internationally significant. Wetland, scrub, dune and beach habitats supporting rare and endangered plant and bird species are nationally important, as are Pleistocene dune and beach deposits and archaeological sites.

EXISTING THREATS: Type - cik

Comment:

Coastal areas are susceptible to invasion by noxious weeds such as gorse and blackberry. Paua and mussel populations near Kawerua are being depleted by overfishing and recreational vehicles are locally damaging dunefield habitat. Waipoua pine plantation is infested with Hakea sericea. Wandering dogs are killing blue penguins within the site (P Anderson pers. comm. 1990).

HUMAN MODIFICATION AND HUMAN USE: Type - ahj

Comment:

Much of the coastline has been modified as a result of forestry and pastoral farming. Traditional use and existing shoreland-based recreation comprises mainly fishing and shellfish gathering.

EXISTING PROTECTION: Type - a

Comment:

Reserves are present at Hokianga South Head, and along parts of the coastline between Waimamaku River mouth and Maunganui Bluff.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:**SOURCES OF INFORMATION:**

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Atwell E G, Puch G F, Lawn R, 1973 : Archaeology of the Waipoua region Part I. Tane 19

Lawlor, 1984 : Waipoua State Forest 13, archaeological resource book. NZ Forest Service.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand

Wildlife Service fauna survey unit report 30.

Spring-Rice W, 1986 : Historical background and archaeological survey of South Hokianga Head signal station. Department of Lands & Survey.

Taylor M, 1986 : Report on the proposed historic and traditional (archaeological) reserve in Waipoua State Forest 13. NZ Forest Service.

Taylor M, 1988 : Radiocarbon dates from Waipoua Forest. Dept of Conservation.

Wilson C, Given D, 1989 : Threatened plants of New Zealand. DSIR Publishing, Wellington

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Hokianga Harbour SITE NO: CRI/01/0005

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 005/25570,66460 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

The Hokianga occupies a drowned river valley and extends well inland. It is about 11500 ha of which about a quarter is covered in mangroves and saltmarsh and half comprises tidal mudflats.

CONSERVATION VALUES: Natural - abcdegh Cultural - c Historic - abc

Comment:

High value coastal habitat is present in an almost continuous band around the margin of the harbour, it includes Juncus, Leptocarpus, Muelenbeckia and mangrove. In Tapawae and Waima arms coastal forest is locally continuous with coastal wetland. Hokianga Harbour is important for birdlife including banded rail (Rallus philippensis assimilis), spotless crane (Porzana tabuensis plumbea), reef heron (Egretta sacra sacra), New Zealand dotterel (Charadrius obscurus) and fern bird (Bowdleria punctata vealeae), and marsh crane (Porzana pusilla affinis), brown teal (Anas aucklandica chlorotis), white heron (Egretta alba modesta) and little egret (Egretta garzetta) have been recorded (Ogle 1984; Coastal Wetland Inventory). The south head of the harbour is the only known site for an undescribed species of Hebe. Holocene and Pleistocene dunes on the north head of Hokianga Harbour are an important geomorphological feature.

There has been extensive Maori settlement around the harbour from the early prehistoric period. Site recording has been patchy with the exception of a stretch of coast from the north head of the harbour to Motuti. This contains evidence of dense prehistoric occupation with numerous pa, undefended settlements and midden. The large number of storage pits at many sites indicate successful agriculture in fertile stream valleys. Sites are mainly concentrated within 1km of the coast apart from the Wairua to Mitimiti corridor which has a very high site density (Leahy & Walsh 1979, Wright & Court 1977). The southern coast and river valleys of the Hokianga are also of great archaeological importance but few sites have been recorded in the NZ Archaeological Association files. Whiria, Rahiri's pa near Pakanae, is of particular significance to Ngapuhi people. Small islands in the harbour, eg Motiti and Motukaraka, contain dense midden and stone work floors. They appear to have been occupied over a long time period (Maingay 1989).

The Hokianga was of continuing importance during the early prehistoric period. The Methodist Mission was established on the south shore, the Catholic Mission on the north. Remains of the Catholic Mission at Purakau are particularly interesting as they include an unusual tidal flour mill and remnants of mill machinery. There are also sites on both sides of the harbour associated with early timber milling and ship building industries (Lee 1987).

Archaeological survey of the South Hokianga should be a high priority especially in areas affected by increased tourism and subdivision.

SITE IMPORTANCE: International

Comment:

Hokianga wetlands are of international importance as bird habitat. Pleistocene dunes, coastal forest remnants and archaeological sites are of national importance.

EXISTING THREATS: Type - bcdej

Comment:

22 hectares of mudflat have been colonised by exotic *Spartina* grasses. Coastal wetlands are locally threatened by stock browsing and trampling. Sediment erosion from deforested fluvial catchments is causing siltation and water turbidity within the harbour. Water quality is also reduced by residential effluent and pastoral runoff, and refuse disposal locally takes place in coastal areas (eg Rawene).

HUMAN MODIFICATION AND HUMAN USE: Type - abdhij

Comment:

Small residential settlements are present around the Hokianga coastline. Surrounding areas are largely deforested and are either in pastoral farms or scrub. Mangrove habitat has been reduced from about 6300ha to about 2700ha and about 11% of harbour wetlands have been reclaimed. Small wharves and associated structures are present at Opononi, Omapere, Rawene and Kohukohu, and car ferry ramps are present at Rawene and south of Kohukohu. Camping grounds are present at several localities. The harbour is important for shoreland-based and water-based recreation, and for traditional Maori food collecting.

EXISTING PROTECTION: Type - acd

Comment:

Scenic reserves are present at Tapuwae and Mangataipa and a historic reserve is present at South Head.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Leahy A & Walsh W, 1979 : Archaeological site survey report Ahipara, North Hokianga, Kaitaia area. NZ Historic Places Trust.

Lee J, 1987 : Hokianga. Hodder & Stoughton

Maingay J, 1989 : Motiti Island, Hokianga Harbour : its historical significance and archaeological potential. Archaeology in New Zealand Vol No 1

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Wright A E & Court A A, 1977 : Report on Mitimiti - Waireia - North Head archaeological site survey, North Hokianga. NZ Historic Places Trust.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory (Department of Conservation, unpublished report).

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Hokianga to Ahipara Bay SITE NO: CRI/01/0006

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: N05/25289,66510 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This area includes long stretches of sandy coastline with scattered rock headlands and intertidal reefs between Hokianga and Whangape harbours, and between Herekino Harbour and Tauroa Point. Elsewhere the coast is predominantly rocky albeit with sandy and shelly beaches locally. The coast is backed by steep hill country between Mitimiti and Herekino Harbour mouth. Unvegetated dunes are present on Tauroa Peninsula and at Hokianga North Head. Pine plantations are present north of Hokianga and Herekino Harbour mouths, and rough pasture is present locally between Mitimiti and Ahipara. Extensive forest is present on coastal ridges between Mitimiti and Whangape Harbour (Warawara State Forest) and forest remnants are present in some coastal valleys further north.

CONSERVATION VALUES: Natural - beh Cultural - abc Historic - abd

Comment:

Natural - Important coastal forest habitat is present in Warawara State Forest and in some valleys between Whangape and Tauroa Peninsula. Gumland scrub near Ahipara contains unusual plant associations that include Hibiscus diversifolius and Phylloglossum drummondii. The endangered plants Euphorbia glauca, Mazus pumilio, Eleocharis novozealandica and Asplenium northlandicum are locally present in coastal areas (Wilson & Given 1989). New Zealand dotterels (Charadrius obscurus) nest on sandy beaches in this area, and toheroa (Paphies ventricosa) are present in low numbers on some sandy beaches. Unvegetated transverse dunes at Hokianga North Head are a notable geomorphological feature.

Cultural and Historic - The area was extensively settled and utilised by Maori and likely contains sites of traditional value. It has high aesthetic and landscape value. Dunes along this coastal strip contain numerous midden and hangi sites and several stone workfloors. Many of these sites are heavily eroded but some of the most interesting remain partly 'in situ'. For example sites near Mitimiti contain chert and obsidian flakes, adze fragments, dog and fish bone and industrial bone - at least two contain archaic adze types. Another site with archaic characteristics is located just south of Tauroa Point and contains a wide variety of stone tools and mammal bone, some of which was used for industrial purposes (Johnson 1989). The coastal area between Mitimiti and Whangape Harbour has unusually dense evidence of occupation for the exposed West Coast. This includes pa, pit and terrace sites and evidence of prehistoric gardening. Extensive groups of pits cut into semi-indurated sandstone lie within a coastal belt of Pinaki sand, suggesting that this light well-drained soil was used for kumara cultivation (Wright & Court 1977).

The Ahipara plateau contains a broad expanse of gumlands, with evidence of kauri gum extraction over more than 250ha. It represents the only remaining example of the hydraulic prepared trench method instigated by Austrian immigrants. This is a unique early industrial landscape (Johnson 1989).

SITE IMPORTANCE: National

Comment:

New Zealand dotterel nesting areas, coastal forest remnants, endangered plants and archaeological sites make this area nationally important.

EXISTING THREATS: Type - cd

Comment:

Gorse and other invasive exotic plants are widespread in some areas. Some dunefield and forest habitats are threatened by introduced browsing animals (eg pigs, possums, cattle, horses).

HUMAN MODIFICATION AND HUMAN USE: Type - ahjk

Comment:

Most of the original coastal forest has been removed. Extensive areas of dunefield north of Hokianga and Herekino Harbours are planted in pine forest, and cattle are grazed in coastal areas. A small residential settlement and camping ground are present at Mitimiti. Fishing and shellfishing are important traditional and recreational uses. Sand is mined from an active dune near Tauroa Point.

EXISTING PROTECTION: Type - a

Comment:

Warawara Forest, parts of Ahipara gumlands, and Hokianga North Head are within reserves.

AVAILABILITY OF INFORMATION:

Natural	1 <u>2</u> 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:**SOURCES OF INFORMATION:**

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Johnson L, 1989 : In Ahipara draft management plan. Department of Conservation report.

Ogle CC, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Wilson C M, Given D R, 1989 : Threatened Plants of New Zealand. DSIR Publishing, Wellington.

Wright A E, Court A A, 1977 : Report on Mitimiti - Waireia - North Head archaeological survey, North Hokianga. New Zealand Historic Places Trust report.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Whangape Harbour SITE NO: CRI/01/0007

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 005/25330,66510 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Whangape Harbour is situated on Northland's west coast between Herekino Harbour 10km to the north and Hokianga Harbour 20km to the south. It is a tidal harbour comprising 53% mudflats, 19% mangroves and 28% permanent water. In total it covers some 850 hectares and is surrounded by steep, cleared land suffering from considerable erosion. The harbour is unique as it opens to the sea via a 4km long, 150 metre wide channel, bordered by steep hills. No other harbour in Northland has a channel opening such as this. Wetland habitat in the site has potential value at present not realised due to disturbance caused by local land use.

CONSERVATION VALUES: Natural - bcdegh Cultural - c Historic - bd

Comment:

Fernbird (Bowdleria punctata vealeae) occur in the saltmarsh vegetation. Wading birds use the area only to a limited degree. Saltmarsh of Juncus, Cotula and Samolus is widespread up the Awarua arm, and mangroves (Avicenna marina var. resinifera), including some of the tallest in New Zealand at up to 10m in height, form a fringe to mudflats in both arms of the harbour. These habitats are locally important and have potential value due to the large area involved. The habitats are sensitive to siltation caused by increased runoff (Ogle 1984; Coastal Wetland Inventory). The unique character of the harbour entrance channel gives the site at least regional topographic importance. The harbour has above average landscape value in its upper reaches and high landscape value at its entrance.

Whangape Harbour is encircled by a similar range of prehistoric sites as Herekino, ie pa, undefended settlements and midden. In addition there is evidence of an extensive agricultural system on the southern side of the harbour. The stream corridor between Whangape and Herekino also contains evidence of prehistoric occupation.

SITE IMPORTANCE: National

Comment:

Coastal wetlands and archaeological sites are of national importance. The geomorphologic value of the harbour entrance is also nationally significant.

EXISTING THREATS: Type - abdim

Comment:

Steep land surrounding the harbour has been cleared for pastoral use and subsequently considerable erosion has taken place. As a result of this, siltation of the harbour is often severe. Cattle are grazed on saltmarsh and mangrove habitat. This area is fished both commercially and recreationally for flounder, kahawai, mussels and paua (in the entrance). Locals dispose of rubbish in some places by dumping it onto the mudflats.

HUMAN MODIFICATION AND HUMAN USE: Type - a**Comment:**

Surrounding land is cleared for pastoral use, coastal roads run the length of the Rotokakahi arm and parts of the remaining area.

EXISTING PROTECTION: Type - ad**Comment:**

A small DoC administered reserve is present adjacent to Awaroa River. Warawara Forest south of Whangape Harbour is protected within a reserve. Fisheries regulations preclude some fishing methods within Whangape Harbour.

AVAILABILITY OF INFORMATION:

Natural	1 <u>2</u> 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 2 <u>3</u>	
Human Mod & Use	1 2 <u>3</u>	

Comment:

Little information on threats and modifications of the harbour was found in the existing literature.

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	1 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetlands Inventory, Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Herekino Harbour SITE NO: CRI/01/0008

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: N05/25280,66570 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This tidal harbour occupying an area of 630ha is situated approximately 15km south of Ahipara on Northland's west coast. It has limited areas of beach and diverse mudflats, mangroves and saltmarsh. Freshwater swamps occur in upper reaches. Habitat value is high, supporting many native and endemic sedentary wetland bird species, some of these are threatened or rare such as the fernbird. Low numbers of migratory waders use the area as well as common coastal/harbour species.

Herekino Harbour entrance lies between high dunes to the north and a prominent spur to the south. Surrounding land is largely cleared and prone to erosion. The southern shoreline has road access and a settlement is present on the northeastern margin of the harbour.

CONSERVATION VALUES: Natural - bcdgh Cultural - c Historic - b

Comment:

Herekino Harbour has high conservation value as an estuarine habitat. About half the harbour is occupied by tidal mudflats. In especially the upper harbour reaches the rush Leptocarpus similis forms extensive saltmarsh. Mangrove (Avicenna marina var resinifera) areas also occur, and scattered freshwater areas are dominated by raupo (Typhis orientalis). An area of coastline on the northern shore is continuous with regenerating hardwood in Herekino Gorge, and patches of manuka occur elsewhere along the coast. This environment provides excellent habitat for fernbird (Bowdleria punctata vealeae), banded rail (Rallus philippensis assimilis) and bittern (Botaurus stellaris poiciloptilus). Only limited areas suitable for waders are present but the New Zealand dotterel (Charadrius obscurus), godwit (Limosa lapponica baueri) and knot (Calidris canutus canutus) occur. The northern head of the harbour is formed by an extensive area of duneland which extends landwards for 2km and provides nesting habitat for New Zealand dotterel (Ogle 1984; Coastal Wetland Inventory).

Herekino Harbour is surrounded by a dense clustering of prehistoric sites including both fortified and open settlements. Several of the pa are large, impressive and well-preserved. Occupation was particularly intensive on hillslopes above the upper reaches of the harbour, continuing through the Herekino Gorge to Ahipara. Although old field systems have not been recorded in the area, the large number of storage pits indicates the importance of prehistoric agriculture (Leahy & Walsh 1979). A survey of Herekino Forest, on the north head of the harbour, after it had been disturbed by forestry clearance and partial planting provides an example of the discrepancy between surface and sub-surface evidence. The area contains five pa sites and one midden had been recorded here previously. Another 123 middens were recorded after clearance (Nevin 1983). The broad spectrum of sites, their density and good state of preservation, make this an area of very high archaeological value.

SITE IMPORTANCE: International

Comment:

The site has international importance only because of its use by international migratory waders. It has national importance in respect to its high habitat value and threatened bird species.

EXISTING THREATS: Type - bdk

Comment:

The surrounding catchment is steep and largely cleared and is eroding. As a result siltation of the harbour has increased. Stock have access to rock platforms on coast and harbour entrance. High tide wader roosts are disturbed by vehicles.

HUMAN MODIFICATION AND HUMAN USE: Type - ai

Comment:

Much of the surrounding area is hilly land in pasture, and very steep hillsides covered in scrub and bush. Margins are mostly cleared with drains through upper marshes. There is a rural settlement in north eastern corner. Recreational and commercial fishing occurs.

EXISTING PROTECTION: Type - d

Comment:

Fisheries regulations preclude some fishing methods within Herekino Harbour.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 2 <u>3</u>	
Human Mod & Use	1 2 <u>3</u>	

Comment:

Generally information on the site is scarce, particularly in regard to modifications and threats to the area.

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 7	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 7	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 6 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 <u>6</u> 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Leahy A, Walsh W, 1979 : Archaeological site survey report, Ahipara, North Hokianga, Kaitaia area. NZ Historic Places Trust.

Nevin D, 1983 : Archaeological site survey report, Herekino Forest. NZ Historic Places Trust.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Ninety Mile Beach SITE NO: CRI/01/0009

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: N03/24110,67120 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Ninety Mile Beach is a northwest trending sandy coastline extending between Ahipara and Scott Point. A low rocky headland is present at The Bluff, two thirds of the way north along the beach, and 2ha Matapia Island is present 1.5km offshore, 13km further northwest. Ninety Mile Beach is backed by extensive Pleistocene and Holocene dunefields that are largely planted in exotic sandbinders, pasture and pine forest. An area of unvegetated dunefield is present in Te Paki Farm Park at the northern end of Ninety Mile Beach.

CONSERVATION VALUES: Natural - abcdegh Cultural - abc Historic - b

Comment:

Most of the area has been extensively modified. Coastal forest remnants are present locally near The Bluff, and Matapia Island supports indigenous scrub. Matapia Island apparently lacks rats and supports a varied lizard population that includes Hoplodactylus pacificus, Leiolopisma smithi and Cyclodina alani. The island is also an important nesting area for seabirds including black-winged petrel (Pterodroma nigripennis), and is a winter haulout area for fur seals (Arctocephalus forsteri) (B Anderson pers. comm. 1990). Unvegetated transverse dunes at the northern end of Ninety Mile Beach provide a good example of a landform that was formerly widespread on the west coast of Northland. Lignite lenses are present within Pleistocene dune sequences at a number of localities, and are an important source of information on past climates and floral biogeography. Pleistocene beach deposits near Ahipara provide important information on former sealevels. Dune lakes and swamps behind Ninety Mile Beach are habitats for a variety of bird species including banded dotterel (Charadrius bicinctus bicinctus), and rare plants (eg Hydatella inconspicua). Ninety Mile Beach is an important feeding area for variable oystercatcher (Haematopus unicolor), New Zealand dotterel (Charadrius obscurus), and caspian tern (Hydroprogne caspia), and locally supports toheroa (Paphies ventricosa) populations (Ogle 1984).

The area is important for seafood (eg shellfish, fish) and has considerable landscape and aesthetic value.

Archaeologically the dunes behind Ninety Mile Beach are characterised by large midden deposits. Those adjacent to the coast consist mainly of huge shell heaps which are particularly concentrated around stream outlets. Further inland, sites tend to be smaller and contain more varied evidence including hangi and artefacts. The coastal sites represent large scale collection and preservation of toheroa and tuatua, those in valleys behind the fore-dunes were probably temporary camp sites and work floors. C14 dates from the area fall relatively late in the prehistoric sequence, ranging between 200 and 400 B.P. Wood samples indicate that coastal broadleaf forest covered most of the area prior to human occupation (Coster 1983; pers. comm.).

Several pa and associated features are strung down the spine of Aupouri Tombolo, in some cases overlooking both Ninety Mile Beach and Great Exhibition Bay. Taumatawhana is the most impressive. This site with its neighbouring pa and surrounding garden systems forms one of the best preserved archaeological landscapes in the Far North.

SITE IMPORTANCE: International/National

Comment:

Matapia Island is of international significance as a seabird nesting area. Natural values of Ninety Mile Beach and adjacent dunes are of national significance.

EXISTING THREATS: Type - cdk

Comment:

Planting of marram, lupin and pine on coastal dunes has displaced most of the indigenous biotas along Ninety Mile Beach. Stock and recreational vehicles locally cause damage to dunefield vegetation, and vehicles on Ninety Mile Beach possibly adversely affect toheroa populations.

HUMAN MODIFICATION AND HUMAN USE: Type - ahj

Comment:

Much of the dunefield area behind Ninety Mile Beach has been planted in pasture, pine forests, marram and/or lupins. Small coastal residential subdivisions are present at Ahipara and Waipapakauri. The area is important for traditional and shore-based recreational fishing and shellfish gathering.

EXISTING PROTECTION: Type - ac

Comment:

Unvegetated dunefields at the north end of Ninety Mile Beach are part of a Paki Farm Park.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Coster J, 1983 : The Aupouri sand-dunes archaeological study - an interim report. New Zealand Archaeological Association newsletter 26.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Reinga SITE NO: CRI/01/0010

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: N02/24960,67500 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This incorporates an area of hill country, coastal dunefields and wetlands at the northern end of Aupouri Peninsula. A large part of the area is covered in mixed exotic and indigenous scrub, and coastal forest remnants are present in some valleys and locally on coastal cliffs. A pine plantation is present southeast of Spirits Bay and much of the area around Te Pahi is farmed.

CONSERVATION VALUES: Natural - abcdefh Cultural - abcd Historic - abd

Comment:

Natural - Human use has modified much of the Scott Point-Ohao Point area, but indigenous forest and scrub remnants, wetlands and dunefields are of high conservation value. A number of endemic species are present, including terrestrial molluscs (eg Placostylus ambagiosus, Paryphanta busbyi watti, Rhytida duplicata) and plants (eg Pittosporum michei, Metrosideros bartletti). Some marine invertebrates are also apparently endemic to this area (eg Marginella valei, Maoricrypta youngi, Cominella necopinata, Exomilopsis hipkinsi) (Powell 1979). Holocene dunes are significant geomorphologic features and locally contain scientifically important subfossil bird, reptiles and gastropods. The area is important to birds; fernbirds (Bowdler punctata vealeae) are common in scrub and wetlands, banded rail (Rallus philippensis assimilis), spotless crane (Porzana tabuensis plumbea), bittern (Botaurus stellaris poiciloptilus) and a variety of waterfowl are present in wetlands and New Zealand dotterel (Charadrius obscurus) and variable oystercatcher (Haematopus unicolor) nest on beaches. Motuopao is an important nesting area for grey-faced petrel (Pterodroma macroptera gouldi), black-winged petrel (Pterodroma nigripennis), sooty shearwater (Puffinus griseus), diving petrel (Pelecanoides urinatrix urinatrix) and northern blue penguin (Eudyptula minor iredalei) (P Anderson pers. comm 1990).

Cultural - The Scott Point-Ohao Point area was extensively settled by the Maori in prehistoric time, and numerous sites are of traditional value. Cape Reinga has important spiritual value. Much of the area has significant landscape and aesthetic value.

Historic - The northern tip of Aupouri contains more than 1,000 recorded archaeological sites. Two major belts of occupation are located on volcanic soils running diagonally across the region from Cape Reinga to Waitiki Stream mouth and from Hooper Point to the North Head of Parengarenga Harbour.

A full range of site types is present including pa, open settlements, hut sites, agricultural evidence and midden. Storage pits are the most frequent feature indicating the importance of agriculture in the region. An unusual and important site at Kapowairua Stream mouth consists of over 100 boulders used as grindstones in adze manufacture. Occupation covers a long time span. A midden at Twilight Beach containing sea mammal, dog and bird bone has been dated to the 13th century and collections from other dune areas contain many examples of archaic artefacts. The density of later sites and records of early European explorers, who noted pa, villages and extensive gardens, suggest that the region was occupied throughout the prehistoric period.

Sites associated with European settlement include a mid-19th century whaling station at Takapaukura, remains of the 1878 Cape Maria Van Diemen lighthouse on Motuopao Island and features associated with gumdigging on Taumatara Flat. The area is of very high archaeological significance and most probably contains evidence of the full prehistoric sequence. Most of the region has been well-surveyed but dune lands still require detailed attention (Davidson 1975 a, b, c).

SITE IMPORTANCE: International

Comment:

The presence of numerous locally endemic species makes this area internationally important. Forest remnants, wetlands and beach and dune habitats have highest conservation value but scrub areas are also important as habitat for invertebrates, reptiles, birds and plants.

EXISTING THREATS: Type - acdfk

Comment:

Threats include disturbance of indigenous terrestrial biotas by introduced predators (eg pigs, rats, cats, mustelids) browsers (cattle, sheep, possums), and invasive exotic plants (eg gorse, hakea). Parts of the area are prone to gullying and fire is a threat to scrublands and forest. Subfossil and archaeological deposits in dunefields are vulnerable to trampling by humans and stock, and to fluvial and aeolian erosion. Quarrying in the North Cape area poses a threat to adjacent indigenous scrub and forest.

HUMAN MODIFICATION AND HUMAN USE: Type - ahij

Comment:

This has included clearing of coastal vegetation for agricultural and residential purposes in prehistoric and historic time, development of plantation forestry, and quarrying. The area is important for recreational purposes including camping, walking, swimming, diving and fishing, and is traditionally important as a source of shellfish and fish.

EXISTING PROTECTION: Type - a

Comment:

Much of the area is included in scenic and scientific reserves, but blocks southeast of Spirits Bay and near North Cape are privately (Maori) owned.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	<u>1</u> 2 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

Very little information is available on distribution and nature of endemic marine biotas in this area.

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Davidson J, 1975a : Te Paki archaeological survey. Department of Lands and Survey report.

Davidson J, 1975b : Mokaikai archaeological survey. Department of Lands and Survey report.

Davidson J, 1975c : North Cape, Ohao and Murimotu archaeological surveys. Department of Lands and Survey Report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Powell A W B, 1979 : New Zealand Molluscs. Collins, Auckland. 500p.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Three Kings SITE NO: CRI/01/0011

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Three Kings Islands are located 50km northwest of Cape Reinga. They total 350ha and comprise four main islands and a number of islets and rocks. They support important terrestrial flora and fauna that have a high degree of endemism.

CONSERVATION VALUES: Natural - abcdgh Cultural - c Historic - bd

Comment:

Although modified in the past the Three Kings Island group is now an area of isolated coastal environment with minimum human interference. Many rare and unique species occur within the site. It has a total of 13 known plant species endemic to its shores, some of which are very close to extinction. Examples include Tecomanthe speciosa and Pennantia baylisiana, known only from single individuals in 1983 (Wilson & Given 1989). Greater than 50% of the beetle fauna is endemic to the Three Kings (Watt 1986). Additionally there is an endemic species of flax snail (Placostylus bollonsi), skink (Leiopisma fallai), and race of bellbird (Anthornis melanura obscura). Marine life around the island group is influenced by upwelling cold water and warm currents of subtropical origin. Southern bull kep (Durvillea antarctica), an abundance of Cook Strait limpet (Cellana denticulata), and mixture of northern and southern fish species are notable. A diversity of seabirds use the islands as a breeding ground. They include Bullers mollymawk (Diomedea bulleri), grey-faced petrel (Pterodroma macroptera gouldi), black-winged petrel (Pterodroma nigripennis), sooty shearwater (Puffinus griseus), fluttering shearwater (Puffinus gavia gavia), diving petrel (Pelecanoides urinatrix urinatrix) and Australasian gannet (Gula bassana serrator) (Turbott & Buddle 1948). The gannet colony is the largest in New Zealand totalling 9855 pairs in the 1980/81 breeding season. Coastal areas are used as haulout sites by fur seals (Arctocephalus forsteri) during winter months. Other features of note include a diverse lizard fauna of 7 species, the presence of the rare weevil Anagotnus turbotti and the rat-free status of the islands. The area has outstanding landscape value.

Maori occupation of the Three Kings was noted by Tasman in 1643, du Fresne in 1772 and d'Entrecasteaux in 1792. The most detailed account is from Tasman's voyage when extensive cultivations and about 30-35 people were seen on Manawa Tawhi or Great Island (McNab 1914). Tom Bowline, the last Maori known to have lived on the Three Kings, gave evidence to the Maori Land Court that Toumarama and approximately 100 of his people formerly lived on the islands, but they were attacked and massacred by an Aupouri war party in the late 18th century. Bowline and his family established large gardens on Great Island during the 1830's. They left in about 1840. Archaeological evidence has been recorded on each of the four largest islands. No pa have been noted, but it can be assumed that natural defences were adequate given the isolated location and the cliff-faced coastlines. Sites consist of numerous terraces, many of them stone-faced, and extensive evidence of Maori horticulture in the form of stone mounds, walls and rows, and several channels interpreted as drains. These features were briefly recorded by Bruce Hayward in 1982-83. The majority are described as moderately well-preserved under regenerating bush. Although they are unlikely to suffer from future human modification some sites have been disturbed by tree roots and bird burrows (Hayward 1986:n d). A more detailed survey and assessment of the sites is required.

SITE IMPORTANCE: International

Comment:

Very high endemism in the flora and fauna of the islands and the unique terrestrial and marine ecosystems make this site internationally important.

EXISTING THREATS: Type - km

Comment:

As a popular diving and fishing destination for both recreational and commercial users, the marine ecosystem is suffering detrimental impact. Bird burrows and tree roots affect archaeological sites.

HUMAN MODIFICATION AND HUMAN USE: Type - ij

Comment:

This site is used extensively for both diving and fishing recreation. The outstanding landscape value attracts boating and yachting to the area. Maori settlement was once extensive and modified the vegetation.

EXISTING PROTECTION: Type - a

Comment:

The islands of the Three Kings are nature reserves. Permission to land on the islands is granted only for scientific purposes.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 <u>7</u>	1. Derived info from existing literature & databases
Cultural	<u>1</u> 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 6 <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Hayward B W, 1986 : Prehistoric man on the offshore islands of northern New Zealand and his impact on the biota. In The offshore islands of northern New Zealand. Department of Lands and Survey information services 16.

Turbott E G, Buddle G A, 1948 : Birds of the Three Kings Islands. Records of the Auckland Institute and Museum 3:319-336.

Watt J C, 1986 : Beetles (Coleoptera) of the offshore islands of northern New Zealand. In The offshore islands of northern New Zealand. Department of Lands and Survey information series 16.

Wilson C M, Given D R, 1989 : Threatened plants of New Zealand. DSIR publishing, Wellington.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Parengarenga SITE NO: CRI/01/0012

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: N02/24050,67420 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Parengarenga is a large estuarine harbour, the most northern in NZ, with a long indented coastline encompassing an area of 6300ha. The large 1500ha Kokota Spit which forms the eastern shore and southern head to the harbour is included in the site as is the bordering section of Great Exhibition Bay and areas of the surrounding hinterland. The site has exceptionally high natural value even though most of the western shoreline is cleared pastureland. It is one of New Zealand's major wading bird habitats with probably the greatest bird diversity of any habitat in Northland and is especially important for migratory birds. All round ecology of the site is healthy, with fish fauna and the flora of the wetland and spit being highly natural. The 'gleaming white' sand at the harbour mouth is mined and used in the glass producing industry.

CONSERVATION VALUES: Natural - abcdegh Cultural - bc Historic - b

Comment:

Eelgrass (Zostera capricorni) covers 50% of the harbour area on extensive sandflats, and mangroves (Avicenna marina var resinifera) and saltmarsh occur another 10-20%, being mainly confined to tidal arms. Some mangrove trees reach 10m in height. Vegetation on Kokota Spit is largely undisturbed native pingao (Desmoschoenus spiralis) and toetoe (Arundo conspicua). The harbour area contains excellent examples of vegetation gradation from bush through to mangroves and has extensive scrublands on its northeastern margin. The site is in a little modified state and provides outstanding natural habitat for over 80 species of bird. Over 20,000 birds including common and rare waders, gulls and waterfowl feed on the highly productive tidal flats. New Zealand dotterel (Charadrius obscurus), variable oystercatcher (Haematopus unicolor), fernbird (Bowdleria punctata vealeae) and banded rail (Rallus philippensis assimilis) breed around the harbour. Parengarenga has the highest numbers of banded dotterels (Charadrius bicinctus bicinctus) in autumn-winter for any New Zealand harbour. These birds migrate to Parengarenga from southern North Island and especially the northern half of the South Island (R Pierce pers. comm. 1990). The Parengarenga is a final resting point for birds migrating to the northern hemisphere, for example turnstones (Arenaria interpres interpres) collect here in March before migrating north. Red-tailed tropic birds (Phaethon rubricauda roseotincta) occasionally visit the harbour in summer. Large numbers of fish such as trevally (Pseudocaranx dentex), snapper (Chrysophrys auratus), kahawai (Arripis trutta), kingfish (Seriola lalandi), grey mullet (Mugil cephalus), yellow-eyed mullet (Aldrichetta forsteri), eagle ray (Myliobatis tenuicaudatus), and school sharks (Galeorhinus australis) reflect the biological richness of this site. There are also extensive numbers of shellfish including pipi (Paphies australis), Pacific oyster (Crassostrea gigas), and cockle (Austrovenus stutchburyi) (Ogle 1984; Coastal Wetland Inventory; R Pierce pers. comm. 1990). The white silica sand-dunes of Kokota Spit are a distinctive land form. The site has outstanding landscape and aesthetic value and is important traditionally as a source of food and fibre.

Archaeological sites on the northern side of Parengarenga Harbour tend to cluster around areas of fertile soil. Pa are located on many headlands and ridges overlooking the harbour, and these are surrounded by numerous undefended sites which include storage pits, terraces and hut sites. There is very little evidence of prehistoric occupation on podzolised gumlands. A few sites have been recorded in other areas of the harbour but no systematic surveys have been undertaken apart from Janet Davidson's work on the northern side. There is no doubt that the harbour was of great prehistoric importance.

Kokota sandspit contains vast midden deposits and there are pa on most headlands and promontories. A map compiled by Viv Gregory, now held with his other papers in Kaitaia, shows many of these sites but the harbour requires detailed survey.

SITE IMPORTANCE: International

Comment:

Parengarenga Harbour is internationally important as habitat for migratory waders. Wetlands and intertidal flats are nationally important as habitat for other bird species, invertebrates, and plant associations.

EXISTING THREATS: Type - bcdfhim

Comment:

Farming of estuary edges causes sediment runoff and creates a hostile environment in which mangrove seeds cannot establish. Spartina grass is present and threatens tidal mudflat areas. Cattle reach some islands at low tide, their presence on these or tidal areas is incompatible with other estuarine values. Exotic plantations threaten the sandspit and other surrounding land. Godwits and other migratory species are taken by locals for food.

HUMAN MODIFICATION AND HUMAN USE: Type - abch

Comment:

The western shoreline is developed as pastoral farmland and plantation forestry occurs to the south. Large areas of wetland in upper harbour reaches have been reclaimed for pasture in the past. There are wharves at Paua and Te Hapua. The area is isolated and as a result is not a high use recreational area. Fishing and shellfishing occur. Sand is extracted at the harbour mouth.

EXISTING PROTECTION: Type - d

Comment:

There are large DoC holdings to the northeast and northwest of the harbour. The harbour is closed to commercial trawling.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u>	2	3	4	5	<u>6</u>	<u>7</u>	1. Derived info from existing literature & databases
Cultural	1	2	3	4	5	<u>6</u>	<u>7</u>	2. Derived info as above & field check
Historic	<u>1</u>	2	3	4	5	<u>6</u>	<u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u>	2	3	4	5	<u>6</u>	<u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u>	2	3	4	5	<u>6</u>	<u>7</u>	5. Recent DoC survey excluding sampling & analysis
								6. Experience
								7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetlands Inventory. Department of Conservation, unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Great Exhibition Bay SITE NO: CRI/01/0013

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: N03/24150,67240 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This incorporates an east-facing sandy coast backed by Pleistocene and Holocene dunefields. A low rocky headland and associated intertidal reef is present at Paxton Point.

CONSERVATION VALUES: Natural - cdh Cultural - abc Historic - b

Comment:

Parts of Great Exhibition Bay are important as nesting areas for New Zealand dotterel (Charadrius obscurus) and variable oystercatcher (Haematopus unicolor). Bittern (Botaurus stellaris poiciloptilus), fernbird (Bowdleria punctata vealeae) and New Zealand scaup (Aythya novaeseelandiae) are present in some interdune wetlands and associated scrub areas inland from the coast (Ogle 1984).

The area has high aesthetic and landscape value and contains sites of traditional value.

Only one small area of the coast, part of Te Kao Forest, has been archaeologically surveyed. Seventy midden were recorded within approximately 3.5 x 1.0 km. Contents were mainly shell although hangi and substantial quantities of fish-bone were found at a few sites (Nevin 1982). It can be assumed that extensive midden exist right along this coastline.

SITE IMPORTANCE: National

Comment:

Dotterel nesting sites and important dunefield wetland habitats are of national significance.

EXISTING THREATS: Type - c

Comment:

Spread of exotic sandbinding plants (eg marram, lupin) poses a possible threat to indigenous coastal dune floras.

HUMAN MODIFICATION AND HUMAN USE: Type - ahj

Comment:

A large area of coastal dunefield is planted in pasture and pine forest. A camping ground is present at Rarawa Beach.

EXISTING PROTECTION: Type - a

Comment:

A coastal strip northwest of Rarawa Beach lies within a reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Nevin D, 1982 : Archaeological site survey, Te Kao forest. New Zealand
Historic Places Trust.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand
Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Houhora SITE NO: CRI/01/0014

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: N03/24220,67130 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This includes Houhora Harbour, the eastern peninsula separating the harbour from the open coast, and Simmonds Islands. The harbour is 1430ha and 8.5km in length. Mt Camel forms a tall rocky headland at the eastern side of the harbour.

CONSERVATION VALUES: Natural - abcdgh Cultural - c Historic - b

Comment:

Houhora Harbour is largely estuarine with extensive areas of sandy flats and small areas of mangrove (Avicenna marina var resinifera) and saltmarsh at the harbours head. Extensive saltmarsh grading to freshwater swamp and shrublands on the eastern shore has high habitat value, especially to fernbird (Bowdleria punctata vealeae) of which 100+ individuals occur. The harbour is an important area for migratory birds such as turnstone (Arenaria interpres interpres), knot (Calidris canutus canutus) and godwit (Limosa lapponica baueri). Other birds include New Zealand dotterel (Charadrius obscurus), reef heron (Egretta sacra sacra), bittern (Botaurus stellaris poiciloptilus), banded dotterel (Charadrius bicinctus bicinctus), wrybill (Anarchynchus frontalis) and on rare occasions the black stilt (Himantopus novaezelandiae) (Ogle 1984; R Pierce pers. comm. 1990). Small forest remnants present on Mt Camel have not been surveyed but are likely to be of high value (L Forester pers. comm. 1990).

Kowhai Beach is an important beach and dune area with little vegetation, and gravel flats. It is a major nesting site for some coastal bird species including New Zealand dotterel, banded dotterel and variable oystercatcher (Haematopus unicolor), as well as white-fronted tern (Sterna striata), red-billed gull (Larus novaehollandiae scopulinus) and black-backed gull (Larus dominicanus). The outstanding value of this site is maintained by remoteness and poor access. Henderson Bay has an area of natural coastal heathland vegetation at the northern end (Ogle 1984). New Zealand dotterel and variable oystercatcher nest along the beach. Simmonds Islands support tawapou (Planchonella novozelandica) forest and have transplanted populations of the flax snail (Placostylus ambagiosus keenorum). Penguins (Eudyptula minor iredalei), fluttering shearwaters (Puffinus gavia gavia), Bullers shearwaters (Puffinus bulleri), grey-faced petrels (Pterodroma macroptera gouldi) and other seabirds nest on the islands. The islands are rat-free (R Parrish pers. comm. 1990).

Landscape value of Houhora Harbour and environs is moderately high and the area contains many sites of traditional importance.

Houhora peninsula and harbour contain evidence of intensive Maori occupation. Early midden sites have been recorded at Henderson Bay and Kowhai Beach on the seaward side of the peninsula and the site of Mt Camel inside the North Head of the harbour has been dated to the 12th century. Excavation revealed a broad range of hunting and fishing activities. Fish and sea mammals were the most important resource followed by moa and domestic dogs. Superimposed lenses of cultural material indicated that the site visited over a number of years (Roe 1969). Later midden composed mainly of shell surround the harbour. The Mt Camel area contains a dense complex of sites including pa, open settlements and agricultural evidence (Grace et al 1980).

The area is of high archaeological value. Several pa on the western side of the harbour have been badly damaged by coastal erosion.

SITE IMPORTANCE: International

Comment:

Habitats used by international migratory waders are of international significance. Wetlands, coastal forest remnants, scrub areas and archaeological sites are of national significance.

EXISTING THREATS: Type - ck

Comment:

Pine plantations on the peninsula threaten areas at Kowhai Beach on which nesting seabirds rely. The roading associated with forestry could increase access and reduce nesting success through human disturbance. A small patch of the invasive Spartina grass is present in the harbour. Intensive recreation use, especially over summer, of sandy beach areas reduces nesting habitat for shorebirds such as New Zealand dotterel. Coastal erosion is seriously affecting archaeological sites.

HUMAN MODIFICATION AND HUMAN USE: Type - abch

Comment:

Pastoral farmland, roading and scattered settlements run the length of Houhora Harbour's western shore. Forestry plantation and associated roading are present on the peninsula. Substantial reclamation for farmland north of Houhora settlement has taken place in the past destroying mangrove area. There is a commercial fishing port at Pukenui. A popular summer camp ground is situated at Houhora Heads. Shellfishing, fishing, boating, swimming occur.

EXISTING PROTECTION: Type - ac

Comment:

Simmonds Islands and the area behind East Beach are within DoC - administered reserves. Council-administered reserves are present locally on the western margin of the harbour.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	<u>1</u> 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 <u>6</u> 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Grace C, Rountree K, Stevenson M, 1980 : Houhora-Mt Camel archaeological site survey. New Zealand Historic Places Trust report.

Ogle C C, 1984 : Wildlife and wildlife values in Northland. New Zealand Wildlife Service fauna survey report 30.

Roe N, 19690 : Archaeological investigation at Houhora, Northland. MA thesis.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Rangaunu SITE NO: CRI/01/0015

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 004/25370,66950 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This includes Rangaunu Harbour, the Kaimaumau area, and the southern and western part of Rangiahia Peninsula. Rangaunu is the fifth largest harbour in New Zealand at 11488ha and comprises large and contiguous tracts of saltmarsh, brackish swamp, and mangrove forest. Extensive freshwater wetlands and adjacent scrubland are present at Kaimaumau and on Rangiahia Peninsula and sandy beaches are present at Rangaunu and Doubtless Bays.

CONSERVATION VALUES: Natural - abcdegh Cultural - c Historic - ab

Comment:

As a whole the site is highly natural and, relative to other large areas, is unmodified. The harbour interior has continuation with unmodified margins, giving further continuation into the surrounding wetlands. Extensive mangrove (Avicenna marina var resinifera) and eelgrass (Zostera mulleri) areas cover 27% and 19% respectively of Rangaunu Harbour. This 3100ha of mangrove comprises about 15% of New Zealand's total mangrove cover. Only small open sandflat areas are present. The saltmarsh rush Leptocarpus simplex occupies wide fringe zones, especially up Kaimaumau River where it includes a form up to 1.8m high with a branching stem. Rangaunu is one of New Zealand's major wading bird harbours with up to 10,000 northern hemisphere waders of many species using the harbour. Banded rail (Rallus philippensis assimilis), fernbird (Bowdleria punctata yealeae), New Zealand dotterel (Charadrius obscurus), bittern (Botaurus stellaris poiciloptilus), caspian tern (Hydroprogne caspia), reef heron (Egretta sacia sacia) and variable oystercatcher (Haematopus unicolor) breed around the harbour. Non-breeding species present include wrybill (Anarhynchus frontalis), banded dotterel (Charadrius bicinctus bicinctus) and white heron (Egretta alba modesta). Rangiputa bank, Otakaka islands and paddocks on Karikari Peninsula form the major roost areas of the harbour. Small numbers of vagrant Australian birds are present at times. They include cattle egret (Bubulcus ibis), little egret (Egretta garzetta), yellow-billed spoonbill (Platalea flavipes), and glossy ibis (Plegadis falcinellus peregrinus). The eastern boundary of Rangaunu Harbour is formed by Karikari Peninsula, an area of wetland framed by the harbour and sandy beaches. Tokerau Beach is backed by the important swamp and lagoon habitats at Ohia. At the southern end of the beach are mangrove, mudflat and sandspit habitats of Awapoko River estuary. Spotless crane (Porzana tabuensis plumbea), banded rail, bittern, reef heron and New Zealand dotterel breed in this area. The sandy beach behind Karikari Bay is backed by dunes, semi-drained lagoons and swamp margins, which are important breeding areas for New Zealand dotterel, bittern and fernbird. At the western end of this bay the dunes back onto important freshwater habitat of Rotokawa Lake and adjacent swamplands (Ogle 1984; Coastal Wetland Inventory; R Pierce pers. comm. 1990).

Karikari Peninsula is important botanically, having a diverse flora of ferns and orchids, and wetland communities that are now rare elsewhere. Hydate inconspicua grows in Lake Rotokawau and the ferns Todea barbara and Thelypteris confluens are present locally. To the west of the harbour is a large wetland encompassing Kaimaumau and Waihauhau swamps. Kaimaumau includes a scientific reserve containing rare orchid, fern and bladderwort species (ie Calochilus compestris, Cyrtostylis subulata) (Coastal Wetland Inventory). A fossil forest on the eastern side of Lake Ohia and dunes on Karikari

Peninsula are geologically important features.

Landscape values of the area are moderately high and sites of traditional importance are present.

East Beach and Karikari Bay are characterised by numerous shell middens. Sites within the harbour contain a higher percentage of fishbone than is commonly found in midden deposits, reinforcing Maori traditions of Rangaunu as a particularly rich fishing ground. Puheke on the north coast of Karikari contains three small pa as well as extensive middens. There are also a number of pa recorded near the southern coast of the harbour and along the banks of the Awanui River, but most of the inner harbour needs to be systematically surveyed. Motutangi contains important swamp pa and extensive drainage systems associated with agriculture. Historic sites on Karikari Peninsula and Kaimaumau Swamp are mainly associated with gumdigging activities. (Nugent & Bellingham 1979; Phillips 1986; Barber & Hensley 1984).

SITE IMPORTANCE: International

Comment:

Rangaunu Harbour has international importance as habitat for migratory waders. Wetland and scrub habitats are nationally important for rare and endangered plant and bird species. Dune formations and fossil forests on Karikari Peninsula are nationally important geological features.

EXISTING THREATS: Type - bchijkm

Comment:

Mangroves in the harbour have increased by 33% from 1944 to 1981; this probably reflects the continual infilling of the harbour with sediments from land runoff. *Spartina* is a major threat (as an invasive exotic plant) to the harbour. There is a refuse dump at Kaimaumau. Intensive recreation on Karikari Bay threatens nesting success of shorebirds such as New Zealand dotterel and variable oystercatcher. It also damages areas of wetland.

HUMAN MODIFICATION AND HUMAN USE: Type - abcdhik

Comment:

Roading and land development has reduced the values of some shores around the harbour and on the peninsula. Extensive areas to the south, east and west of the harbour have been developed for pastoral farmland with associated drainage of wetlands. Roothing skirts the harbours northern shore removing continuation with wetland, elsewhere this continuation is removed by farmland. Areas to the east, west, and south of the harbour have been reclaimed for farmland. Road causeways have reclaimed areas and are a continued threat. There is a landing and fertiliser dock at Unahi, moorings and jetties in Awanui River. Recreation activities include boating, fishing, swimming, shellfish collection and duckshooting. Fire burnt 3300ha of Kaimaumau Swamp and some northern mangroves in 1988.

EXISTING PROTECTION: Type - ad

Comment:

Kaimaumau Scientific Reserve.
Kaimaumau Recreation Reserve.
Rangiputa Recreation Reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

Archaeological surveys have been intensive in some areas but non-existent in others.

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 <u>7</u>	1. Derived info from existing literature & databases
Cultural	<u>1</u> 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Barber I, 1984 : An archaeological survey of the Kaimaumau mining licence area. New Zealand Historic Places report.

Bellingham M, David A, 1983 : Rangaunu Harbour Wildlife Survey. New Zealand Wildlife Service technical report 3.

Nugent J C, Bellingham R M, 1979 : Site survey, west Houhora Harbour and Kaimaumau. New Zealand Historic Places Trust report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Phillips C, 1986 : Archaeological site survey on the Karikari Peninsula 1982-85. New Zealand Historic Places Trust report.

Rangaunu Harbour Study 1984 - report prepared for Northland Harbour Board.

RECORDED ON EXISTING DATABASES:	<u>1. WERI</u>
	<u>2. SSWI</u>
	3. PNA
	4. Geopreservation
	5. HPT County Inventories
	6. Other
	7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Unpublished Department of Conservation report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Moturoa Islands SITE NO: CRI/01/0016

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 003/25440,67130 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Moturoa Islands comprise three small islands (4.3ha - 13.0ha) and a number of adjacent rocks and stacks, and are located northwest of Cape Karikari.

CONSERVATION VALUES: Natural - abcdgh Cultural - a Historic - ab

Comment:

Natural - Moturoa Islands support a varied reptile fauna that includes Hoplodactylus pacificus, Leiolopisma suteri, Leiolopisma smithi, Leiolopisma moco, Cyclodina aenea and Cyclodina alani. Seabirds that nest on the islands include diving petrel (Pelecanoides urinatrix urinatrix), white-faced storm petrel (Pelagodroma marina maoriana), and fluttering shearwater (Puffinus gavia gavia) (Adams 1971; Hitchmough 1977).

Cultural and Historic - The islands were utilised by Maori and contain sites of traditional value. Prehistoric sties are present but have not been surveyed. A whaling station was located on Whale Island, the most southerly of the group.

SITE IMPORTANCE: International

Comment:

Moturoa Islands are of international importance as a nesting area for seabirds and on account of the presence of rare lizards (eg C allani, L moco). They have national importance as rat-free regufes.

EXISTING THREATS: Type -

Comment:

No threats have been identified.

HUMAN MODIFICATION AND HUMAN USE: Type - ij

Comment:

Moturoa Islands are used for waterbased recreation (eg diving, fishing) and are traditionally utilised by Maori.

EXISTING PROTECTION: Type -

Comment:

Moturoa Islands are privately (Maori) owned.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 2 <u>3</u>	
Human Mod & Use	1 2 <u>3</u>	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Adams G P, 1971 : Wildlife survey of Moturoa Islands. Notornis 18:43-49.

Hitchmough R A, 1977 : The lizards of the Moturoa Island group. Tane 23:37-46.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Cape Karikari SITE NO: CRI/01/0017

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 003/25500,67070 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

The Karikari site comprises rocky headlands and coastal ridges at the northeast end of Rangiawhia tombolo. Virtually all of the original vegetation in the area has been removed and replaced by pasture, exotic and indigenous scrub and pine plantation.

CONSERVATION VALUES: Natural - begh Cultural - a Historic - b

Comment:

Natural - Small remnants of coastal broadleaf forest are present at a few localities at Cape Karikari. Their international and scientific importance derives from the former geographic isolation of the area as an island, and is indicated by the presence of at least one locally endemic invertebrate (ie the snail Allodiscus fallax) (Powell 1979). A raised intertidal boulder beach of probable penultimate interglacial age north of Matai Bay is of geomorphologic significance. Shallow subtidal habitats support high abundances and diversity of subtropical fish and invertebrate species (eg Willan et al 1979).

Cultural and Historic - The area has a rich Maori history and contains many sites of traditional value. Numerous archaeological sites of Maori origin are present, including pa, kumara pits and midden. The eastern tip of Karikari Peninsula is of considerable archaeological importance as it contains evidence from the early prehistoric through to the proto-historic period. Archaic middens have been recorded at Whataru Bay. There is a range of later sites including pa and undefended settlements, and two Ngatikahu pa, Rangiaohia and Patia, were occupied on 1769 when de Surville anchored in Doubtless Bay. Journals, charts and sketches from the expedition provide detailed information on Maori life seen from a French perspective. Sites in this area have been intensively surveyed and recorded (Phillips 1986).

SITE IMPORTANCE: International

Comment:

Coastal forest habitats supporting the endemic land snail Allodiscus fallax are internationally significant. Archaeological sites are nationally important.

EXISTING THREATS: Type - cd

Comment:

Forest remnants are threatened by fires, and by cattle, possums, rats and invasion by noxious plants (especially gorse).

HUMAN MODIFICATION AND HUMAN USE: Type - ahij**Comment:**

The area is heavily used for waterbased and shorebased recreational purposes and is of importance for traditional Maori use. The coastline has been extensively modified by removal of vegetation, and dunes at Matai Bay have been stabilised by marram.

EXISTING PROTECTION: Type - ac**Comment:**

Scenic reserves are present in the Matai Bay area.

AVAILABILITY OF INFORMATION:

Natural	1 <u>2</u> 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 <u>2</u> 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Phillips C, 1986 : Archaeological site survey on the Karikari Peninsula 1982-1985. New Zealand Historic Places Trust report.

Powell A W B, 1979 : New Zealand Mollusca. Collins, Auckland. 500p.

Willan R C, Dallimore J M, Nicholson J, 1979 : A survey of fish populations at Karikari Peninsula, Northland, but SCUBA diving. New Zealand journal of marine and freshwater research 13:447-458.

RECORDED ON EXISTING DATABASES:	1. WERI
	2. SSWI
	3. PNA
	4. Geopreservation
	5. HPT County Inventories
	6. Other
	7. None

Comment:

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Mangonui SITE NO: CRI/01/0018

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 004/66570,66900 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This area incorporates the coastline from Aurere River mouth to Hihi Beach and includes Taipa estuary and Mangonui Harbour. The southern shore of Doubtless Bay comprises rock headlands and intertidal reefs, with intervening sandy, shelly and locally gravelly beaches. Much of the coastal area is farmed and residential settlements are present at several places. Mangrove and saltmarsh are present in estuaries at Mangonui and Taipa.

CONSERVATION VALUES: Natural - abgh Cultural - abc Historic - ab

Comment:

Natural - Important features in this area include estuarine habitats in the Taipa and Mangonui areas. These support important plant associations and birds such as spotless crane (Porzana tabuensis plumbea), bittern (Botaurus stellaris poiciloptilus), banded rail (Rallus phillipensis assimilis) and fernbird (Bowdleria punctata vealeae) (Ogle 1984). The plant Pittosporum pimeleoides is present locally near Mangonui Harbour (L Forester pers. comm. 1990) and coastal forest remnants are present adjacent to Taipa estuary.

Cultural & Historic - The area has important traditional, aesthetic and landscape values. Sites of historic value include Butler's House at Mangonui and Adamson's House at Taipa. This area includes some of the richest concentrations of both prehistoric and historic sites in Northland. Taipa estuary and the Oruru Valley contain more than 1,000 archaeological sites, the majority of which are well preserved. Alluvial soils in the valley and sandy flats near the estuary are well-suited to Maori agriculture. Recent excavation of a Taipa swamp revealed several hectares of drainage systems assumed to have been associated with taro cultivation. The Maori population at Oruru was still large in the initial years of European settlement, and supplied both settlers and whaling ships with vegetables, fruit and pork. The first land war in New Zealand was fought at Oruru in 1843. Mangonui Harbour is also surrounded by archaeological sites including pa, undefended settlements, midden, hangi, stonework floors and early historic sites. The harbour became an important whaling port in the 1840's and the township of Mangonui still retains many of its historic buildings. Only parts of the harbour have been surveyed, further work is still required.

SITE IMPORTANCE: National

Comment:

Estuarine habitats are of national importance because of the presence of threatened bird species (eg banded rail, fernbird, bittern) and the plant Pittosporum pimeleoides.

EXISTING THREATS: Type - e1

Comment:

Taipa estuary is adversely affected by residential effluent, and residential subdivision has modified foredunes behind Taipa Beach. Introduced Spartina grass is present locally.

HUMAN MODIFICATION AND HUMAN USE: Type - abcdhij**Comment:**

The coastline has been extensively modified with most original vegetation having been removed for residential and agricultural purposes. Causeways, areas of reclamation, and boat moorings are present at Taipa and Mangonui, and a small commercial wharf is present at Mangonui. The area is important for traditional Maori use and for shoreland-based and water-based recreation.

EXISTING PROTECTION: Type - ac**Comment:**

DoC-administered reserves are present at Coopers Beach and the mouth of Mangonui Harbour.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:	1. WERI
	<u>2. SSWI</u>
	3. PNA
	4. Geopreservation
	5. HPT County Inventories
	6. Other
	7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Berghans Point SITE NO: CRI/01/0019

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: 004/25620,66960 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This area incorporates the coastline from Hihi to Taupo Bay. Most of the coast is rocky and backed by cliffs, but sandy beaches are present at Taemaro, Waimahana, Motukahakaha and Taupo Bays. Scrub covered regenerating farmland, and pasture adjoin the coast in most areas, but coastal forest remnants are present locally. Small residential settlements are present at Waimahana and Taupo Bays.

CONSERVATION VALUES: Natural - ch Cultural - abc Historic - b

Comment:

Natural values in this area include forest remnants at Whakaangi and Paikauri that include hard beech (Nothofagus truncata) and Pittosporum pimeleoides, and contain the northernmost kiwi (Apteryx australis mantelli) and pied tit (Petroica macrocephala toitoi) in New Zealand. Also important are pohutukawa (Metrosideros exelsa) forest remnants on coastal cliffs, and New Zealand dotterel (Charadrius obscurus) nesting areas in Motukahakaha Bay (P Anderson pers. comm. 1990). The area has high aesthetic and landscape value and includes sites of Maori traditional value.

Pa sites have been recorded on several rocky headlands around Berghans Point, and there is evidence of intensive prehistoric occupation adjacent to sandy bays on the northern coast. The ridges and slopes behind Motukahakaha and Tupou Bay contain both fortified and undefended settlements, and extensive garden areas characterised by agricultural lines running down the hillsides. Most of this coastline still requires systematic survey.

SITE IMPORTANCE: National

Comment:

Coastal forest remnants, dotterel nesting areas, and archaeological sites, are nationally important.

EXISTING THREATS: Type - dl

Comment:

Cattle, goats, pigs and possums are damaging vegetation in coastal forests. Recreational subdivision has damaged foredunes at Taupo Bay.

HUMAN MODIFICATION AND HUMAN USE: Type - aij

Comment:

The coastline has been extensively modified by removal of indigenous forest for timber extraction and pastoral farming, and has been locally modified by residential settlement. Traditional Maori use includes shellfish gathering and fishing. A moderate amount of water-based recreation takes place, but is limited by the inaccessibility of much of the area.

EXISTING PROTECTION: Type - a**Comment:**

Coastal forest and scrub at Paikauri are included within a scenic reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	1 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Whangaroa	SITE NO:	CRI/01/0020
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	P04/25800,66860	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

Whangaroa Harbour is situated on Northland's east coast approximately 30km north of Kerikeri. It covers an area of 19km². Southern estuarine areas of mudflats and mangroves are recognised as moderate value wetland. The area supports several threatened and rare species despite extensive modification by agriculture and residential development, particularly in southern reaches. The coastal edge of northwestern Whangaroa head has continuation into high value forest habitat including an endangered plant, and species of rare bush birds.

CONSERVATION VALUES: Natural - abcdh Cultural - abc Historic - ab

Comment:

Mangroves (Avicenna marina var resinifera) cover 418ha, mudflats 573ha, saltmarsh 45ha, and eelgrass (Zostera capricorni) 18ha of the harbour. Rocky shores and tidal rivers add to habitat diversity. Bird species using the harbour include banded rail (Rallus philippensis assimilis), fernbird (Bowdleria punctata vealeae) and New Zealand dotterel (Charadrius obscurus), and brown teal (Anas aucklandica chlorotis) are present in low numbers. Common waders, gulls and four species of shag also use the inner harbour. Diverse coastal vegetation in the northwestern head and shore of Whangaroa Harbour supports the only known population of the rare plant Pseudopanax gilliesii. The vegetation is important for nectar-feeding birds such as the tui (Prosthemadera novaeseelandiae novaeseelandiae). Kiwi (Apteryx australis mantelli) occur in the area, and penguins (Eudyptula minor iredalei) nest around the coast (Ogle 1984; Wilson & Given 1989).

The harbour provided an ideal environment for prehistoric settlement - abundant seafood, river valleys and coastal flats suited to agriculture, and a variety of stone sources for tool manufacture. Impressive and well-preserved pa sites surround the harbour, some of these have been briefly recorded but only two small coastal areas have been systematically surveyed (Johnson 1988, 1990). However, these show evidence of intensive pre-European occupation, and indicate that the remainder of the coastline holds high archaeological potential.

The harbour still supported a substantial Maori population when it was discovered by Europeans in 1807, and it was of continuing importance in the early historic period. The first Methodist Mission was established here in 1835, and for several decades it was a major centre for timber milling, ship building and the kauri gum industry (Sale 1986).

A detailed survey of the harbour is urgently required, given the historic significance and archaeological potential of the area and the recent increase in proposed developments.

SITE IMPORTANCE: International

Comment:

Habitat of the endemic plant Pseudopanax gilliesii is internationally important. Other coastal forest and scrub areas, wetlands, and archaeological sites are nationally important.

EXISTING THREATS: Type - bhi**Comment:**

Expansion of mangroves in some areas suggests siltation. Collection of shellfish occurs intensively in the area. Occasional damage to archaeological sites occurs.

HUMAN MODIFICATION AND HUMAN USE: Type - abcdij**Comment:**

Almost all surrounding land is developed for agricultural use. Residential development is present around the southern shores. Highway 10 crosses the southern-most wetland areas and the more southern east and western shores have roads fringing their length. Reclamations have reduced original tidal areas through agricultural, road causeway, refuse landfill, timber mill and wharf developments, again especially in southern reaches. Commercial fishing wharf at Whangaroa on the eastern shore, pile and swing moorings present. Waterbased recreation is popular. Fourteen marae depend on the harbour for Kaimoana.

EXISTING PROTECTION: Type - acd**Comment:**

Ranfurly Bay Scenic Reserve. Traditional and historic Maori reserves on southbank of Kaeo river moth (Waikukipu Reserve). Maori reserves also on oyster beds and Peach Island.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 <u>5</u> 6 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Johnson Z, 1988 : Archaeological site survey of the Ratcliffe residential subdivision, Whangaroa. Department of Conservation report.

Johnson Z, 1990 : Archaeological site survey of the Shepherd residential subdivision, Whangaroa. Department of Conservation report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Sale E V, 1986 : Whangaroa. Whangaroa Book Committee.

Wilson C M, Given D R, 1989 : Threatened plants of New Zealand. DSIR Publishing, Wellington. 151p.

Whangaroa Harbour Study 1985 - report prepared for Whangaroa County Council.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Cavalli & Stephenson Islands SITE NO: CRI/01/0021

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: P04/25970,66890 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

The outer fringe of the Cavalli Island group is situated one and half km off Northland's east coast, approximately 20km north of the Bay of Islands. They consist of 28 islands with 82 associated rocks, plus 25 stacks, within an area of approximately 29km². The largest and most modified of these islands is Motukawanui at 350ha. Motukawati Island is also relatively large at 47ha but the remainder of the islands are small in area, with Panaki the next largest at 16.5ha. Many of the smaller islands are highly natural and rat-free, with high flora and fauna value. 23km to the west of the Cavalli group is Stephenson Island, a highly modified area of 112.5ha. Within a kilometre of the north western tip of this island is Cone Island (2ha) and Kawhiti Reef. The small area of Cone Island is of high natural value. Stephenson Island and the Cavalli Islands are considered as a single site.

CONSERVATION VALUES: Natural - abcdh Cultural - c Historic - b

Comment:

There are areas of high natural value throughout the site, even on the highly modified larger islands. The smaller islands are highly natural. Many lizards, rats and mustelids and have petrel scrub cover. Flax snails (Placostylus ambagiosus) have been transferred to Motutakapu, Nakutaunga and Matatapere Islands from northernmost New Zealand (R Parrish pers. comm. 1990). The lizard fauna of individual Cavalli Islands is diverse. For example, seven species of lizard are found on Motuharakeke, including Cyclodina macgregori. Many seabirds use Stephenson Island for roosting and breeding, including Pycroft's Petrel (Pterodroma pycrofti), (R Pierce pers. comm. 1990).

Cavalli Islands and Stephenson Island have high aesthetic and landscape value.

Surveys of these offshore islands suggest that they were occupied over a long period of time on a relatively permanent basis. Stephenson Island has an extensive pa site and six areas of terracing (Leahy & Walsh 1978); the Cavallis contain more varied evidence. Most recorded sites are on the larger islands of Motukawanui and Motukawaiti. They include both fortified and undefended settlements, midden and agricultural evidence (Hayward et al 1979). Several midden contain sea-mammal and moa bone which suggests they are archaic deposits, and a midden on one of the smaller islands consists of many deep, stratified layers which could provide a prehistoric sequence for the area (Bartlett pers. comm.). Agricultural evidence is extensive. It includes shallow parallel lines down hillslopes and large areas of soil modified with beach pebbles.

The wide variety of evidence, the long sequence of deposits and the generally good preservation of sites make the Cavallis an extremely important archaeological area.

SITE IMPORTANCE: National

Comment:

Cavalli and Stephenson Islands are nationally important habitats for threatened flora and fauna, and are nationally important as archaeological sites.

EXISTING THREATS: Type - dkm**Comment:**

Stoats and rats are present on Motukawanui Islands. Rats are known from Stephenson, Cone and several of the smaller islands. For most of the remaining islands, however, there is no information available. Recreational diving and fishing remove marine stock from the area. Both Stephenson and the Cavallis are muttonbirded by the local Maori people.

HUMAN MODIFICATION AND HUMAN USE: Type - aij**Comment:**

Motukawanui was farmed until 1974 and much of the land is still pastoral grassland. Healthy regeneration is now taking place. Stephenson Island was also farmed and is highly modified. Motukawanui's old farmhouse is rented by DoC to those wishing to stay on the island. The area is renowned as a fishing and diving resource.

EXISTING PROTECTION: Type - a**Comment:**

Motukawanui Scenic Reserve.

AVAILABILITY OF INFORMATION:

Natural	1 2 3	1. Well documented
Cultural	1 2 3	2. Limited information (General)
Historic	1 2 3	3. Little information (if any)
Threats	1 2 3	
Human Mod & Use	1 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	1 2 3 4 5 6 7	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 7	2. Derived info as above & field check
Historic	1 2 3 4 5 6 7	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Hayward B W, Moore P, Puch A, Ramsay E, Wright A, 1979 : Archaeological sites on the Cavalli Islands. Tane 25.

Leahy A, Walsh W, 1978 : Stephenson Island archaeological field survey. Department of Lands & Survey report.

Miller P J, 1979 : The lizards of Cavalli Islands, northeastern New Zealand. Unpublished report, New Zealand Wildlife Service file 30/3/20.

RECORDED ON EXISTING DATABASES: 1. WERI
 2. SSWI
 3. PNA
 4. Geopreservation
 5. HPT County Inventories
 6. Other
 7. None

Comment:

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Takau Bay	SITE NO:	CRI/01/0022
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	P04/25950,66840	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

The site includes the coastal strip joining the eastern Whangaroa Harbour headland with the base of the Purerua Peninsula. It encompasses many small bays and rocky headlands with pockets of residential development amongst a largely pastoral landscape.

CONSERVATION VALUES:	Natural - bcegh	Cultural - c	Historic - b
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Comment:

A small estuary at Tauranga Bay includes areas of mangrove and saltmarsh and supports banded rail (Rallus philippensis assimilis) and New Zealand dotterel (Charadrius obscurus). A similar estuary is present at Mahinepua Bay. An important freshwater wetland is present at Marawhiti Lake. Rushes grade to cabbage tree (Cordyline australis) and flax (Phormium tenax), with a breeding population of brown teal (Anas aucklandica chlorotis) being present. The coastal area between Matauri and Taronui Bays is used by New Zealand dotterel for feeding and breeding. The many small rivers and streams along this section of coast provide important habitat for fernbird (Bowdleria punctata vealeae) and low numbers of brown teal. Takau River estuary supports one of the largest mainland brown teal roosts. Banded rail and spotless crane (Porzana tabuensis plumbea) are present in some wetland areas, and variable oystercatchers (Haematopus unicolor) nest on some sandy beaches (Ogle 1984; Coastal Wetland Inventory).

The site has significant aesthetic and landscape value, and contains sites of traditional importance.

Only the northern coast of this area has been systematically surveyed. Numerous pa are situated on headlands and ridges overlooking the sea, many are extensive and spectacular defensive systems, although some on lower ground are simpler and may be historic gunfighting structures. undefended settlements and agricultural systems are also frequent. Evidence of agriculture includes slope drains, stone structures, swamp ditches and the addition of gravel to soils. There are relatively few prehistoric storage pits compared with many areas of Northland, although there is adequate evidence of kumara storage in the historic period including interesting shaft pits near Mahinepua which combine prehistoric and modern technology (Stretton & Cassels 1978). A number of pa and midden have been recorded in the Takau Bay area but this stretch of coastline requires further detailed survey.

SITE IMPORTANCE:	International
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Comment:

Habitats used as breeding areas by brown teal are internationally important. Other wetland areas and archaeological sites are nationally important.

EXISTING THREATS:	Type - dk
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Comment:

Cattle are a problem in several wetlands through grazing and associated trampling. Recreational vehicular use threatens dune habitats locally at Tauranga Bay.

HUMAN MODIFICATION AND HUMAN USE: Type - abhi**Comment:**

Pastoral land occurs along the coast and residential and holiday settlements are present at individual bays. Roads link access to the bays. Individual estuaries at Tauranga and Mahinepua are modified by housing and roading. Farming reclamations have modified wetlands. Recreational use of the area is high and includes sportsfield use of Mahinepua wetland. Matauri Bay is popular for camping and recreation. Water-based recreation (boating, diving, fishing) is popular.

EXISTING PROTECTION: Type - a**Comment:**

Bay of Islands Maritime & Historic Reserve includes Tauranga Bay area.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	1 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 6 <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Stretton J, Cassels R, 1978 : Archaeological survey near Whangaroa Harbour, Northland from Te Ngairi to Tauranga Bay. New Zealand Historic Places Trust report.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation, unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Kerikeri	SITE NO:	CRI/01/0023
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	P05/25070,66650	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This includes the western side of Bay of Islands from Purerua Peninsula to Te Puna and Kerikeri Inlets, and as far south as Wairoa Bay.

CONSERVATION VALUES: Natural - abcegh Cultural - c Historic - ab

Comment:

The shoreline of Te Puna and Kerikeri Inlets has high conservation value, with a band of coastal manuka (Leptospermum scoparium) - mamaku (Cyathea medullaris) scrub joining wetland habitats. The scrub supports a variety of common bush birds and locally kiwi (Apteryx australis mantelli). Mangrove, saltmarsh and coastal flats support fernbird (Bowdleria punctata vealeae), brown teal (Anas aucklandica chlorotis), banded rail (Rallus phillipensis assimilis), variable oystercatcher (Haematopus unicolor), reef heron (Egretta sacra sacra), New Zealand dotterel (Charadrius obscurus), and a diverse array of terns and gulls. At Onewhero Bay a sandy beach is backed by areas of pohutukawa and shrublands. At the northern end the Wharau shrublands provide kiwi and bushbird habitat. New Zealand dotterel, variable oystercatcher and blue penguin (Eudyptula minor inedalei) breed along the beach. The endangered fern Thelypteris confluens is present locally in scrub on the margin of Kerikeri Inlet. A gravel ridge behind Onewhero Bay is an important source of information on Holocene (?late Pleistocene) sealevels. Moturoa Island is the least modified of the big islands in the Bay of Islands, supporting coastal cliff vegetation containing the rare plant Pittosporum pimeleoides. Brown teal and kiwi have been released on the island. The Black Rocks are geomorphologically important landforms and provide nesting habitat for reef heron and white-fronted tern (Sterna striata) (Ogle 1984; Coastal Wetland Inventory).

The area has significant landscape and aesthetic value and contains sites of traditional importance.

There is evidence of intensive prehistoric occupation along the deeply indented coastline of Purerua Peninsula and the Te Puna and Kerikeri Inlets. A pa is situated on almost every headland. Terraces are strung along coastal ridges and the shores of inlets. The inlets also contain fish traps and dense midden deposits. Agricultural sites are found on both the fertile volcanics of Kerikeri Inlet and the heavy clays of Purerua Peninsula (Leahy & Walsh 1978, Nugent & Nugent 1977). Numerous Maori artefacts have been collected from the area in the past.

The importance of the region continued into the early historic period. Whalers frequently visited this side of the Bay before Kororareka became the most popular port-of-call, and were supplied with vegetables and pork by Maori from Te Puna. Hongi Hika set out for his southern battles from Kerikeri Inlet. The first Church Mission Society settlement was established at Oihi adjacent to Rangihoua Pa in 1814, and a mission outpost at Kerikeri five years later (Lee 1983). The Stone Store and Kemp House are well preserved buildings from the settlement period, and Edmunds Ruins, the remains of an early farm cottage, provides an interesting social and architectural contrast.

SITE IMPORTANCE: National

Comment:

Wetlands and coastal scrub are nationally important habitats for threatened plants and birds. Archaeological sites are nationally important.

EXISTING THREATS: Type - bdfhjl

Comment:

Plantation forest felling in the catchments of both inlets causes sediment runoff. Grazing of mangroves and Zostera by cattle occurs in Rangitane River and Te Aiora and Purerua Creeks. The Leptospernum scrub border is being destroyed by both overgrazing and development. Rubbish is dumped by locals into Te Tii and Opete Creek up the Te Puna Inlet.

HUMAN MODIFICATION AND HUMAN USE: Type - abcdhi

Comment:

Small residential settlements are scattered along both sides of Kerikeri Inlet at Te Tii on the Te Puna Inlet. At the western end of Kerikeri Inlet is the large residential area of Kerikeri. Where not residential, the land surrounding habitat areas is developed as farmland. Roading skirts both sides of each inlet with Te Puna being less accessible. Reclamation has destroyed much wetland in many individual developments. A large area within the only significant mangrove/saltmarsh habitat of the upper Te Puna has been drained for farmland. Estuarine area reductions have been recorded for all wetland areas in the Te Puna. An extensive area of saltmarsh/mangrove at the mouth of Okura River in the Kerikeri Inlet has been drained. There is a wharf at Kerikeri plus up to 200 swing and pile moorings. Anchorages and moorings are mainly toward the mouth of Te Puna Inlet. Tourism in the area is high. Recreational activities include swimming, boating, scuba diving, fishing, sailing, canoeing.

EXISTING PROTECTION: Type - a

Comment:

Areas of DoC-administered land are present on Purerua Peninsula, at Black Rocks and adjacent to Kerikeri Inlet.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 <u>7</u>	1. Derived info from existing literature & databases
Cultural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Leahy A, Walsh W, 1976 : Archaeological survey report, Bay of Islands and Kerikeri-Paihia area. New Zealand Historic Places Trust report.

Lee J, 1983 : I have named it the Bay of Islands. Hodder & Stoughton.

Nugent D, Nugent J, 1977 : Report on site survey : Kerikeri Inlet, Bay of Islands. New Zealand Historic Places Trust report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Inner Bay of Islands	SITE NO:	CRI/01/0024
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q05/26130,66540	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This includes inlets extending south from Wairoa Bay and Tapeka Point in southern Bay of Islands.

CONSERVATION VALUES:	Natural - abcdh	Cultural - c	Historic - ab
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Comment:

Three quarters of the Juncus - Leptocarpus saltmarsh habitat of the Bay of Islands is found in the Waikare Inlet, an area of 214.1 hectares. Mangrove forest extends over wide areas of the inlet grading in many places continuously into fresh water swamps, shrub and forest habitat. Russell Forest covers most of the Waikare catchment, particularly in the eastern arm where it extends right to the waters edge. The forest consists of some unmodified areas, and much cutover and secondary kauri (Agathis australis), podocarp/hardwood and manuka (Leptospermum scoparium) scrub; it supports kiwi (Apteryx australis mantelli), kaka (Nestor meridionalis septentrionalis), and pied tit (Petroica macrocephala toitoi). Waikare Inlet provides habitat for fernbird (Bowdleria punctata vealeae), banded rail (Rallus phillipensis assimilis), and bittern (Botaurus stellaris poiciloptilus). Brown teal (Anas aucklandica chlorotis) have been reported from the inlet. The eastern side of Veronica Channel has extensive shrubland extending down to the coast in many areas. Fernbird and kiwi are found in this habitat. Continuums from estuarine/swamp wetland to scrub are present at Uruti, Orongo and in small bays around to Okiato. The western side of Veronica Channel is fringed by a coastal strip of scrubland which backs onto Opuia Forest. The strip contains a variety of birdlife including kiwi, weka (Gallirallus australis greyi) and pied tit. Small estuaries with mudflat, mangrove and saltmarsh habitat are located at Paihia and Waitangi. Many of these wetlands are continuous with adjacent scrublands and support banded rail, spotless crane (Porzana tabuensis plumbea) and caspian tern (Hydroprogne caspia) roosts. New Zealand dotterel (Charadrius obscurus) also feed in the area (Ogle 1984; Coastal Wetland Inventory).

The area has significant landscape and aesthetic value and contains sites of traditional importance.

Waterways of the inner Bay of Islands held great importance throughout the prehistoric and early historic periods. The Waitangi and Taumarere Rivers in particular provided easy access to the fertile Taiaimai Plains, and the Taumarere is still a sacred waterway to Ngapuhi people. The coast in this area is delineated by archaeological sites with pa or undefended settlements on every headland and dense midden deposits along the inlets (Nevin 1984). Fortified sites continue along the rivers to the interior emphasising the importance of these routes. Many significant historic events were centred here. In the early 19th century Kororareka became the major whaling port of the Pacific. An Anglican Mission was established at Paihia and a Catholic Mission at Kororareka. The Treaty was signed at Waitangi in 1840. Okiato became the first seat of Government in New Zealand and in symbolic action against the British Hone Heke chopped down the flagpole on Maiki Hill (Lee 1983). The area has traditional, historic and archaeological importance and is of national significance to both Maori and Pakeha.

SITE IMPORTANCE: National

Comment:

Wetland, scrub and coastal forest remnants are nationally important habitat for threatened bird species. Archaeological sites are also of national importance.

EXISTING THREATS: Type - bdefh

Comment:

Hinterland up the Kawakawa arm of the inlet is developed pastoral land and a source of much runoff. Cattle trample wetland at Oronga Bay and are prevented from doing so within inlet only by manuka vegetation. Effluent is discharged into Veronica Bay from a motor camp; runoff from residential areas, plus seepage also reduce water quality.

HUMAN MODIFICATION AND HUMAN USE: Type - abcdhi

Comment:

Western Veronica shoreline is highly developed with residential and tourist facilities such as motels at Paihia, Opuia, Te Haumi and scattered in between. Russell and Okiato on the eastern side are equally developed, although separating land has been largely spared. Around the inlet pastoral farm development has cleared most hinterland of the Kawakawa and parts of the Waikare arm. Coastal fringe roading extends around northern areas of the site in particular, with causeway construction being responsible for wetland reclamation and fragmentation. Drainage and reclamation for farmland has occurred in the upper Waikare and Kawakawa arms, "big swamp" in Waitangi estuary has been drained, and reclamation has taken place at Veronica Bay Motor Camp. Ferry wharves are present at Paihia and Russell, a port at Opuia and a car ferry operation between Opuia and Okiato. Moorings are abundant in northern areas of Paihia, Waitangi, Russell, Opuia and scattered in between and also within the inlet. Recreation includes boating, swimming, canoeing, fishing, windsurfing and shellfishing.

EXISTING PROTECTION: Type - acd

Comment:

Waitangi National Reserve extends over whole northern coastline of Waitangi estuary. Much of the area is reserved by Bay of Islands Maritime & Historic Park around Opuia, Paihia and Russell. Recreational reserves encompass much of the area.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Nevin G, 1984 : Archaeological survey of the coastal region between Te Tii and Tapeka Point. Northland Harbour Board report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Outer Bay of Islands	SITE NO:	CRI/01/0025
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q05/26250,66640	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This area includes the eastern Bay of Islands from Oneroa Bay to Motukokako and the coastline from Cape Brett south to Taupiri Bay. Islands in the eastern Bay of Islands are mostly covered in pasture, exotic trees and scrub, but regenerating forest is present locally. Indigenous scrub and forest are widespread on Cape Brett Peninsula, and mangrove forest and coastal wetlands are present in Manawaora, Paroa and Parekura Bays.

CONSERVATION VALUES: Natural - abcdeh Cultural - abcd Historic - ab

Comment:

Cape Brett Peninsula includes areas of important coastal forest that locally extend from sealevel to ridgetop. Threatened species present include the plants Fuschia procumbens, Calystegia marginata and Hibiscus trionum, and kiwis (Apteryx australis mantelli) and tui (Prothemadera novaeseelandiae novaeseelandiae) are common. Motukokako is capped by little modified coastal forest and lacks rats. Wetlands and mangrove forest in Parekura, Paroa and Manawaora Bays are important areas for birds such as brown teal (Anas aucklandica chlorotis), banded rail (Rallus phillipensis assimilis), and fernbird (Bowdleria punctata vealeae), and the flax snail (Placostylus hongii) is present in one area of fringing coastal forest. Sandy beaches on some islands in eastern Bay of Islands are nesting areas for New Zealand dotterel (Charadrius obscurus) (Ogle 1984; Coastal Wetland Inventory; R Parrish pers. comm. 1990). Shallow coastal marine habitats in the outer Bay of Islands contain a number of species of subtropical fish such as lizardfish (Synodus similis), blue knifefish (Labracoglossa nitida) and clown toado (Canthigaster callisterna). Subtropical invertebrates, including the gastropods Bursa verrucosa, Phillipia lutea, and Terebra circumcincta, are present also. Eelgrass (Zostera capricorni) beds within Rawhiti Inlet support scallop (Pecten novaezelandiae) and juvenile snapper (Chrysophrys auratus) populations. An archway in Motukokako is an unusual landform and calc-silicate mineralisation on that island is of scientific importance (F Brook pers. comm. 1990).

The outer Bay of Islands was extensively settled and utilised by Maori and contains many areas of traditional value. The area has considerable landscape and aesthetic value.

When Cook and du Fresne visited the Bay in the 18th century they recorded a large Maori population in the eastern area. Cook described vast fishing nets at Manawaora Bay and extensive, well-kept cultivations on both the islands and the mainland. Du Fresne's ill-fated expedition stayed longer and produced plans showing the location of inhabited pa and villages, and a detailed plan of Paeroa Pa on Moturoa.

A 13th century date for gardens on Moturoa (Peters 1975) and a deep stratified midden with archaic through to early historic deposits indicate that these outer islands were occupied over a long period of time. Both the islands and the coast of the mainland show an extremely high density of sites. The many large and impressive pa, habitation sites and midden emphasise the importance of the area during the prehistoric and proto-historic periods.

SITE IMPORTANCE: International

Comment:

Brown teal roosts and nesting areas are of international importance, and coastal forest habitats, dotterel nesting areas and archaeological sites are nationally important.

EXISTING THREATS: Type - dik

Comment:

Possums and goats are damaging coastal forest on Cape Brett Peninsula. Recreational fishing has depleted scallop populations in the eastern Bay of Islands (and possibly other marine species also), and recreational use on sandy beaches adversely affects dotterel breeding.

HUMAN MODIFICATION AND HUMAN USE: Type - hij

Comment:

Much of the original forest cover in the area has been removed during prehistoric and historic time. The eastern Bay of Islands is used extensively for recreational purposes (including camping, walking, picnicing, swimming, diving, fishing, boating) and is of importance for traditional Maori seafood gathering. Camping grounds are present at a number of localities and small residential settlements are present in some areas.

EXISTING PROTECTION: Type - ad

Comment:

The main islands in eastern Bay of Islands are Recreation and Scenic Reserves; other reserves are present at Cape Brett, Deep Water Cove, Te Toroa Bay and Whangamumu Harbour. Important forest habitats on Cape Brett Peninsula and Motukokako are privately owned.

AVAILABILITY OF INFORMATION:

Natural	1 2 3	1. Well documented
Cultural	1 2 3	2. Limited information (General)
Historic	1 2 3	3. Little information (if any)
Threats	1 2 3	
Human Mod & Use	1 2 3	

Comment:**SOURCES OF INFORMATION:**

Natural	1 2 3 4 5 6 7	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 7	2. Derived info as above & field check
Historic	1 2 3 4 5 6 7	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Whangaruru	SITE NO:	CRI/01/0026
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q05/26330,66490	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This comprises a complex rocky coastline from Taupiri Bay south, and includes the inner wetland environment of Whangaruru Harbour. It is an area of high scenic and natural value. Upper catchments of the site are largely in uncleared areas of Russell Forest, whereas coastal areas are mostly cleared pastoral farmland. The harbour extends some 7km inland running parallel to the coast. Estuarine habitat of mangrove and saltmarsh grading up several small streams within the harbour has high wildlife value. The harbour has a distinctive northern headland vegetated in high wildlife/botanical value forest. The eastern shoreline of the harbour is important recreationally, and has a large area of plantation forestry.

CONSERVATION VALUES: Natural - abcdeh Cultural - c Historic - b

Comment:

Estuarine areas in the upper 4km of Whangaruru Harbour have wetland habitat of outstanding value to wildlife. Extensive areas of mangrove (Avicenna marina var. resinifera) and Leptocarpus fringe mudflats and are bound landwards by manuka (Leptospermum scoparium) and farmland. Russell Forest is within 2km of most parts of the estuary. There are at least 3 roosts of the endangered brown teal (Anas aucklandica chlorotis) in the area, 2 in Punaruku estuary and the other in Tutaematai estuary. Other birds present in the area include fernbird (Bowdleria punctata vealeae), banded rail (Rallus phillipensis assimilis), kiwi (Apteryx australis mantelli) and paradise shelduck (Tadorna variegata). Forest on Whangaruru north head extends to the coast. Manuka-kanuka (Leptospermum ericoides) covers most of the headland with secondary forest in gullies. The rare plant Fuschia procumbens is present locally. Flax snails (Placostylus hongii) and kauri snails (Paryphanta busbyi) are present on the headland, along with kiwi and coastal bird species. New Zealand dotterels (Charadrius obscurus) breed at Bland Bay (Ogle 1984; Coastal Wetland Inventory).

The area has high landscape and aesthetic value.

The sheltered Whangaruru Harbour is surrounded by impressive pa and extensive undefended settlements containing terraces and storage pits (Stratton & Cassels 1975). Collections of artefacts from the area include excellent examples of both archaic and classical types of tools and ornaments. Stratified middens have been noted which contain evidence of a long period of prehistoric occupation. The area is of great importance to Ngati Wai people.

SITE IMPORTANCE: International

Comment:

Habitats used for breeding by brown teal are internationally important. Other wetland areas, coastal forest, and archaeological sites are nationally important.

EXISTING THREATS: Type - bcdk**Comment:**

Mangroves are increasing in area the reflecting siltation within the harbour. Spartina is present in the harbour wetlands. Stock encroach upon the estuarine zones in many areas. Seepage and runoff from residential development affects water quality. Recreational activities on Bland Bay affect nesting success of the New Zealand dotterel.

HUMAN MODIFICATION AND HUMAN USE: Type - achi**Comment:**

Surrounding coastal land is largely pasture. The middle portion of the peninsula is planted in exotic forest. Roads run the length of the coast and both sides of the harbour. Scattered residential development is present at Whangaruru North and South Heads and at Ngaiotonga at the harbour's head. Water-based recreation is popular in the harbour and at Bland Bay. DoC operate a camping ground at Whangaruru Head and walkways exist in forest habitat.

EXISTING PROTECTION: Type - a**Comment:**

Whangaruru Harbour Scenic Reserve.
Whangaruru Head Scenic Reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey report 30.

Stratton J, Cassels R, f 1975 : Archaeological survey of Whangaruru North Head. Department of Lands & Survey report.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetlands Inventory. Department of Conseration, unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Mimiwhangata	SITE NO:	CRI/01/0027
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q06/26370,66400	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This area extends from Oakura to Mimiwhangata and comprises a predominantly rocky coastline with interspersed gravelly and sandy beaches. Residential settlements are present at Oakura and Helena Bay. Much of the coastal area is farmed, but forest remnants are present locally.

CONSERVATION VALUES: Natural - abcdgh Cultural - abc Historic - b

Comment:

Natural - This area is important for birdlife. Mimiwhangata Bay and nearby bays are nesting areas for New Zealand dotterel (Charadrius obscurus) and variable oystercatcher (Haematopus unicolor), and bellbirds (Anthornis melanura melanura) are present in nearby coastal forest. Helena Bay is an important mainland roosting and nesting area for brown teal (Anas aucklandica chlorotis), and also supports banded rail (Rallus phillipensis assimilis) and bittern (Botaurus stellaris poiciloptilus) (Ogle 1984). Important conifer-broadleaf forest is present near Mimiwhangata and Helena Bay, and indigenous coastal vegetation is present on some of the smaller Wide Berth Islands.

Cultural and Historic - This area has high landscape and aesthetic value, and includes sites of traditional value.

Archaeological sites at Mimiwhangata cover a wide range of site types. Altogether about 90 sites have been recorded on the peninsula including extensive pa and undefended terracing, pits, agricultural lines, stone heaps, old tracks, middens and burials. Most of these are in good condition, although some have been damaged by farming practices and coastal erosion (Calder 1972).

The variety and density of sites suggests a long period of occupation and makes this landscape of high archaeological value.

SITE IMPORTANCE: National

Comment:

The presence of threatened and endangered bird species, and coastal forest remnants give this area national significance.

EXISTING THREATS: Type - ad

Comment:

Coastal erosion has occurred on east-facing sandy beaches at Mimiwhangata. Possums and rats are adversely affecting coastal forest biotas.

HUMAN MODIFICATION AND HUMAN USE: Type - abhij**Comment:**

Residential subdivisions and causeways have locally modified the coastline, as has the removal of coastal forest. The area is important for traditional Maori use and is presently heavily used for water-based and shore-based recreation.

EXISTING PROTECTION: Type - ace**Comment:**

A land reserve and adjoining marine park are present at Mimiwhangata.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Calder A, 1972 : Mimiwhangata archaeological report. Report to New Zealand Breweries.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Whananaki SITE NO: CRI/01/0028

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: Q06/26440,66330 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Whananaki site extends from just north of Roimata Pt south to include Whananaki inlet and spit, approximately 8km of coastline situated midway between Cape Brett and Bream Head. It takes in a long area of rocky coast, a small 2.75ha remnant of pohutukawa forest continuous with a 20ha freshwater habitat and the 350ha Whananaki estuary. Whananaki is a tidal inlet with a large sandy spit separating it from the ocean. The northern headland extends east of the spit and forms a continuous band of rocky coast up to the northern site boundary. The area is a popular recreation location.

CONSERVATION VALUES: Natural - abcdh Cultural - c Historic - b

Comment:

Whananaki Inlet has important natural values. Mudflats grade through mangroves (Avicenna marina var resinifera) and freshwater swamps, to scrub and podocarp-hardwood forest. The eastern cliffs and intertidal platforms have a diverse fauna and flora, especially in areas inaccessible to stock. There are small numbers of brown teal (Anas aucklandica chlorotis) within upper reaches of the inlet and fernbird (Bowdleria punctata vealeae), banded rail (Rallus phillipensis assimilis), reef heron (Egretta sacra sacra) and New Zealand dotterel (Charadrius obscurus) also occur. Eastern bar-tailed godwit (Limosa lapponica baueri) and pied stilt (Himantopus himantopus leucocephalus) also use the inlet. The Yates Livingston Scenic Reserve at Moureeses Bay includes remnant pohutukawa (Metrosideros excelsa) forest and scrub, and backs onto Mackens Swamp which is a breeding area for brown teal and bittern (Botaurus stellaris poiciloptilus) (Ogle 1984; Coastal Wetland Inventory).

The area has high landscape and aesthetic value, and includes sites of traditional value.

The area has high archaeological value. Many impressive pa and undefended settlements have been recorded along the rocky coastline between Motutara Point and Pareparea Bay. However, in general there are only brief records of major sites with the exception of a small intensively surveyed area between Pareparea and Rockells Bay (Maingay 1990). Prehistoric settlement in this area appears to be mainly confined to a coastal strip of less than 1km. Further inland the heavy clay soils would have been unsuited to Maori agriculture. At present few sites have been recorded on the shores of Whananaki Inlet although this has high archaeological potential. Two sites on Whananaki sandspit are of particular interest - a stratified midden showing three levels of occupation, and a find spot where a minnow shank lure was collected in the 1950's. This artefact type has been found in archaic deposits in both the North and South Islands and in other areas of Polynesia. It suggests very early settlement of Whananaki Harbour. The shores and adjacent hills surrounding the inlet require detailed survey.

SITE IMPORTANCE: International

Comment:

Habitats in which brown teal breed are internationally important. Coastal forest and other wetland habitats are nationally important.

EXISTING THREATS: Type - bdk

Comment:

Whananaki wetland is infilling with sediment derived from the land in the catchment. Farm stock are a threat to Mackens Swamp (which is continuous with a stock pond) and to areas of the Whananaki Inlet. Intensive recreational use of inlet reduces chances of nesting success for New Zealand dotterel on the Whananaki spit. Possums are degrading coastal forest.

HUMAN MODIFICATION AND HUMAN USE: Type - abdhi

Comment:

Mudflats at Whananaki South were reclaimed by a road causeway and are now used for pasture. Reclamation using loose tyres in foreshore works has taken place at Whananaki North. Most adjacent land is farmed and roads skirt the open coast and both sides of the inner coast of the inlet. There are small holiday home settlements on both sides of the inlet and an area of pine plantation on the spit. There are further residential settlements at Moureeses and Otamure Bay. A footbridge joins North and South Whananaki and there is also a small wharf at the inlets mouth. Activities taking place in the estuary at Whananaki inlet include swimming, sailing, waterskiing, shellfish collecting. Boating, fishing and diving take place up the coastline.

EXISTING PROTECTION: Type - ac

Comment:

Yates Livingstone Scenic Reserve encompasses the pohutukawa remnant ac Moureeses Bay. Council has zoned some areas "Scenic protection zones".

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

Natural information for the inlet and Mackens Swamp is well documented, the remainder of the coast is not documented as having natural value.

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 6 7	1. Derived info from existing literature & databases
Cultural	<u>1</u> 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	1 <u>2</u> 3 4 5 <u>6</u> 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Maingay J, 1990 : Archaeological inspection of the Jull property, Whananak Department of Conservation unpublished report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Matapouri	SITE NO:	CRI/01/0029
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q06/26440,66270	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This includes approximately 8km of coastline between the southern end of Whananaki Spit to and including Matapouri Bay and estuary. It encompasses several small bays separated by rocky headlands. Matapouri estuary is a small but important habitat and the site as a whole supports a wide variety of birds. Coastal forest remnants occur on headlands.

The area is very scenic and is used extensively for coastal recreation. Inland areas are farmed and a residential area of mainly holiday homes exists at Matapouri.

CONSERVATION VALUES: Natural - abcdh Cultural - c Historic - b

Comment:

Although Matapouri estuary is small and modified by human use, the area still has high habitat value. Some small patches of coastal secondary forest are continuous with the estuary which is 35% mud and sandflats, 40% mangroves (Avicenna marina var resinifera) and 25% saltmarsh grading into brackish a freshwater swamp. An assemblage of saltmeadow plant species within an area of Te Wairoa Stream is notable. Brown teal (Anas aucklandica chlorotis), banded rail (Rallus phillipensis assimilis), fernbirds (Bowdleria punctata vealeae), bittern (Botaurus stellaris poiciloptilus), caspian tern (Hydroproque caspia), and variable oystercatcher (Haematopus unicolor) use the estuary and bay. Coastal forest remnants support common bush birds and the less common bellbird (Anthornis melanura melanura). New Zealand dotterels (Charadrius obscuris) are present on all beaches in the area except Sandy Bay (Ogle 1984; Coastal Wetland Inventory).

The area has high landscape and aesthetic value and includes sites of traditional value.

A number of archaeological sites including pa, terraces and midden have been recorded along the coast. A stratified midden at Matapouri is of particular interest. However, this area has not been systematically surveyed and requires further attention.

SITE IMPORTANCE: National

Comment:

Wetlands and coastal forest habitats are nationally important.

EXISTING THREATS: Type - cek

Comment:

Kikuyu grass is present and a threat to saltmarsh vegetation. There is a threat of sewerage pollution to estuaries during peak summer holiday period. Matapouri Bay is an extremely popular recreation area. This, plus housing and roading needs for expanding residential development, is a major threat to the estuarine and coastal habitats.

HUMAN MODIFICATION AND HUMAN USE: Type - abhi**Comment:**

Residential development at Matapouri behind the bay consists mainly of holiday homes. Many small areas have been reclaimed for residential and pastoral use up the Te Wairoa Stream. A causeway separates the wetland from the beach. Roothing runs along the coastal edge for much of the site, forming a boundary between coastal vegetation on the seaward side and landward pastoral land. Unroaded coastal land between Whananaki South and Wooleys Bay is developed for farmland. Shore-based recreation is the major user of the site. Over summer the local population swells with swimming, diving, fishing and beach relaxation being popular. Boating and diving offshore also takes place.

EXISTING PROTECTION: Type - a**Comment:**

Wildlife management reserve in Te Wairoa Creek.
Matapouri Scenic Reserve southern headland Matapouri Bay.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

Natural value of Matapouri estuary is well documented but for the remainder of the site information was very limited.

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.
WERI = Coastal Wetland Inventory. Department of Conservation unpublished report.

OTHER CONSIDERATIONS:

The evidence includes pa with stone-faced terracing, stone embankments, walls, mounds and boundary markers, and a number of burials. Stone and wooden artefacts are associated with several of the sites. These islands contain impressive remains of Maori stone constructions. The majority are reasonably well-preserved, although there is evidence of past damage by feral pigs and continuing disturbance from bird burrows and regenerating bush. Most of the extensive features have been recorded only briefly. More detailed survey and mapping is essential.

SITE IMPORTANCE: International

Comment:

High endemism in many aspects of the Poor Knights flora and fauna make this site internationally important.

EXISTING THREATS: Type - m

Comment:

Bird burrows and regenerating bush disturb/destroy archaeological sites.

HUMAN MODIFICATION AND HUMAN USE: Type - di

Comment:

Mooring buoys are situated in South Harbour and further mooring sites are planned for Nursery Cove, Hope Pt and South Middle Arch. Diving is the major recreation use with many charter boat operations using the area. Additionally boating and yachting are popular. Limited fishing using specified methods (no netting, commercial fishing and only floating lines) is allowed in some areas.

EXISTING PROTECTION: Type - a

Comment:

The Poor Knights site boundary is also that of the Poor Knights Marine Reserve, established in 1981. This status protects some areas entirely from exploitation (to the north and south of Aorangi Island) and the remaining area allows limited recreational fishing. All land within the reserve is nature reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 <u>2</u> 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 6 7	3. Derived from existing maps & aerial photographs
Threats	1 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Fraser W M, 1926 : The Poor Knights Islands. New Zealand journal of science and technology.

Hayward B W, 1986 : Prehistoric man on the offshore islands of northern New Zealand and his impact on the biota. In The offshore islands of northern New Zealand. Department of Lands & Survey information series 16.

Kelly M, 1983 : A bibliography and literature review for the Poor Knights Islands marine reserve. Report to Poor Knights Islands Marine Reserve Management Committee.

Lawlor I, 1977 : An archaeological survey of Aorangi Island. No 1. University of Auckland report.

Lawlor I, 1979 : Continuation of an archaeological survey of Aorangi Island. University of Auckland report.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Ngunguru	SITE NO:	CRI/01/0031
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q06/26460,66150	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This site extends from Tutukaka Harbour in the north to just south of the Horahora river mouth in the south, a total coastline distance of approximately 12km. It encompasses the large (2000ha) and very diverse wetland habitats of the Ngunguru and Horahora estuaries, plus the rocky coast separating and including the small harbour at Tutukaka. The Ngunguru and Horahora rivers form parallel estuaries separated by 2-3km of wetland, regenerating forest and scrub and patches of farmland and exotic forestry. The wetlands grade inland from sandy beaches, dunes and tidal sand and mudflats to large areas of mangrove and saltmarsh. Brackish and freshwater swamps provide additional high value habitat with the area as a whole supporting many rare wetland bird species such as banded rail, bittern and fernbird. Numbers of waders use the area. Tutukaka Harbour is developed as a major marina and as a wetland is of little value. A small settlement occurs along the shorefront of the Ngunguru mouth and roading follows parts of both rivers. Small bush remnants are continuous with the upper reaches of both estuaries and a thin coastal vegetation fringe between Tutukaka and Ngunguru. Surrounding land is largely pastoral farmland.

CONSERVATION VALUES: Natural - abcdgh Cultural - c Historic - bc

Comment:

The Ngunguru and Horahora wetlands are continuous with three forested habitats of high value. Kiripaka bush and Kiripaka reserve on the northern side of Ngunguru and McDonald's bush on the south side form important reserves of secondary hardwood/podocarp/kauri forest, with some stock material. Juncus, Leptocarpus and Plagianthus form saltmarsh vegetation. Swamp plant associations are diverse with cabbage tree, scrub, flax, sedge and rush communities. While the absence of extensive open tidal flats reduces variety and number of wading birds, the high proportion of vegetated wetland, with long margins where open water meets vegetation, creates habitats for some other birds on a scale unknown elsewhere in Northland. The area is most notable for banded rail (Rallus philippensis assimilis), bittern (Botaurus stellaris poiciloptilus), fernbird (Bowdleria punctata vealeae), kiwi (Apteryx australis mantelli) and low numbers of brown teal (Anas aucklandica chlorotis). New Zealand dotterel (Charadrius obscurus) feed in the estuaries and nest on the sandspit at Ngunguru and beach at Horahora. Low numbers of brown teal occur at Tutukaka. This complex mosaic of habitats is environmentally sensitive to water quality changes, particularly in regard to siltation increases caused by catchment development (Ogle 1984; Coastal Wetland Inventory). The site has above average landscape value.

There is evidence of intensive prehistoric occupation surrounding Ngunguru estuary, with pa on rocky headlands and dense midden along the shoreline. A number of pit sites are located on high ground to the south of the estuary. Ngunguru sandspit is of particular interest. The spit itself is covered with shell and stone-capped dunes. Many of these midden and hangi are deflated or eroding badly, but some are still partly 'in situ' and those on the harbour side of the spit appear to have large areas intact. Dotterel nest on the deflated midden.

Part of a historic midden is visible at the southwest end of the spit. A pre-terrace and pit sites are situated on higher ground overlooking the sea and estuary. Early survey plans show a Maori settlement and cultivations adjacent to the estuary in the 19th century. Timber mills and a small tannery were also set up here in the late 1830's. Only a few sites have been recorded near the Horahora estuary, but there is a high probability that it contains similar prehistoric evidence to Ngunguru. The whole of this area requires systematic survey.

SITE IMPORTANCE: International

Comment:

Use of the wetland habitats by international migratory waders and the endangered brown teal make the site internationally important.

EXISTING THREATS: Type - bdf1

Comment:

Considerable siltation of the Ngunguru River from existing coal mine workings has taken place. Cattle and sheep graze drier areas of the Ngunguru estuary. Rural-residential development at Whangaumu Bay caused heavy erosion in 1988 and wetland in the bay was destroyed during development. It is likely that urban development will increase with recreational pressure in the near future. Careless recreation is a threat to nesting birds on the sandspit and beach environments (ie New Zealand dotterel and variable oystercatcher nests). A number of archaeological sites have been damaged/destroyed by forestry. Natural erosion has affected many midden and hangi sites on Ngunguru sandspit

HUMAN MODIFICATION AND HUMAN USE: Type - abdhi

Comment:

Road construction around estuary margins plus peripheral drainage and clearing has destroyed wetland area. Causeway, marina and residential development at Tutukaka has destroyed most of the wetlands in that area. Wetland was lost during residential development at Whangaumu Bay. Rural residential development occurs at and between Ngunguru and Tutukaka. Shore stabilisation works are present along Ngunguru mouth with boat ramp access to mudflats provided. At the mouth to Horahora a large area in the south east corner has been reclaimed and has separated the sand dunes from the estuary. There are buoy moorings in the Ngunguru mouth and a large marina at Tutukaka. The outlying coast is used by boaties and yachties with the estuaries and Tutukaka Harbour providing good ocean access. Fishing at estuary mouths plus water skiing, swimming and picnicing on the estuary side are popular. Duckshooting maimais are situated up both estuaries.

EXISTING PROTECTION: Type - ac

Comment:

Small areas of DoC-administered land are present adjacent to Tutukaka Harbour, and Ngunguru and Horahora estuaries.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural 1 2 3 4 5 6 7
 Cultural 1 2 3 4 5 6 7
 Historic 1 2 3 4 5 6 7
 Threats 1 2 3 4 5 6 7
 Human Mod & Use 1 2 3 4 5 6 7

1. Derived info from existing literature & databases
2. Derived info as above & field check
3. Derived from existing maps & aerial photographs
4. Recent DoC survey including sampling & analysis
5. Recent DoC survey excluding sampling & analysis
6. Experience
7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation, unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Pataua	SITE NO:	CRI/01/0032
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q07/26490,65080	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

This east coast site, directly east of Whangarei city, takes in Ngunguru Bay south of the Horahora River mouth and the Pataua and Taiharuru estuaries, approximately 11km of coastline. Ngunguru Bay has a long sandy beach backed with dunes. The beach's southern tip forms a broad sandy spit on the northern side of the Pataua River mouth. Taiharuru estuary has a narrow mouth with a chain of small islands on the seaward side. Taiharuru and Pataua Rivers have parallel estuaries separated by a rocky headland only 200 metres wide at its narrowest point. This unusual twin estuary system has a diverse wetland environment covering 650ha, modified by high recreational use. It supports migratory wader species plus a range of rare and threatened sedentary species such as fernbird and New Zealand dotterel. Surrounding land is largely cleared and farmed, small areas of scrub/mangrove continuum occur.

CONSERVATION VALUES: Natural - bcdh Cultural - c Historic - b

Comment:

Pataua and Taiharuru estuaries have moderate value as wetland habitat. Mangroves (*Avicenna marina* var. *resinifera*) are the dominant vegetation in the Pataua estuary with small areas of saltmarsh grading into scrub zones in the eastern estuary arm. Mangroves are restricted to several small creeks in the Taiharuru estuary. Open mudflats are extensive throughout the twin estuary system. Coastal pohutukawa (*Metrosideros excelsa*) persists on rocky headlands between and fringing the estuaries. Bird species using the area include Asiatic whimbrel (*Numenius phaeopus variegatus*), caspian tern (*Hydroprogne caspia*), reef heron (*Egretta sacra sacra*), bittern (*Botaurus stellaris poiciloptilus*), banded rail (*Rallus philippensis assimilis*), banded dotterel (*Charadrius bicinctus bicinctus*) and New Zealand dotterel (*Charadrius obscurus*). Fernbird (*Bowdleria punctata vealeae*) and spotless crane (*Porzana tabuensis plumbea*) are found in the saltmarsh. New Zealand dotterel occur along the length of Ngunguru Bay and probably nest there. Variable oyster catchers nest throughout the site in low numbers. Habitats within the estuaries are sensitive to siltation from surrounding catchments (Ogle 1984; Coastal Wetland Inventory). The area has above average landscape value.

There is evidence of dense prehistoric settlement on the north side and at the mouth of Pataua estuary. This includes pa, open settlements and midden sites. Abundant seafood resources would have been a major attraction. Pataua River also provided easy access to Whangarei Harbour. The area appears to have been occupied over a long period of time. Two archaic sites recorded near the mouth of the estuary have both been destroyed in recent years. Moa, dog and other unidentified bone was recovered from a test excavation at one of these sites on Te Whangai Head (Maingay 1990). Another important site on the northern shoreline contained a large number of wooden implements including more than 20 fern root beaters, a digging stick and canoe seat. The quantity of material indicates that implements were deliberately cached here, and the fern root was an important resource at some period of prehistory. So far only four sites have been recorded at Taiharuru. The whole of this estuary and the southern side of Pataua require systematic surveys (Maingay 1990).

SITE IMPORTANCE: National

Comment:

A diverse fauna of threatened species within some habitats make parts of this site nationally important.

EXISTING THREATS: Type - hk

Comment:

A campground at Taiharuru and residential housing at Pataua North and South mean human disturbance is high, especially during summer.

HUMAN MODIFICATION AND HUMAN USE: Type - abdhi

Comment:

Residential development mainly for holiday housing has modified both sides of the Pataua River mouth. The areas are joined by a footbridge. Surrounding land is largely farmed. One area in the south east of Taiharuru and areas in the Pataua estuary have been reclaimed. Causeways through Taiharuru wetland have reclaimed and fragmented habitat. Several maimais are situated in the estuary for duckshooters. Boating, swimming and shellfish collection (just above the footbridge) are popular recreation activities in the area. Buoy moorings are present in both estuaries.

EXISTING PROTECTION: Type - a

Comment:

Small areas of DoC-administered land are present adjacent to Pataua estuary.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:**SOURCES OF INFORMATION:**

Natural	<u>1</u> 2 3 4 5 6 7	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	1 2 3 4 5 6 <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Maingay J, 1990 : Archaeological survey of proposed reserve on Pataua Island. Department of Conservation report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation, unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Ocean Beach SITE NO: CRI/01/0033

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: Q07/26510,65980 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

This is an 8km long coastal strip incorporating Kauri Mountain and Ocean Beach. It incorporates rocky headlands in the north and a sandy coastline along Ocean Beach.

CONSERVATION VALUES: Natural - abch Cultural - c Historic - b

Comment:

Much natural value can be derived from the site's remoteness and relatively low usage in a region of coastline otherwise intensively used. New Zealand dotterel (Charadrius obscurus), variable oystercatcher (Haematopus unicolor), and a large colony of black backed gull (Larus dominicanus) nest along the beach. In the dunes native vegetation such as pingao (Desmoschoenus spiralis) and spinifex (Spinifex hirsutus) occur amongst introduced marram grass (Ammophila arenaria). Shore skinks (Leiolopisma smithi) and ornate skinks (Cyclodina ornata) are present. Estuaries provide roosting and feeding habitat for species such as banded dotterel (Charadrius bicinctus bicinctus), caspian tern (Hydroprogne caspia) and pied stilt (Himantopus himantopus leucocephalus), and red-billed gulls (Larus novaehollandiae scopulinus) nest on offshore rock stacks at the northern end of the site. Forest at Kauri Mountain comprises 260ha of secondary podocarp-hardwood forest with kauri (Agathis australis) regeneration and diverse shrublands, and supports common bush birds and a large population of kiwi (Apteryx australis mantelli). This forest is joined to Ocean Beach by a narrow band of coastal vegetation (Ogle 1984; Coastal Wetland Inventory). As a whole the site has high landscape value.

This area contains mostly midden sites, apart from a small eroding pa and stone workfloor at the northern end of the beach. Several midden appear to be archaic deposits. These once contained artefacts and a variety of bone including tuatara, seal, dolphin, dog, fish, moa and other bird bone. Most are now completely deflated and have been thoroughly fossicked. However, a few exposed sites are still partly 'in situ' and there is a strong possibility that other sub-surface evidence exists.

SITE IMPORTANCE: National

Comment:

Breeding populations of threatened bird species, namely New Zealand dotterel and North Island brown kiwi give areas within this site national importance.

EXISTING THREATS: Type - dek

Comment:

Wandering cattle degrade wetland areas in and behind dunes and farmed goats browse coastal vegetation at the northern end of the site adversely modifying the habitats. Saltmarsh and wetlands associated with the most southern and northern streams are enriched by septic tank effluent. Trail motorcycles and other beach vehicles affect dune landscape and vegetation, and disturb ground nesting birds. Natural erosion affects archaic middens.

HUMAN MODIFICATION AND HUMAN USE: Type - ahi**Comment:**

Surrounding land is developed for pastoral usage with one settlement at the southern-most bay for holiday and fulltime residence. Scattered farm houses overlook the site. Surfing occurs along the entire site, but particularly in the southern bay. Other recreation includes swimming, walking, fishing, birdwatching and offroad vehicles. Offshore scuba diving around Kauri Mountain is popular, as is boating and fishing.

EXISTING PROTECTION: Type - a**Comment:**

There are DoC-administered reserves at Kauri Mountain and behind Ocean Beach.

AVAILABILITY OF INFORMATION:

Natural	1 <u>2</u> 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	1 <u>2</u> 3 4 5 6 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 <u>6</u> 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation, unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Bream Head	SITE NO:	CRI/01/0034
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	R07/26530,65930	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

Bream Head is an area of approximately 550ha forming the northern headland to Whangarei Harbour. It comprises a steep sided, southward facing ridge of volcanic origin which has several peaks, the highest being 476m. This site has the most extensive and intact coastal hardwood forest in Northland with an uninterrupted shoreline to ridge top zonation. Several threatened plants and a diverse bush fauna (including threatened species) are found in the area. The hard coastline of the headland offers good diving and fishing. There is a hut near Peach Cove along the southern shoreline which caters for the most extensive usage of the area which is tramping. Most of the area has scenic reserve status in recognition of its high landscape value. Possums and wandering stock on the northern slopes threaten the area.

CONSERVATION VALUES: Natural - abcegh Cultural - c Historic - b

Comment:

This area includes an important coastal forest remnant that has an unmodified zonation from rocky shore to 476m elevation with largely southern aspect coastal hardwood forest and secondary forest, and scrub on north facing slopes. The habitat also includes rock bluff and pinnacles, small streams, and a cabbage tree (Cordyline australis)-raupo (Typha orientalis) swamp. The Bream Islands offshore are rat-free shore bird roosts and are a popular diving location. Notable plants in the Bream Head area include Fuschia procumbens, Celmisia adamsii, Paratrophis banksii, Pittosporum virgatum and an undescribed species of Hebe (L Forester pers. comm.). A diverse fauna of bush birds and common seabirds is present in this area. The North Island kaka (Nestor meridionalis septentrionalis), red-crowned parakeet (Cyanoramphus novaezelandiae novaezelandiae) and brown kiwi (Apteryx australis mantelli) occur, and bats are possibly present. Bellbird (Athornis melaneura melaneura), rare on the Northland mainland, are seen from June to midsummer, but are not known to breed at the site. It is thought that the birds seen are migratory juvenile males from the neighbouring Hen & Chickens Islands. Near Peach Cove there is a population of the flax snail (Placostylus hongii). The steep volcanic rocky outcrops are regionally important landforms. There is a large amount of data on surrounding marine environments held by Auckland University Zoology Department (B Ballantine pers. comm. 1990).

Bream Head was named by Cook in 1969 who noted a number of villages and cultivations in the area. It contains a wide variety of well preserved archaeological sites. Two pa overlook Peach Cove and terraced areas are situated on the western side of Bream Head rock and along the western ridge of Mt Lion. The Home Point-Busby Head-Smugglers Bay area contains a particularly dense concentration of sites including numerous small living areas with terraces and pits and huge quantities of shell midden, indicating intensive prehistoric settlement. Archaic material including one piece moa bone fishhooks has been found in a midden at Smugglers Bay. As one of the very few partially intact archaic sites in the Whangarei area, it is of particular importance. Stock erosion is affecting this and other midden at Smugglers Bay (Nevin 1984:63-66).

SITE IMPORTANCE: National

Comment:

This site includes a unique remnant of a once extensive Northland coastal forest type and as such has very high value. The threatened flora and fauna within it contribute to this value.

EXISTING THREATS: Type - d

Comment:

Possums and cattle degrade vegetation.

HUMAN MODIFICATION AND HUMAN USE: Type - hi

Comment:

A network of tracks and a single hut cater to the most popular use of the area, walking and picnicing. Offshore diving, boating, yachting and fishing recreational usage also occurs.

EXISTING PROTECTION: Type - ai

Comment:

The majority of the south face is scenic reserve, Bream Islands are nature reserves and land on the northern face is largely private. Permanent rat poisoning bait stations are set up around the flax snail colony at Peach Cove.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 <u>2</u> 3	
Human Mod & Use	1 <u>2</u> 3	

Comment:**SOURCES OF INFORMATION:**

Natural	<u>1</u> 2 3 4 5 6 7	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 6 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Nevin G, 1984 : Whangarei Harbour Study : Archaeology. Northland Harbour Board report.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Whangarei Harbour Study 1988. Report prepared for the Northland Harbour Board.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME:	Whangarei Harbour	SITE NO:	CRI/01/0035
RECORDERS NAME:	T Shaw, J Maingay	CONSERVANCY:	Northland
MAP/GRID REF:	Q07/26400,65980	DATE:	23.4.90

BRIEF DESCRIPTION OF SITE:

Whangarei Harbour is a deepwater embayment of 9800ha, of which about 60% is exposed at low tide as mud and sand flats and shell banks. Extensive areas of mangrove forest and saltmarsh are present also. Whangarei city is located at the northwestern end of the harbour, and industrial complexes and residential settlements are scattered around the margin of the harbour.

CONSERVATION VALUES: Natural - bcdegh Cultural - a Historic - abcd

Comment:

Whangarei Harbour has been modified by settlement and development, but maintains high natural value. Coastal and estuarine areas support a very diverse bird fauna, with 82 species (including 63 natives and 14 endemics) being recorded. Large numbers of migrant waders (up to 9000) are supported, including commonly occurring species such as knot (Calidris canutus canutus) and godwit (Limosa lapponica baueri), and rare migrants such as far eastern curlew (Numenius madagascariensis) and asiatic whimbrel (Numenius phaeopus variegatus). Twenty nine species (19 native) breed on the harbour, the most notable of these being New Zealand dotterel (Charadrius obscurus), caspian tern (Hydroprogne caspia), banded rail (Rallus philippensis assimilis), fernbird (Bowdleria punctata vealeae), and reef heron (Egretta sacra sacra). The last named species occurs in greater numbers in Whangarei Harbour than in other New Zealand harbours (R Pierce pers. comm. 1990). Other endemics of note include wrybill (Anarhynchus frontalis), banded dotterel (Charadrius bicinctus bicinctus) and marsh crake (Porzana pusilla affinis). Coastal forest occurs in isolated pockets at Reserve Point, Mt Aubrey and Jacksons Bay bush. Mt Aubrey is probably the best forest remnant with 65ha of unmodified secondary coastal hardwood. The large areas of mangroves (Avicenna marina var resinifera) within the harbour are significant. Extensive pipi (Paphies australis) and cockle (Austrovenus stutchburyi) are present on intertidal and immediately subtidal sandy substrates, and scallops (Pecten novaezelandiae) are locally common in subtidal channels. Harbour habitats are vulnerable to surrounding land use, being sensitive to sedimentation and water quality changes. For example buildup of silt discharged from Portland Cement works has caused reduction of shellfish and fish stocks, and loss of eelgrass (Zostera capricorni) (Ogle 1984; Mason & Ritchie 1979; Whangarei Harbour Study).

Sites of geomorphologic significance in the Whangarei Harbour area include volcanic pinnacles in the Manaia area, and late Pleistocene and Holocene beach deposits and foredune ridges on the southeastern margin of the harbour.

The diverse natural resources of Whangarei Harbour supported a large prehistoric population. Dense shell middens line the coast. On the north these are flanked by pa and undefended settlements on almost every hill and spur overlooking the harbour. The most impressive is Parahaki, a well fortified complex with numerous storage pits which covers about 3km of ridgelines. To the west and south dense settlements are concentrated mainly around areas with rentzina soils which still provide evidence of Maori agriculture. A spectacular example is Limestone Island where the whole northwest face is covered with longitudinal 'drainage' channels.

The harbour contains a wide variety of site types probably covering the full archaeological sequence from archaic sites to those of early European industries. A chert work floor on the Onerahi foreshore covers an area of 800 x 30m. Tools from this site are mostly based on flakes and include retouched blades, side-hafted knives and saw-toothed flakes over 20cm across. It was formerly assumed that flake tool industries were confined to the South Island so this is an important, possibly unique, site. It has not been dated but the presence of an Onerahi chert flake in an archaic midden at Smugglers Bay indicates that it was an early stone source. Stone was also used for construction purposes. Sites at McLeods Bay contain a variety of stone features including stone mounds and walled enclosures 100m above sealevel, and a small pa with stone-faced terraces near the coast. An impressive retaining wall, 70m long and 1.5m high, runs along a stream bank at the foot of the pa (Nevin 1984). Evidence given in the Maori Land Court states that Whangarei initially belonged to Ngaitahuhu. Ngapuhi conquered the region in the mid-18th century and during the intertribal wars of the 1820's Whangarei became the meeting place for war parties travelling south. These gatherings of many chieftains gave the harbour its name 'whangarei terenga paraoa', swimming place of whales (Pickmere 1986). Early 19th century visitors included the missionaries Marsden and Colenso but it was 1839 before the first permanent settlers arrived. A number of industries developed from the 1850's onward - gumdigging, flax milling, coal mining, tanning, lime production and flour and timber milling. Archaeological remains of all these industries have been identified in the Whangarei area (Nevin 1988).

SITE IMPORTANCE: International

Comment:

The many international migratory wader species, the high number of threatened and rare bird species and the Pleistocene beach and dune ridges found in this site give it international importance. Chert workflow, Onerahi, contains evidence of flake tool industry formerly assumed to be confined to the South Island.

EXISTING THREATS: Type - bcdefhlm

Comment:

Siltation due to dredging, reclamation, increased runoff and mining of coal, scoria and clay in catchment is a threat to fragile habitats. Spartina, an exotic invasive estuarine plant, threatens mudflat habitats. Along especially the southern shoreline around important areas of saltmarsh and mangrove, wandering stock are damaging habitat whilst possums are modifying the remaining coastal vegetation. Industrial waste, outfall through greater than 35 stormwater pipes, possible ground water contamination from the oil refinery, sewage treatment outfalls and polluted catchment streams, all pose a threat to water quality. Sand extraction from the harbour occurs at an unknown scale. Aquaculture takes place with an oyster farm situated at Parua Bay. Further residential and industrial development is planned for the site. A large forestry port proposal at Marsden Point with the potential to destroy a large area of wetland is a real threat as is increased urban development along the harbour fringe. Constant dredging is needed to keep open the main shipping channel, which forces the Harbour Board to seek new dumping sites. If reclamations extend to the Otaika River mouth valuable feeding areas will be lost.

HUMAN MODIFICATION AND HUMAN USE: Type - abcdhij**Comment:**

The site is intensively developed. Residential development occupies considerable areas of shoreline around the harbour at Marsden Point, One Tree Point, Whangarei City, Onerahi and along the northern shore. Industrial subdivisions are found at Port Whangarei and along the Hatea River. The Portland Cement works occupies a large area up the Portland arm of the estuary as does the oil refinery at Marsden Point. Reclamations have claimed large areas previously part of the harbour wetland. Before 1955 455ha were reclaimed and subsequently more has been taken as the entire Port Whangarei area and industrial development has been built on reclaimed mudflats. North and western harbour margins are largely roaded with associated occasional causeways. A railway causeway on the western edge has also reclaimed and fragmented areas of wetland. There is a commercial port near Whangarei city and two large wharves service Marsden Point. Moorings are scattered along the northern bays and there is a marina situated in Hatea River. Recreation, both water and shore based, is high due to the areas' surrounding population of approximately 40,000. Boating, yachting, swimming, diving (especially for scallops in the inner harbour) and fishing are all popular.

EXISTING PROTECTION: Type - acd**Comment:**

Much of the harbour is a wildlife refuge. Scenic reserves protect some coastal forest patches.

AVAILABILITY OF INFORMATION:

Natural	1 2 <u>3</u>	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	1 2 <u>3</u>	
Human Mod & Use	1 2 <u>3</u>	

Comment:

There are extensive publications on the natural element of the harbour done by a variety of authorities including DoC (Wildlife Service), Lands & Survey and Northland Harbour Board. Detailed archaeological surveys by G Nevin.

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 6 <u>7</u>	2. Derived info as above & field check
Historic	1 <u>2</u> 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Nevin G, 1984 : Whangarei Harbour Study : Archaeology. Northland Harbour Board report.

Nevin G, 1988 : Archaeological survey of Whangarei City. Whangarei City Council report.

Mason R S, Ritchie L D, 1979 : Aspects of the ecology of Whangarei Harbour. A report commissioned by the Northland Harbour Board and Ministry of Agriculture and Fisheries.

Ogle C C, 1984 : Wildlife and wildlife values of Northland. New Zealand Wildlife Service fauna survey unit report 30.

Pickmere N, 1986 : Whangarei, the founding years. Private publication.

Whangarei Harbour Study - report prepared for the Northland Harbour Board.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation, unpublished report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

EXISTING THREATS: Type - efjkl**Comment:**

Waipu River and Waipu Cove water is heavily contaminated by septic tanks. Saltmarshes in Waipu River and upstream south of Waipu Cove are adversely affected by effluent. Stan Semenoff Sand Supplies Ltd extracts sand from behind the foredunes from Ruakaka Beach at Uretiti Road access. Refuse dumping occurs at the Uretiti Council landfill in dune land behind Uretiti Beach. The success of nesting birds is reduced by ignorant recreational use, particularly dog walking, vehicles and horses. Large areas of dune land have been lost to the Marsden Point Oil Refinery, Ruakaka Power Stations and Uretiti sand work developments.

HUMAN MODIFICATION AND HUMAN USE: Type - abhij**Comment:**

Three zones within this site are intensively modified -

- i. Waipu Cove - residential, small settlement with campsite in dunes.
- ii. Ruakaka - ribbon of residential development along river, 2 oil fired powerstations and a race course on dune land and a large camp and settlement at rivers mouth.
- iii. Marsden Point - oil refinery on duneland plus small residential area.

Additionally there is a sand processing plant at Uretiti. Lengths of coast separating these areas are developed for pastoral use and a golf course. Areas along the Waipu and Ruakaka River banks and in their respective estuaries have been reclaimed. A groyne has been placed in the Waipu estuary to determine the mouth. Recreational use of the area includes surfing, swimming, fishing, offroad vehicles, camping and picnicing. Boating and fishing occur offshore. Cockles and pipis are gathered in the estuaries and tuatuas on the coast.

EXISTING PROTECTION: Type - a**Comment:**

DoC-administered land forms a strip along much of the coast immediately inland from Ruakaka and Waipu beaches.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	1 2 <u>3</u>	2. Limited information (General)
Historic	1 <u>2</u> 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 <u>5</u> <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> 7	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 <u>5</u> <u>6</u> 7	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 <u>6</u> 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Ogle C, 1984 : Wildlife and wildlife values of Northland. New Zealand
Wildlife Service fauna survey unit report 30.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

SSWI = Ogle 1984 - above.

WERI = Coastal Wetland Inventory. Department of Conservation, unpublished
report.

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Bream Tail SITE NO: CRI/01/0037

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: R08/26530,65710 DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Bream Tail is a rocky headland with scattered sandy and shelly pocket beaches. It is bounded by sandy coasts to the northwest and south. Most of the headland is farmed, but areas of indigenous coastal forest and scrub are present locally. A residential subdivision is present at Langs Beach.

CONSERVATION VALUES: Natural - aeh Cultural - bc Historic - b

Comment:

Coastal forest remnants on cliffs and in gullies represent a habitat type that is absent from sandy coasts to the northwest and south. The area likely includes sites of Maori traditional value, but these have not been identified. Landscape and aesthetic values are high.

Archaeological site distribution in the area is mainly confined to a 500m coastal strip. Several pa are situated on rocky headlands but the majority of sites, small undefended settlements, tend to cluster around sandy bays with fertile soils (Bellingham & Houba 1976).

SITE IMPORTANCE: National

Comment:

Coastal forest remnants are of national importance.

EXISTING THREATS: Type - d

Comment:

Coastal forest is being damaged by possums and cattle.

HUMAN MODIFICATION AND HUMAN USE: Type - ahj

Comment:

The area is important for traditional Maori seafood gathering, and is popular for shoreland-based recreation. The coastline has locally been modified for residential and agricultural purposes.

EXISTING PROTECTION: Type - ab

Comment:

AVAILABILITY OF INFORMATION:

Natural	1 2 3	1. Well documented
Cultural	1 2 3	2. Limited information (General)
Historic	1 2 3	3. Little information (if any)
Threats	1 2 3	
Human Mod & Use	1 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	1	2	3	4	5	<u>6</u>	<u>7</u>	1. Derived info from existing literature & databases
Cultural	1	2	3	4	5	<u>6</u>	<u>7</u>	2. Derived info as above & field check
Historic	1	2	3	4	5	<u>6</u>	<u>7</u>	3. Derived from existing maps & aerial photographs
Threats	1	2	3	4	5	<u>6</u>	<u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	1	2	3	4	5	<u>6</u>	<u>7</u>	5. Recent DoC survey excluding sampling & analysis
								6. Experience
								7. Expert opinion

Comment:

Bellingham R, Houba A, 1976 : Report of site survey : Brynderwyn Hills, Northland. New Zealand Historic Places Trust report.

RECORDED ON EXISTING DATABASES:

1. WERI
2. SSWI
3. PNA
4. Geopreservation
5. HPT County Inventories
6. Other
7. None

Comment:

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:

SITE NAME: Hen & Chicken Islands SITE NO: CRI/01/0038

RECORDERS NAME: T Shaw, J Maingay CONSERVANCY: Northland

MAP/GRID REF: DATE: 23.4.90

BRIEF DESCRIPTION OF SITE:

Hen & Chickens Islands are located offshore from Bream Bay. A northern east-west trending island chain (Marotere Islands) includes three larger islands (79.5 - 155ha) and a series of smaller islands and rocks (up to 26.5ha). Taranga (Hen) Island to the south is 500ha, and Sail Rock is 3.4ha. Islands within the Hen & Chickens group are covered in little modified and regenerating coastal forest and scrub. Rattus exulans is present on all larger islands in the group, but is apparently absent from some of the smaller islands and stacks.

CONSERVATION VALUES: Natural - abcdgh Cultural - abc Historic - b

Comment:

Natural - The islands are important nesting areas for seabirds such as Pycrofts petrel (Pterodroma pycrofti), flesh-footed shearwater (Puffinus carneipes hullianus) and little shearwater (Puffinus assimilis haurakiensis), and for endangered forest birds including stitchbird (Notiomystis cincta), saddleback (Philesturnus carunculatus rufusater) and kaka (Nestor meridionalis septentrionalis). Reptiles present include tuatara (Sphenodon punctatus), Duvaucels gecko (Hoplodactylus duvauceli), Suter's skink (Leiolopisma suteri), moko skink (Leiolopisma moco), marbled skink (Cyclodina oliveri), MacGregor's skink (Cyclodina macgregori). The presence of an endemic landsnail Rhytida tarangaensis and the plants Xeronema callistemoun and Carmichaelia williamsii is notable (P Anderson pers. comm. 1990).

Cultural - Most islands in the group were occupied and/or utilised by Maori and likely contain sites of traditional value. Hen & Chickens have high aesthetic and landscape value.

Hen Island contains pa and extensive areas of stone features which include walls, mounds, platforms and stone-faced terracing. Much of this evidence appears to be associated with agricultural practices and suggests long-term prehistoric occupation of the island (Hayward et al 1978). In contrast the Chickens are characterised by numerous but smaller sites, mainly living terraces with limited deposits of shell midden. However, the pa on Whatupuke and Alice Islands, evidence of agriculture on Whatupuke and groups of large terraces on Lady Alice indicate that they were inhabited for more than brief prehistoric visits (Prickett 1984).

There is evidence of European mining on Coppermine Island.

SITE IMPORTANCE: International

Comment:

The presence of rare and endangered species and local endemics give Hen and Chickens Islands international significance.

EXISTING THREATS: Type - d**Comment:**

Rattus exulans is a threat to reptiles, some bird species, and invertebrates.

HUMAN MODIFICATION AND HUMAN USE: Type - ai**Comment:**

Forest areas on some of the larger islands were cleared for residential and agricultural purposes, but are now regenerating. The area is used for water-based recreation.

EXISTING PROTECTION: Type - a**Comment:**

The islands are protected within the Hen and Chickens Islands Nature Reserve, and Sail Rock Nature Reserve.

AVAILABILITY OF INFORMATION:

Natural	<u>1</u> 2 3	1. Well documented
Cultural	<u>1</u> 2 3	2. Limited information (General)
Historic	<u>1</u> 2 3	3. Little information (if any)
Threats	<u>1</u> 2 3	
Human Mod & Use	<u>1</u> 2 3	

Comment:

SOURCES OF INFORMATION:

Natural	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	1. Derived info from existing literature & databases
Cultural	1 2 3 4 5 <u>6</u> <u>7</u>	2. Derived info as above & field check
Historic	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	3. Derived from existing maps & aerial photographs
Threats	<u>1</u> 2 3 4 5 <u>6</u> <u>7</u>	4. Recent DoC survey including sampling & analysis
Human Mod & Use	<u>1</u> 2 3 4 5 6 7	5. Recent DoC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Hayward B W, Moore P, Newman M, 1978 : Archaeological site survey of Hen Island. Tane 24:137-157.

Prickett N, 1984 : Archaeological survey of the Chickens Islands (Marorere). Tane 30:177-197.

RECORDED ON EXISTING DATABASES:	1. WERI
	2. SSWI
	3. PNA
	4. Geopreservation
	5. HPT County Inventories
	6. Other
	7. None

Comment:

OTHER CONSIDERATIONS:

ACCOMPANYING MAPS & PHOTOGRAPHS:
