

COASTAL RESOURCE INVENTORY

FIRST ORDER SURVEY

EAST COAST CONSERVANCY

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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 It is based on existing information compiled by conservancy staff from regional and national databases, published and unpublished reports, limited field surveys and personal or anecdotal information from various experts.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

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".*

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
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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 |
| 7. Wanganui | |



MAP INDEX - EAST COAST

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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.

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

EAST COAST

COASTAL RESOURCE INVENTORY SUMMARY

SECTION 1: JUSTIFICATION FOR CONSERVATION VALUE OVERLAY

The marine and coastal conservation values of the East Coast were assessed from Existing literature, databases, personal recollections and anecdotal information as well as field surveys carried out by conservancy staff.

In terms of percentage; 60% of the coast was reflected in reference material, 10% was discovered by field surveys and a further 30% had no reference material, field survey or any other information concerning it.

Detailed information on the location and extent of marine communities and habitats along the coast was sparse. Similarly detailed information on maori cultural perspectives and locations was not available.

The fact that 30% of the coastline has no recorded conservation value does not mean that those areas have no conservation value. This fact merely raises the need to continue a more advanced phase of inventory to determine what those conservation values are.

SECTION 2: SUMMARY OF CONSERVATION VALUES OF THE COASTLINE IN THE EAST COAST CONSERVANCY

A Natural

The coastline of the East Coast Conservancy is 580km long. It is geomorphologically diverse and can be categorised into six distinct units. They are:

- (i) The Bay of Plenty sandy barrier coastline.
- (ii) The eastern Bay of Plenty greywacke rock shelf and headland coast.
- (iii) The Matakaoa basalt coast.
- (iv) The East Coast papa rock platform coast.
- (v) Mahia Peninsula.
- (vi) The Wairoa black sand coast.

The natural character of the coast is largely unmodified due to the low population in this region, but the quality of the coast continues to be eroded by intense but indirect human use, that is, agriculture leading to major erosion problems.

C Cultural

The seven iwis of the East Coast retain strong and vibrant links with the entire coastline of this conservancy. It must be stressed that, to the Maori, all the coast; every rock and bay, is known and held in the highest esteem and considered culturally and spiritually important and therefore of the highest conservation value. Consequently, renewal of 'rangitiratanga' over their coast is, in their minds, paramount (a personal comment, Bob Kaa).

Pakeha cultural interest in the coast is also high and is focussed on utilisation of the coast as a resource either for recreational pursuits or commercial ventures.

D Historical

The East Coast is historically important to both cultures; for the Maori it is the landing place of the Tainui canoe at Whangaparaoa and the site of Paikea's landing place at Whangara. For the European it is the site of Captain Cook's discovery of New Zealand, the first landing place at Poverty Bay and the first liaison with the Maori at Tolaga Bay. In fact the nation of New Zealand had its genesis on the East Coast. Whaling played a large part in the history of the East Coast and is reflected by the large number of whaling stations around the coast. The East Coast is also significant for the large number of shipwrecks; over 250.

Archaeological evidence indicates that early Maori and European habitation concentrated on coastal plains and lower river valley systems, a prime factor being the utilisation of marine resources such as kaimoana, whaling and coastal shipping.

E Existing Threats

The effects of the geological instability of the East Coast have been accelerated by land clearing operations and represent a major threat to the natural character and quality of the coast and marine ecosystems. Existing human usage remains a pervasive threat to natural values; noxious weeds, domestic stock, wild animals, fire and unrestricted recreational uses threaten maritime vegetation regimes.

Inappropriate fishing methods threaten marine communities. Inappropriate local developments threaten local areas for instance sewage outfalls, coastal rubbish disposal, coastal subdivision and structures.

F Human Modification and Use

The East Coast has a low population base. Consequently development is centred on small, historically sited communities based on agricultural and maritime enterprises. Tourism and recreational uses have become more important in recent years with the advent of the coastal highway permitting ready access to good beaches, fishing and camping areas.

The major modifier of the coastal environment has been agricultural stock management by grazing and accelerated erosion by deforestation.

G Existing Protection

Few coastal land areas are under national protection and those that are, exist for the protection of wildlife under the Wildlife Act.

There are no formally protected marine areas. There are, however, two areas; the Wairoa hard and parts of Mahia Peninsula which have voluntary fishing restrictions on them.

Harbour?

Most commercially oriented local Government recognises the importance of the coast by entertaining a 'coastal zone' in their district schemes. Some coastal areas near population centres and subdivision have local purpose reserves or esplanade reserves.

H Sites of International Significance

Opoutama Beach CRI 072004 NZMSI 48230 37890 (5 Kilometres)

This beach has international significance as a site of frequent whale strandings (Brabyn M, 1990). The Mahia Tombolo is the best example of its land form warranting a national rating.

Cooks Landing Place CRI 055015 718 29470 62685 (1 Kilometre)

A National Historic Reserve commemorating Cooks first landfall in 1769.

Waiomoko River CRI 055018 Y18 29650 62786 (1.5 Kilometres)

The site has an international rating because of the presence of a significant population of the endangered endemic plant Plantago picta. The natural values of this site warrant a national rating because of a dune system of high botanical conservation value and the presence of threatened species of wildlife.

Whangara CRI 055019 Y18 29659 62800 (3 Kilometres)

This site is of national importance because of the nationally significant geological features (Gibb J, pers comm) at Pakarae River and for the historic and cultural importance of Paikea to Aotearoa. The site is rated of international significance for the presence of a significant population of the endangered endemic plant Plantago picta (Given et al 1987 or Wilson and Given 1989).

East Island/Whangaokeno CRI 054027 Z14 29017 63750 (1 Kilometre)

The presence of the endemic endangered species Plantago picta (Given et al or Wilson and Given 1989) warrants an international rating. The island is a gazetted Wildlife Refuge.

East Cape CRI 054028 Z14 29995 63753 (5 Kilometres)

This site is rated of international importance for the presence of the endemic endangered species Plantago picta (Given et al or Wilson and Given 1989). The other values on the site, the Protected Natural Areas values and the recreational, historical and cultural values warrant a national rating.

Awatere - Horoera CRI 053030 Z14 29845 63827 (10 Kilometres)

Site of the endemic endangered species Clianthus puniceus and vulnerable species Dactylanthus taylori rates international significance. The majority of the site rates of national importance for the priority one Recommended Area for Protection status in the ecological district PNA report.

Haupara CRI 053033 Z14 29804 63875 (5 Kilometres)

This site is a priority one RAP in the Pukeamaru Ecological Area PNA report. The presence of the endangered plant Plantago picta (Given et al 1987 or Wilson and Given 1989) warrants international significance.

Wai^aiau CRI 052052 X15 28005 63518 (2 Kilometres)

This site has been ranked as being of international significance under the Convention on Wetlands of International Importance, especially as Waterfowl Habitat (known as the Ramsar Convention) because of the presence of a significant breeding population of a threatened species of NZ Dotterel. The presence of several species of threatened wildlife and the occurrence of the most eastern mangroves in NZ and the only mangroves in the Opotiki Ecological District warrants a national rating.

Waiotahi Estuary CRI 052057 W15 28783 63475 (2 Kilometres)

This site is awarded an international rating for the presence of a significant breeding population the threatened NZ Dotterel (Ramsar convention). The Waiotahi Spit is a gazetted national Scenic and Historic Reserve. The presence of several threatened species of wildlife and the natural scenic character warrant a national rating.

Sites of National Significance

Wairoa Hard CRI 071001 NZMS1 N115 43590 37815 (18 Kilometres)

The juvenile fish nursery is of national importance because of important snapper fishery to the country (CRI Taskforce 1990, MAFFish, 1990). The cobble pebble substrate of the site is a unique feature in Hawke's Bay.

Whakahi - Wairoa River CRI 072002 NZMS1 N116 48900 37910 (20 Kilometres)

The largest wetland lagoon system in Hawke's Bay supporting endangered, threatened and rare species of wildlife priority one PNA values.

Portland Island CRI 072006 NZMS1 N126 51230 34615 (8 Kilometres)

This island is a significant land form in Hawke's Bay, of geological interest having been formed by marine planation (Hawkins K, 1990). It's high site of special wildlife interest rating for the presence of several threatened (Bell, 1986) species of wildlife including Banded Dotterel (Charadrius bicinctus bicinctus) and Caspian Tern (Hydroprogne caspia) warrants a national rating.

Pukenui/Maungawhio CRI 072009 NZMS1 N127 52265 37890 (9 Kilometres)

This site is of national significance for its wildlife habitat values, the presence of several threatened (Bell, 1986) species including Bittern (Botaurus stelleri poiciloptilus), Banded Rail (Rallus philippensis assimillis) and Banded Dotterel (Charadrius bicinctus bicinctus) and preservation of the nationally unique Mahia tombolo landform (Ward C, pers comm).

Young Nicks Head/Te Kuri CRI 055012 Y18 29409 62601 (6 Kilometres)

A site of national historic importance relating to Cooks Landing in 1769. (Kaa B, pers comm), (Cook County District Scheme Review No. 1, 1989).

Whero Whero Estuary CRI 055013 Y18 29390 62620 (3 Kilometres)

The wildlife values of the site, its high SSWI rating, the presence of threatened (Bell, 1986) species including Wrybill (Anarchynchus frontalis) warrants a national rating.

Waipaoa River CRI 005014 Y18 29392 62645 (2 Kilometres)

The wildlife values of this site, its medium/high SSWI rating and the presence of threatened (Bell, 1986) species of wildlife including Golden Plover (Pluvialis fulva) (Bell, 1986) and Wrybill (Anarchynchus frontalis) warrant a national rating.

Tuahine Point CRI 055016 Y18 29507 62650 (5 Kilometres)

Significant parts of this site are recommended for priority one protection in the Turangi Ecological District PNA report (Clarkson B, 1990).

Gannet Rock CRI 051020 Y17 29765 62961 (1 Kilometre)

This site is rated as high by the SSWI. Interest for the presence of nesting Australasian Gannets (Rasch G, 1989).

Cooks Cove/Pouawa Island CRI 056021 Z17 29760 62997 (12 Kilometres)

A site of national significance for its important natural values (Lands and Survey, 1990). Important cultural and historic values relating to Cook visit in 1769 and maori rock drawings. It is a proposed Scenic and Historic Nature Reserve. SSWI rates this site as high (Rasch G, 1989).

Uawa Estuary CRI 056022 Z17 29738 92000 (2 Kilometres)

This site has a ranking of medium/high SSWI for its wildlife values. The presence of several threatened (Bell, 1986) species including Reef Heron (Egretta sacra sacra) warrants a national significance. Rated of national significance in the WERI Database.

Anaura Bay CRI 056024 Z16 29750 63160 (6 Kilometres)

This site has priority one PNA values in the Waiapu Ecological District (Daniel L, 1990) and is historically significant for Cooks visit in 1769.

Waiapu River CRI 054026 Z15 29925 63655 (1 Kilometre)

A site with a moderate/high SSWI rating for its wildlife habitat value. The presence of threatened Banded Dotterel (Charadrius bicinctus bicinctus) warrants a national rating.

Hautai Beach CRI 054029 Z14 29960 63785 (5 Kilometres)

The presence of the vulnerable plant Marzus pumilio and the uniqueness of the sand plain dune system in the ecological district warrants a national significance rating.

Karakatuwhero CRI 053032 Z14 29815 63841 (3 Kilometres)

A priority one RAP in the Pukeamaru PNA report. Has a high SSWI rating for the wildlife values including the presence of nesting threatened species, NZ Dotterel and Banded Dotterel (Bell, 1986).

Hicks Bay CRI 053034 Z14 29775 63885 (3 Kilometres)

A priority one RAP in the Pukeamaru Ecological District PNA report. Has a high SSWI rating for its wildlife values and is a nesting area for threatened (Bell, 1986) species of wildlife, White Heron (Egretta alba modesta).

Matakaoa CRI 053035 Y14 29700 63940 (34 Kilometres)

This site is of significant scenic, environmental and scientific interest, many of its marine biological features are unique (Ballantine W, 1988). The Pukeamaru Ecological District PNA report recognises several priority one RAP's. This coast is an environmental asset of national significance (Morton J, 1988).

Cape Runaway/Tikirau CRI 053036 Y14 29510 63935 (10 Kilometres)

The PNA values and cultural and historic values of the site warrant a regional rating however the Opotiki District Scheme rates natural scenic character of the coast as of national significance.

Whangaparaoa Bay CRI 053037 Y14 29505 63905 (2.5 Kilometres)

This site is of national importance for its breeding threatened NZ Dotterel. The site has priority one RAP status in the Pukeamaru Ecological district. It is an important Turanga Waka (Bain P, pers comm) site and the Opotiki District Scheme rates its natural scenic character of national significance.

Waikanapanapana CRI 053038 Y14 29485 63887 (3 Kilometres)

The intertidal and marine geology and habitat is unique to the Bay of Plenty (MAFFish, 1990). The Opotiki District Scheme rates its natural scenic character of national significance.

Waihau Bay CRI 053039 Y14 29470 63875 (5 Kilometres)

The sand dunes and pohutukawa forest on the site are a priority one RAP in the Pukeamaru Ecological District PNA survey. The Opotiki District Scheme rates its natural scenic character of national significance.

Orete Point CRI 053040 Y14 29430 63880 (3.5 Kilometres)

This site has geological qualities for which it is recommended for protection in the geopreservation index. Also the Opotiki District scheme rates its natural scenic character of national significance.

Taratua Point CRI 053041 Y14 29413 63853 (2.5 Kilometres)

The Opotiki District Scheme rates its natural scenic character of national significance.

Raukokore CRI 053042 Y14 29390 63825 (4.5 Kilometres)

A priority one RAP in the Motu Ecological District PNA survey. Several threatened (Bell, 1986) species including Variable Oyster Catcher (Haematopus unicolor) of wildlife are present. The Opotiki District Scheme rates its natural scenic character of national significance.

Whanarua - Te Paraua CRI 053043 Y14 29340 63815 (8 Kilometres)

A priority one RAP in the Motu Ecological District PNA report. The presence of a vulnerable (Beadel S, 1989) endemic plant (Carmichaelia williamsii), and the undoubted high aesthetic and landscape qualities of the site warrant national significance.

Waikawa CRI 052044 X14 29270 63805 (7 Kilometres)

Opotiki District Scheme rates its natural scenic character of national significance.

Kereu CRI 052045 X14 29250 63760 (4 Kilometres)

The site is a priority one RAP in the Motu Ecological District PNA Report. The Opotiki District Scheme rates its natural scenic character of national significance.

Te Kaha CRI 052046 X14 29217 63742 (6 Kilometres)

The maritime area is a nationally important recreation area (MAFFish, 1990). The Opotiki District Scheme rates its natural scenic character of national significance.

Awanui CRI 052047 X15 28205 63300 (5 Kilometres)

The Opotiki District Scheme rates its natural scenic character of national significance.

Whitianga CRI 052048 X15 28155 63645 (8 Kilometres)

Tokata Scenic Reserve is a national reserve. The site is a priority one RAP in the Motu Ecological District PNA Survey. The Opotiki District Scheme rates its natural scenic character of national significance.

Motu Estuary CRI 052049 X15 28140 63610 (2 Kilometres)

The estuary has a moderate/high SSWI rating, the presence of threatened (Bell, 1986) species including Variable Oyster Catcher, Banded Dotterel and Reef Heron. It has a priority two rating as a RAP in Motu Ecological District PNA Survey. The Opotiki District Scheme rates its natural scenic character of national significance.

Maraenui CRI 052050 X15 28097 63573 (7 Kilometres)

Part of a priority one RAP in the Motu Ecological Area PNA Survey. The site has very high aesthetic and landscape qualities (White D, pers comm). The Opotiki District Scheme rates its natural scenic character of national significance.

Pehitari Headland CRI 052051 X15 28047 63533 (3 Kilometres)

The Opotiki District Scheme rates its natural scenic character of national significance. This site has natural, cultural and historical values which warrant a regional rating (White D, pers comm).

Haurere Headland CRI 052052 X15 28005 63518 (2 Kilometres)

The presence of a significant population of the vulnerable plant Olearia pachyphylla warrants a national rating (Given et al 1987). Also the Opotiki District Scheme rates natural scenic character of national significance.

Opape CRI 052053 X15 28987 63500 (2 Kilometres)

A priority one RAP in the Motu Ecological District PNA report. The site of the most substantial population of the vulnerable plant Olearia pachyphylla in New Zealand (Given et al 1987).

Waioeka Estuary CRI 052055 W15 28855 63475 (1.5 Kilometres)

The presence of several breeding threatened (Bell, 1986) species including Variable Oyster Catcher, Banded Rail and Caspian Tern warrant a national rating.

Waiotahi Beach CRI 052056 W15 28817 63480 (4 Kilometres)

Opotiki District Scheme rates the natural scenic character of the site as of national significance.

Onekawa CRI 052058 W15 28764 63485 (5 Kilometres)

Opotiki District Scheme rates the natural scenic character of the site as of national significance. Also it is a feeding area for threatened (Bell, 1986) species of wildlife including Caspian Terns, Banded Dotterel and NZ Dotterel.

Table Cape CRI 073008 N127 52350 39820 (15 Kilometres)

This site has a national rating for the national geological interest of the marine uplift features, the marine values of the marine intertidal habitat and the Tasmania. One of the important dive sites in New Zealand.

Sites of Regional Significance

Nuhaka CRI 072003 NZMS1 N116 48100 37905 (8 Kilometres)

Of regional importance for the presence of pingao (Given et al 1987) at one of only a few sites in the Waihua Ecological District.

Long Point CRI 072005 NZMS1 N116 48200 37750 (5 Kilometres)

The presence of unique intertidal and subtidal land forms, a great abundance and variety of marine life (Morton J, pers comm).

South East Mahia CRI 072007 NZMS1 51270 34670 (10 Kilometres)

A natural maritime zone relatively unspoilt, extensive offshore system of reefs, banks and boulders and the bull rock shelf supports a great abundance and variety of marine life (Ballantine W, 1988). The intertidal area is a feeding area for several rare and threatened species of wildlife.

Maraetaha Beach CRI 055010 Y18 29385 62565 (5 Kilometres)

Dune vegetation of a relatively high inventory rating requiring protection (Partridge 1989).

Orongo Lagoon CRI 055011 Y18 29400 62582 (1 Kilometre)

A lagoon with a moderate SSWI rating.

Mauterepa Island CRI 056023 Z17 29765 62034 (1 Kilometre)

Recommended for zoning as a nature reserve of regional importance for landscape and natural values (Lands and Survey, 1980).

Kurutau Trig CRI 054025 Z15 29874 63594 (0 Kilometres)

A site of moderate SSWI rating in Waiapu County. Pied Shag nesting site.

Awatere CRI 053031 Z14 29845 63825 (1 Kilometre)

The wildlife values in the river delta have a moderate SSWI rating, the historical and cultural values are of regional significance (Kaa B, 1987).

Pouawa CRI 055017 Y18 29605 62740 (4 Kilometres)

Regional significance for relative importance of its remnant vegetation, the historic pa site, and the natural and cultural significance of its maritime values (Kaa B, 1987).

I Outstanding Areas of Conservation Value

There are several areas within this conservancy which are special and unique and need to be expanded on. They include;

- (i) The Matakaoa orogeny basalts located between Cape Runaway in the west to Matakaoa Point in the east.

This area has very high scientific, cultural, recreational, historical and aesthetic landscape value.

Due to its location close to the continental shelf, its exposure to high energy wave attack and the influence of two major ocean currents, many species of plants and animals find their limits of distribution here including rare species found on no other mainland site in New Zealand (Ballantine, B, Morton, J). The Matakaoa basalts have all the characteristics of a deep sea island. This is unique in New Zealand.

- (ii) The eastern Bay of Plenty has several sites of high conservation value due to the high cultural, landscape, botanical and recreational value of the coastal pohutukawa (*Metrosideros excelsa*) forest remnants on sea cliffs and the natural successions through the relatively unmodified intertidal zones to subtidal reef systems.

- (iii) The East Cape has several sites of high conservation value incorporating remnant coastal wetlands and dune systems progressing to typical papa rock reefs and sandy beaches. Many of the coastal wetlands are wildlife refuges harbouring several rare and endangered species. These sites have a high cultural and historical significance.

- (iv) Mahia Peninsula has several outstanding features including New Zealand's largest tombolo land form (Geo Preservation Database) and the world's second highest rate of whale strandings at Opoutama Beach. There is also an important wetland; Mangawhio Lagoon.

The intertidal habitats at Mahia have high scientific values (Morton J, Ballantine B). The subtidal habitats at Table Cape, Portland Island, Long Point and associated reefs have considerable scenic and biological value. Numerous shipwrecks are a major recreation attraction.

Mahia Peninsula has major significance spiritually and historically to the Maori people and is an area used as a major holiday and recreation location.

- (v) Whakako Lagoons. These have been identified and documented as a nationally important coastal wetland system.
- (vi) The Wairoa Hard. This is an area of seafloor located off the mouth of the Mohaka river where an extensive rock and weed zone disrupts the prevalent silt, sand and mud substrate.

This site is a recognised fish breeding and nursery area and is protected voluntarily from commercial fishing.

SECTION 3: NEW ZEALAND COASTAL POLICY ISSUES

There are several specific issues that will need to be incorporated into such a policy that are typical to this conservancy.

It must first of all be emphasised that the entire coast has deep significance both culturally and spiritually to the Maori. They do not consider any of the coast to be less significant than any other part of the coast so that to attempt to rank the coast in terms of conservation values is to the Maori, a nonsense. It is the Maori perspective that a NZ Coastal Policy should restore to them Rangitiritanga over the coast and seas.

The NZ Coastal policy must reflect a holistic approach to conservation in that it must influence land management above the mean high water mark if the problem of erosion in this region is to be dealt with. The coast and marine habitats are being devastated by bad land management practices in the high country and policy looking only at coasts cannot alter this situation.

The concept of sustainable land use is well accepted but does not extend to the marine environment. The NZ coastal policy must incorporate a range of protection measures for the marine environment ranging from marine reserves to restricted fishing methods to ensure sustainability and to preserve the natural character and quality of the coast. Further the NZ coastal policy must reflect a conservation ethic that brings to account local government in such matters as stock grazing structures and subdivision. The policy should encourage the integration of land and sea protection.

The NZ coastal policy should minimise untreated marine sewage outfalls to where these are the only possible option.

The East Coast Conservancy has many shipwrecks which are currently being damaged by careless salvage operations which are mostly illegal. The NZ coastal policy should extend protection onto shipwreck sites in recognition of the historical value they have and as a memorial to those who died on them.

SECTION 4: DIRECTION FOR 2ND ORDER SURVEY

The 1st Order CRI here completed has revealed specific areas for further work. As has been stated, the gaps that have been revealed do not represent areas that have no conservation value, rather they are areas where the conservation value is not known. This then is the task of the 2nd Order CRI, to determine the conservation value of those areas not yet investigated.

The two largest gaps thus identified are marine habitats and Maori cultural detail.

For marine habitats there needs to be designed a rapid survey methodology for inshore areas and access to data bases previously inaccessible such as the DSIR Database 'offshore benthos'.

The cultural inventory can only be done through effective iwi liaison at conservancy level.

More immediate gaps to be plugged are those coastal sites that are inaccessible at the moment. We will need to send a field team to investigate those sites.

A full time conservancy archaeologist will further assist the 2nd Order CRI survey.

Tony Seymour
SCO Marine and Coastal

REFERENCES

- (1) 53,308 in the East Coast Region.
"Gisborne District Planning Scheme Proposed Review No. 2", Gisborne City Council, December 1988.
- (2) East Coast Project Review, Gisborne District Council, 1988.
- (3) MAFFish; "CENTRAL FISHERIES Management Plan", (Draft), 1989.
- (4) Beadel S M, A Register of Threatened and Local Plants of Eastern Region, 1988.
- (5) Rasch G, Wildlife and Wildlife Habitats of Eastern ^{Coast} Region (DOC), 1989.
- (6) Gibb J, Coastal Hazard Mapping, Waiapu County (Water and Soil Conservation), 1981.
- (7) MAFFish, Auckland Fisheries Management Plan, 1989.

Site Record Forms

Site Name/s:	Wairoa Hard	Site No:	CRI 05 0001
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	NZMS1 N115 43590 37815	Date:	31/8/90
Brief Description of Site: The Wairoa Hard is defined as all those waters of Hawke's Bay enclosed by a line at the mouth of the Moeangiangi River in the south to a line at the mouth of the Waihua River - both lines extending out to 18 kilometres from the shore to the 30 fathom depth contour. The Wairoa Hard is a recognised juvenile fish spawning area (Niel Weir, MAF, pers comm).			
Conservation Values:	Natural: ACEFGH	Cultural: AC	Historic: D
Comment: Natural The substrate of the Wairoa Hard is dominated by cobbles and pebbles with a subsidiary fraction of granules and coarse sand in the south of Mataangimoe headland and a subsidiary fraction of mud greater than 20% north of the Mohaka rivermouth. This area stands out from the dominant substrate of the Hawke's Bay which is medium fine sand and mud (NZ Oceanographic Institute, 1968). The benthos on the site is unknown. The Wairoa Hard is one of two juvenile fish nursery grounds in the central fisheries management area (MAFFish, 1987). Since 1981 the Wairoa Hard has had method fishing restrictions in order to protect the juvenile fish nursery. No amateur person shall use any net for taking finfish and no commercial fisherman shall take any finfish from the waters of Wairoa Hard (MAFFish, 1987). MAFFish have proposed the Wairoa Hard as a Marine Reserve (MAFFish, 1987). Cultural The Kahawai fishery at the Mohaka rivermouth is important to both Maori and Pakeha, especially Tangata Whenua, Ngati Panaumera (Hawkins K, pers obs). Historical Locals report several unrecorded shipwrecks in the area (Hawkins K, pers obs).			
Site Importance:	International	<u>National</u>	Regional Local Unknown
Comment: The cobble/pebble substrate is a unique feature of the region, the juvenile fish nursery area has at least regional importance, probably national importance because of the importance of the snapper fishery to the country.			
Existing Threats:	ABI		
Type & Comment:	Locals claim flooding of Mohaka effects the fishing - likely that the inundation of the cobble and gravel substrate by mohaka sediments may effect the fish nursery area. A recent study of macro invertebrates in the Mohaka rivers has shown a rapid decline in populations (HBCB, 1988). Recovery of the snapper population in recent years suggests that the bulk fishing methods employed before the ban were detrimental to local fish stocks (G. Forman pers comm).		

Modification and Human Use: K

Modified by commercial and recreational bulk fishing methods employed to 1981 (Forbes/Hawkins).

Existing Protection:
Type & Comment:

Recreation fishing method restriction and commercial fishing ban for finfish (MAFFish, 1981).

Availability of Information: No info on Marine Benthos located

Natural	1 2 3
Cultural	1 2 3
Historic	1 2 3
Threats	1 2 3
Human Mod. & Use	1 2 3

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

MAFFish 1987 Central Fishery Management Team, Proposed Management Plan, Phase I
 MAFFish 1987 Central Fishery Management Team, Proposed Marine Protected Areas
 NZ Oceanographic Institute 1968 Mahia Coastal Series Sediment Map DSIR
 Forbes/Hawkins 1990 Coastal Resource Inventory Site Sheet Unit 8 Site 4 DOC
 Hawke's Bay Catchment Board 1988, Water Quality Laboratory Report
 Personal Comment: G Forman, Diver, Wairoa

Recorded on Existing Database:

- | | |
|---------------------------|----|
| 1. WERI | No |
| 2. SSWI | No |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | No |
| 6. Other | No |
| 7. None | |

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Whakaki - Wairoa River	Site No:	CRI 05 0002		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	NZMS1 Y116 48900 37910	Date:	11/4/90		
<p>Brief Description of Site:</p> <p>This site extends for twenty kilometres from Whakaki Lagoon in the east to the Whakanaki Lagoon by the Wairoa River in the west. The site comprises a chain of coastal lagoons and wetlands behind a black sand and gravel steep profile beach. The lagoons were created by the longshore drift of Mohaka river gravels. Farming development extends to the lagoons and sand foredune margins. The narrow coastal flat is crossed by both road and rail lines.</p> <p>The lagoons are a unique geomorphological feature of the Waihua district and are important for their wildlife habitat value (Hawkins, pers obs). The Waihua Ecological Area preliminary report on protected natural areas suggests that extreme modification has effected every remnant feature to such an extent that in order to achieve adequate protection of representative natural features consideration should be given to protecting every natural feature in the lowland area (Fronmont M, 1990).</p>					
Conservation Values:	Natural: BCDEFH	Cultural: ABCD	Historic: ABCD		
<p>Comment:</p> <p>Natural A chain of six lagoons formed by the long shore drift of the Mohaka river gravels a unique geomorphological feature in the district (Hawkins K, pers obs). The Whakaki Lagoon and 280 Hectare area with a high site of special wildlife interest. A large rush sedge wetland with mostly open water large number of water and water fowl birds including the endangered (Bell B, 1986) White Heron (<i>Egretta alba modesta</i>) and threatened species (Bell B, 1986) Australasian Bittern (<i>Botaurus stellaris poiciloptilus</i>), New Zealand Dabchick (<i>Podiceps rufopectus</i>) also Spotless Crake (<i>Porzana tanzeensis plumbea</i>). Seasonal visitors include the threatened (Bell B, 1986) Corybill (<i>Anarchynchus frontalis</i>) and the rare (Bell B, 1986) Golden Plover (<i>Pluvialis fluva</i>) (Rasch G, 1989). The Te Paeroa Lagoon is a 70 hectare raupo wetland with a moderate/high site of special wildlife interest (SSWI) rating for its wildlife values which include the presence of Bittern and Spotless Crake (Rasch G, 1989). The Ohiwa Lagoon, a 95ha coastal lagoon also has a moderate/high SSWI rating. The Waiua Lagoon, an 11 hectare chain of coastal lagoons has a moderate SSWI rating. Ngamotu Lagoon, located on the east bank of the Wairoa river, is a 101 hectare coastal lagoon with saltmarsh communities on sand and shingle the endangered White Heron (<i>Egretta alba modesta</i>) and threatened Banded Dotterel (<i>Charadrius bicincta bicincta</i>) and rare golden plover (<i>Pluvialis fulva</i>) and a breeding colony of Southern Black Backed Gulls (<i>Larus dominicanus</i>) and water fowl and waders. This is a Wildlife Management Reserve with a moderate/high SSWI rating. The Whakanaki Lagoon on the western side of the Wairoa River has a high SSWI rating for the range of threatened species of wildlife preserve (Rasch G, 1989). Whakaki Beach Unit B1 has a rating of 12, the highest rating of northern Hawke's Bay beaches. Notable are the presence of hollows of sand sedge and some coastal scabweed, a species apparently here at its northern limit in sand dunes. The presence of pingao (<i>Desmoschoenus spiralis</i>) is found only in remnants and of scabweed are botanical features warranting protection (Partridge T, 1990). Pingao is present only in small remnant patches along the coastline of the Waihua Ecological District (Fronmont M, 1990).</p> <p>Cultural Lagoons and Wairoa rivermouth are traditional food sources for Tangata Whenua (Ngati Kahununu). The area has important cultural and spiritual links for Tangata Whenua. The site is viewed from the State Highway, has landscape and aesthetic appeal (Hawkins K, pers obs).</p> <p>Historic The Lagoon area has 36 identified maori historic sites including pa sites, middens, ovens, pits and terraces. The Takitimu Canoe landed at Te Wairoa. Cook noted the area in 1769 (S. Forbes, pers comm). In 1909 Wairoa was designated as port (Ingram, pers comm). Records 9 shipwrecks off the bar between 1847 - 1872.</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
<p>Comment:</p> <p>The largest wetland lagoon system in Hawke's Bay supporting endangered, threatened and rare species of wildlife. Also has high PNA values.</p>					
<p>Existing Threats:</p> <p>Type & Comment:</p> <p>ABCDE</p> <p>Lagoons exposed and reduced by siltation and controlled water levels (Hawkins K, pers obs). Noxious and domestic animals threaten botanical and wildlife values (Rasch G, 1989). Adventive plants, especially lupin, boxthorn, gorse and marram threaten botanical values (Partridge T, 1989). Some pollution of Wairoa estuary by outfalls from the river, outfalls, sewage, runoff, etc (Hawkins K, pers obs). Refuse dumping is a problem at some of these sites.</p>					

Modification and Human Use: ABCHIJ

The coastal wetlands have undergone extensive drainage, agricultural development and water level control by pumping stations. Sand extraction at Whakamahi Lagoon. Recreational activities mainly shooting and fishing, walking, horseriding, camping. Wairoa river has causeways built at Whakamahi and Ngamotu Lagoons. The Wairoa River is a commercial port area which extends seawards of the rivermouth. Traditional kai moana still important whitebait/eels.

Existing Protection:

Type & Comment: AD

The Wairoa District Scheme Rural D Coastal Zone protects coastal conservation values. Ngamotu Lagoon is a gazetted wildlife management reserves. Whakamahi lagoon is a conservation area managed by DOC. The Wairoa Port Authority administers an area. 1.5 nautical mile radius of the Wairoa rivermouth. The Wairau Lagoon is currently under negotiation for QEII Trust covenant (Hawkins K, pers comm). Whakamahi Lagoon is closed for game shooting.

Availability of Information:

Natural	<u>1 2 3</u>	
Cultural	<u>1 2 3</u>	
Historic	<u>1 2 3</u>	
Threats	<u>1 2 3</u>	Susan Forbes, Historian, Rotorua
Human Mod. & Use	<u>1 2 3</u>	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1 2 3 4 5 6 7</u>
Cultural	<u>1 2 3 4 5 6 7</u>
Historic	<u>1 2 3 4 5 6 7</u>
Threats	<u>1 2 3 4 5 6 7</u>
Human Mod. & Use	<u>1 2 3 4 5 6 7</u>

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:

Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region, DOC
 Bell G 1986 Conservation Status of NZ Wildlife
 1989 Wairoa District Scheme Review
 Hawkins K 1990 Coastal Resource Inventory Site Sheet Unit 8 Sites 2 and 3
 Given D 1990 Threatened Plant and Local Plant List of NZ Botanical Region DSIR
 Partridge T 1989/90 An Inventory of Sand Dune and Beach Vegetation of NZ North Island DSIR
 Fromont M 1990 The Ecology of Waihua PNA Survey Stage One DOC
 Ingran S/W NZ Shipwrecks 1795 - 1975

Recorded on Existing Database:

1. WERI Yes, See Natural
2. SSWI Yes, See Natural
3. PNA
4. Geopreservation No
5. HPT County Inventories Wairoa County 1986
6. Other NZAA SRF S Forbes
7. None Inventory of Sand Dune and Beach Vegetation Site No. 131

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Nuhaka	Site No:	CRI 05 0003		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	NZMS1 N116 48100 37905	Date:	30/8/90		
<p>Brief Description of Site:</p> <p>The Nuhaka site extends 8 kilometres from the Nuhaka river in the east to the Tahanaenui Stream in the west. The site comprises the dune slacks and estuary of the Nuhaka Estuary and a black sand gravel beach and dune system extending to the Tahanaenui stream.</p> <p>The dune systems are backed by a narrow coastal flat which has been largely utilised for farming and dissected by road and rail.</p> <p>The Waihua Ecological Area preliminary report on protected natural areas suggests that extreme modification has effected nearly every remnant feature to such an extent that in order to achieve adequate protection of presentative natural features then consideration should be given to the protection of every natural feature remaining in the lowland area (Fromont M, 1990).</p>					
Conservation Values:	Natural: BDF	Cultural: C	Historic:		
<p>Comment:</p> <p><u>Natural</u> The Nuhaka dune slacks are a 3ha area of water filled dune depressions with some rush and exotic vegetation. A few waders and waterfowl are present and the rare (Bell G, 1986) Least Golden Plover (<i>Pluvialis fulva</i>) private land. The site has a potential rating in the site of special wildlife interest index (Rasch). Site No. 130 in the sand dune and beach vegetation inventory is the area Nuhaka River to Tahaenui River the area is notable for the presence of a single dune of the local plant (Given D, 1990). Pingao (<i>Desmoschoenus spiralis</i>), a species not found for some considerable distance. Although dominated by spinifex (<i>Spinifex hirsutus</i>) it has some marram (<i>Amophila arenaria</i>). The presence of pingao is a botanical feature warranting protection (Partridge). Pingao is present in very small remnant patches along the coastline of the Waihua Ecological District (Fromont M, 1990).</p> <p><u>Cultural</u> The site offers an impressive coastal perspective from the coast State Highway (Hawkins).</p> <p><u>Historical</u> Site has not been surveyed (S. Forbes).</p>					
Site Importance:	International	National	<u>Regional</u>	Local	Unknown
<p>Comment:</p> <p>For the presence of a local species Pingao at one of only a few sites in the Waihua Ecological District.</p>					
Existing Threats:	CD				
Type & Comment:	<p>Invasive plants particularly marram (<i>Amophila arenaria</i>) threaten the pingao (Partridge T, 1989). Domestic stock threat wildlife habitats (Rasch G, 1989).</p>				

Modification and Human Use: ^{AHI}

The site has been modified by land development for pastoral farming. Recreation use is limited through lack of access, some shooting for waterfowl in the estuary and seasonal wetlands, surf casting.

Blacks Beach at the Nuhaka rivermouth is a popular surfing spot (Hawkins K, 1990).

Existing Protection:

Type & Comment:

D

Wairoa District Scheme Rural D Coastal Zone protects coastal conservation values. Some MAFFish commercial fishing restrictions within 2 nautical miles of the shore (Hawkins K, 1990).

Availability of Information:

Natural	1 2 3
Cultural	1 2 3
Historic	1 2 3
Threats	1 2 3
Human Mod. & Use	1 2 3

Historic Source - S Forbes DOC Rotorua

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

Hawkins 1990 Coastal Resource Inventory Site Sheet Unit 8 Site 1
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
 Bell G 1986 Conservation Status of NZ Wildlife
 Given D 1990 Threatened Plant and Local Plant List of NZ Botanical Region DSIR
 Partridge T 1989/90 An Inventory of Sand Dunes and Beach Vegetation of NZ North Island DSIR
 Frmont M 1990 The Ecology of Waihua, PNA Survey Stage One DOC

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|---|
| 1. WERI | Yes, rated of local importance |
| 2. SSWI | Yes, rated potential 1984 |
| 3. PNA | Preliminary report Waihua Ecological District |
| 4. Geopreservation | No |
| 5. HPT County Inventories | |
| 6. Other | |
| 7. None | |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Opoutama	Site No:	CRI 05 0004
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	NZMS1 N116 48230 37890	Date:	8/2/90

Brief Description of Site:

Opoutama beach is located on the eastern side of the Tombolo on the Mahia Peninsula. The site is a 5 kilometre fine yellow brown and beach backed by dune systems of the Mahia Tombolo.

The Bay is shallow with a gently sloping sand and gravel substrate.

The back beach area is highly modified by farming, pine plantation, roading, residential subdivisions and holiday parks. A boat launching facility is located at the south eastern end of the beach used by commercial and recreational boat operators.

Opoutama Beach's international significance is as a site of one of the highest rates of whale strandings in the world.

Conservation Values:	Natural:	Cultural:	Historic:
Comment:	ABEGH	ADE	

Natural Opoutama Beach is regarded as one of the most unspoilt sand beaches in Hawke's Bay (Hawkins K, 1990). The inventory of sand dune and beach vegetation rates the beach at nine. It is noted for its diversity of species (Partridge T, 1989). Several species of wildlife nest on the beach including the threatened Banded Dotterel (*Charadrius bicinctus bicinctus*) and the rare Variable Oyster Catcher (*Haematopus linicolor*) (Hawkins K, 1990). The beach in the eastern side of the Mahia Tombolo which is the best example of such a land form in NZ and is recommended for protection in the geopreservation index. The site has international recognition as the site of the second or third most frequent happening of whale strandings in the world (Seymour A, 1990). The beach has the most significant pipi (*Paphies australis*) population in Hawke's Bay (Hawkins K, 1990).

Cultural The site has great cultural significance to Tangata Whenua (Rongomaiwahine). According to maori history the whale strandings occur as a result of a tapu put on the beach to ensure a supply of food to the local people (Elsdon Best, 1930). The beach is an important source of kaimoana (shellfish). It is also used frequently for education purposes by local schools (Hawkins K, 1990).

Historic Two maori sites of local importance (pits) recorded (Forbes S, pers comm).

Site Importance:	<u>International</u>	National	Regional	Local	Unknown
Comment:					

This beach has international significance as a site of frequent whale strandings the Mahia Tombolo best example of its landform has a national rating.

Existing Threats:
Type & Comment:

CL

The dune system vegetation is threatened by invasive plants, marram, gorse, lupin, pines (Partridge T, 1989).

Coastal subdivision on adjacent sites has caused concern as regards sewage and stormwater pollution problems (Hawkins K, 1990).

Modification and Human Use: ADHIKJ

Behind the back beach area human development has significantly modified the site. Dune stabilisation works, pastoral farming, pine plantations, residential subdivision and roading. A boat ramp for commercial and recreation use is located here. The beach is regionally important for all forms of shorebased recreation use. The site is an important kaimoana source (shellfish).

Existing Protection:

Type & Comment: CD

The Wairoa District Scheme Rural and Coastal Zoning applies.

There are several public reserves for local purpose at each end of the beach.

All methods of commercial fishing are banned to 4km offshore (Weir N, pers comm).

Availability of Information:

Natural	1 2 3
Cultural	1 2 3
Historic	1 2 3
Threats	1 2 3
Human Mod. & Use	1 2 3

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communication: T Seymour, Marine and Coastal, DOC Gisborne
S Forbes, DOC Archaeologist

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

Survey Reports

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:

Hawkins K 1990 Conservation Resource Inventory Site 12 Unit 7 DOC
 Partridge T 1989/90 The Sand Dune and Beach Vegetation Inventory of NZ North Island DSIR
 1989 Wairoa District Scheme Review
 Bell BD 1986 Conservation Status of NZ Wildlife

Recorded on Existing Database:

1. WERI No
2. SSWI No
3. PNA No
4. Geopreservation Yes, Mahia Tomolo, See Natural
5. HPT County Inventories
6. Other NZAA SRF Survey 1982/84/86
7. None Sand Dune and Beach Vegetation of NZ North Island DSIR Site No 128, See Natural

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Long Point	Site No:	CRI 05 0005		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	NZMS1 N116 48200 37750	Date:	11/4/90		
Brief Description of Site: <p>This site is located on the western side of Mahia Peninsula it extends 5 kilometres from Long Point south to the Te Muka Stream.</p> <p>The site comprises sandstone sea cliffs with a narrow beach, wave cut platforms and offshore reefs and submarine canyons.</p> <p>Road access exists from Mahia to the Kopuni Stream.</p>					
Conservation Values:	Natural: ABCDE	Cultural: ACD	Historic: ABCD		
Comment: <p>Natural The land area is modified by farming practices. The marine area is relatively unmodified. The reef systems and submarine canyons are unique landforms in the Mahia area. The marine habitats are varied and support a great abundance and diversity of marine life (Dive Club, pers comm). The shore platforms support a variety of common species of wildlife. Also present are the threatened (Bell B, 1986) Caspian Tern (<i>Hydroprogne caspia</i>) and the rare Golden Plover (<i>Pluvialis fulva</i>) and variable Oyster Catcher (<i>Haematopus unicolor</i>) and the migratory Bar Tailed Godwit (<i>Limosa lapponica baueri</i>) (Hawkins K, 1990).</p> <p>Cultural The limestone features of the coast are frequently commented on regarding their seascape value (Hawkins K, 1990). The area is culturally significant to the Tangata Whenua (Hawkins K, 1990).</p> <p>History An important site of early coastal whaling operations (1837). Several historic sites, maori, of local importance recorded by (Bain P, pers comm). Eleven shipwrecks recorded at Long Point between 1849 - 1909 (Ingram, C pers comm).</p>					
Site Importance:	International	National	<u>Regional</u>	Local	Unknown
Comment: <p>Presence of unique intertidal and submarine landforms, a great abundance and diversity of marine life and support rare and threatened species of wildlife.</p>					
Existing Threats: Type & Comment: I <p>Bulk fishing methods, both amateur and commercial threaten the marine ecologies. Concern at "over harvesting" of fish stocks (Hawkins K, 1990).</p>					

Modification and Human Use: AHIJ

Terrestrial area has been modified by historic land clearing, farming and roading. Commercial fishing important local industry. A major recreational fishing and use are for the people of Mahia. Sea based recreation fishing and diving. Still an important source of kaimoana for Tangata Whenua (Hawkins K, 1990).

Existing Protection:
Type & Comment:

D

Wairoa District Scheme Rural D Coastal Zoning protects coastal conservation values. Two local purpose reserves at Long Point 6.2 hectares and at the Mangatea Stream. MAFfish operate a method restriction ban for commercial fishing offshore.

Availability of Information:

Natural	1 2 3	Source Dive Clubs Wairoa
Cultural	1 2 3	
Historic	1 2 3	Source S Forbes Archaeologist
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communications: Members Wairoa Dive Club

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:

1989 Wairoa District Scheme Review
 Ingram CWI NZ Shipwrecks 1795 - 1975
 Bell BD 1986 Conservation Status of NZ Wildlife
 Hawkins K 1990 Conservation Resource Inventory Site Sheet Unit 7 No. 8 DOC

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|------------------------------------|
| 1. WERI | No |
| 2. SSWI | No |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Wairoa County 1983 |
| 6. Other | NZAA SRF M Jeal Surveys 1982/84/86 |
| 7. None | |

Other Considerations:

Dive club members suggest the site requires investigation for marine reserve status (Hawkins personal comment).

Accompanying Maps and Photographs:

Site Name/s:	Portland Island	Site No:	CRI 05 0006		
Recorders Name:	KP Hogan	Conservancy:	East Coast		
Map/Grid Ref:	NZMS1 N126 51230 34615	Date:	11/4/90		
<p>Brief Description of Site:</p> <p>The only significant island in Hawke's Bay, 150 hectares in area. A unique landform and special feature of the Hawke's Bay Coast. Located 2 kilometres south of Mahia Peninsula.</p> <p>The privately owned (maori) island is an outcrop of sandstone with a flat top due to 'marine planation'. The island is uninhabited but farmed, cattle grazing.</p> <p>The island has been extremely modified by human use, only isolated areas of native scrub survive on cliffs and areas of sand dunes.</p> <p>The island has an extensive wave cut platform from which rock and boulder reef systems extend out to a sand/mud plane.</p>					
Conservation Values:	Natural: ABCEFGH	Cultural: ABCD	Historic: ABCD		
<p>Comment:</p> <p>Natural A unique landform and special feature of the Hawke's Bay Coast. The only island in the ecological district. The island is flat topped having been formed by marine planation (Hawkins, 1990). The land area has been modified only remnant areas of native plants survive on cliff faces. The local plant (Given, 1990) Pingao (<i>Desmoschoenus spiralis</i>) occurs on dune systems with (<i>Spinifex hirsuitus</i>) (Rasch, 1989). Portland Island has a high rating as a Site of Special Wildlife Interest (SSWI) (Rasch, 1989). Rock platforms, stacks and cliffs boarded by <i>Spinifex</i> sand dunes. A breeding area for Blackwinged Petrels (<i>Pterodroma nigripennis</i>) and Redbilled Gulls (<i>Larus novae hollandiae</i>). Threatened species (Bell, 1986) present include Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>) and Caspian Tern (<i>Hydroprogne caspia</i>), also common shore birds present the Australasian Gannet (<i>Sula bassana serrator</i>) nests here (Rasch). The intertidal and subtidal marine habitats are in very good condition and are marine ecological types which support an abundance and variety of marine life, they are important juvenile fish habitats (pers obs).</p> <p>Cultural Maori occupation of the site was only temporary but the Tangata Whenua have significant cultural and spiritual links. The area is still an important kaimoana source. Several local maori people killed in a slip on the island and are still buried there (Hawkins, 1990).</p> <p>Historical Two maori sites are recorded in the Wairoa Historic Place inventory. A landing area and an occupational site (Forbes, 1990). Portland Island is the site of an early NZ lighthouse (1875) and a whaling station. Several shipwrecks are recorded - the Queen 1866, unidentified wreck 1866, Alexander Newton 1894, Sea Hawk 1960 (Ingram).</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
<p>Comment:</p> <p>The island is a significant landform in Hawke's Bay of geological interest as having formed through marine planation. Its <u>high rating</u> as a SSWI and the presence of several threatened species of wildlife warrants a national rating.</p>					
Existing Threats:	DI				
Type & Comment:	<p>Domestic stock grazing is a significant threat to the few remaining natural plant species on the island (Hawkins, 1990).</p> <p>Bulk fishing methods trawling, seining and set nets threaten inshore juvenile fish and reef fish habitats (Hawkins, 1990).</p> <p>Recreational use by boat owners and farming operations could introduce rats threatening wildlife (Hawkins, 1990).</p>				

Modification and Human Use: ACKI

The terrestrial area has been modified by farming operations. Farm buildings, an airstrip and a lighthouse have all been built and since abandoned.

The marine area is extensively commercially fished. Craypotting is now the most important fishery (Hawkins K, 1990). Recreation fishing and diving is dependant upon suitable sea conditions.

Existing Protection:
Type & Comment:

D

Wairoa District Scheme Rural D Coastal Zoning protects coastal conservation values MAFFish operate method fishing restrictions around the island (Hawkins K, 1990).

Availability of Information:	No marine ecological data located
Natural	1 2 3
Cultural	1 2 3
Historic	1 2 3
Threats	1 2 3
Human Mod. & Use	1 2 3

1. Well documented
2. Limited information (general)
3. Little information (if any)

Susan Forbes, Rotorua

Comment:
Personal Communication: P Rippen, Diver, Wairoa

Sources of Information:	Diver P Rippen Wairoa	1. Derived info. from existing literature & databases
Natural	1 2 3 4 5 6 7	2. Derived info. as above & field check
Cultural	1 2 3 4 5 6 7	3. Derived from existing maps & aerial photographs
Historic	1 2 3 4 5 6 7	4. Recent DOC survey including sampling & analysis
Threats	1 2 3 4 5 6 7	5. Recent DOC survey excluding sampling & analysis
Human Mod. & Use	1 2 3 4 5 6 7	6. Experience
		7. Expert opinion

S Forbes DOC

Comment:
 1989 Wairoa District Scheme Review
 MAFFish 1987 Central Fisheries Management Area Report, MAFFish
 Ingram CW 1987 NZ Shipwrecks 1795 - 1975
 Beadel SM 1989 A Register of Threatened and Local Plants of Eastern Region DOC
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
 Hawkins K/Forbes S 1990 Coastal Resource Inventory Sheet Unit 7 Site 9 DOC, Gisborne
 Bell DG 1986 Conservation Status of NZ Wildlife NZ Wildlife Service Occasional Publication No. 12
 Given D 1990 Threatened Plant and Local Plant List of NZ Botanical Region DSIR

Recorded on Existing Database:	Comment:
1. WERI	No
2. SSWI	Rasch, See Natural
3. PNA	No
4. Geopreservation	No
5. HPT County Inventories	Wairoa Inventory 1983, See Historical
6. Other	NZAA SRF S Forbes
7. None	

Other Considerations:

This island has the potential to be an important East Coast wildlife rehabilitation site (Hawkins K, 1990). The offshore areas have marine reserve potential.

Accompanying Maps and Photographs:

Site Name/s:	South East Mahia	Site No:	CRI 05 0007		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	NZMS1 N126 51270 34670	Date:	11/4/90		
<p>Brief Description of Site:</p> <p>This site extends approximately 10 kilometres from the Tangawa Stream south to Ahuriri point at the southern tip of Mahia Peninsula. The site comprises a relatively inaccessible stretch of coast, being highly modified farmland above sandstone cliffs, a wide wave cut platform and an extensive system of banks, reefs, rocks and boulders, offshore extending out for two kilometres to a medium fine sand substrate.</p> <p>The maritime environment below the sea cliffs are relatively unmodified. The limestone coastal areas have high aesthetic and landscape values (Hawkins K, 1990).</p> <p>No public vehicle access exists.</p> <p>This site includes the bull rock reef 6 kilometres offshore to the east.</p>					
Conservation Values:	Natural: ACDE	Cultural: ABCD	Historic: ABCD		
<p>Comment:</p> <p>Natural Natural values of the maritime zone are relatively pristine (Hawkins K, 1990). The offshore reef systems support a variety of marine habitats and are important for the abundance and variety of marine life presene (divers pers comm).</p> <p>Rare and common birds feed on the inter tidal areas, variable Oyster Catcher (<i>Maematopus unicolor</i>), Eastern Bar Tailed Godwits (<i>Limosa capponica baueri</i>), White Fronted Terns (<i>Sterna striata</i>) also the threatened (Bell D, 1986) Caspian Tern (<i>Hydroprogne caspia</i>) (Hawkins K, 1990). The Bull Rock Reef is regarded by many a the best dive spot on the east coast. It supports a great abundance and variety of marine life and is an important nursery and feeding area for fish (Rippon P, pers comm).</p> <p>Cultural The area of limestone coastline is frequently commented on for its seascape and aesthetic value (Hawkins K, 1990). The site of cultural and spiritual significance to Tangata Whenua.</p> <p>Historical Numerous maori sites of local importance recorded pas, middens, find spots. Also several sites associated with early european occupation (Hawkins K, 1990). Mahia was an important early coastal whaling centre. Ingram report several shipwreck associated with the southern coast of Mahia Peninsula, including the Tongariro (1916) at Bull Rock, one of the attractions to the dune site.</p>					
Site Importance:	International	National	<u>Regional</u>	Local	Unknown
<p>Comment:</p> <p>A natural maritime zone relatively unspoilt, extensive offshore system of reefs, banks and boulders and Bull Rock Reef important for marine life. The inter tidal area supports several rare and threatened species of wildlife.</p>					
Existing Threats:	75				
<p>Type & Comment:</p> <p>Fishing techniques both amateur and commercia threaten marine life on the inshore reef systems (Hawkins K, 1990).</p>					

Modification and Human Use: AHIJ

The terrestrial area above the sea cliffs has been modified by farming practices. The area below the cliffs is relatively pristine (Hawkins K, 1990).

Commercial and recreation fishing are important uses. Recreational diving is popular.

A traditional kaimoana area for Tangata Whenua.

Existing Protection:

Type & Comment: CD

Wairoa District Scheme Rural D Zoning is designed to protect coastal conservation values. MAFFish. Commercial fishing method restrictions apply offshore (Hawkins K, 1990).

Availability of Information:

Natural	1 2 3	
Cultural	1 2 3	
Historic	1 2 3	Surveys 1982/84/86
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communication: P Rippon, local diver. Little documented information available, none of sub tidal ecology.

Sources of Information:

Natural	1 2 3 4 5 6 7	Dive Club Personnel
Cultural	1 2 3 4 5 6 7	
Historic	1 2 3 4 5 6 7	Surveys S Forbes DOC
Threats	1 2 3 4 5 6 7	
Human Mod. & Use	1 2 3 4 5 6 7	Dive Club

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:

Ingram CWW 1989 Wairoa District Scheme Review
 NZ Shipwrecks 1795 - 1975
 BeTl DG 1986 Conservation Status of NZ Wildlife
 Hawkins K 1990 Coastal Resource Inventory Site Form Unit 7 Site 8

Recorded on Existing Database:

1. WERI No
2. SSWI No
3. PNA No
4. Geopreservation No
5. HPT County Inventories Wairoa County 1983
6. Other NZAA SRF 1982/84/86, M and M Jeal, Sue Forbes
7. None

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Table Cape	Site No:	CRI 05 0008		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	NZMS1 N127 52350 39820	Date:	28/8/90		
<p>Brief Description of Site:</p> <p>This site extends for 15 kilometres from Auroa Point around Table Cape to the Taiporutu rivermouth. The site comprises an extensive horizontal wave cut platform of tilted strata and sand stone and mudstone with tidal pools. The platforms are backed by a narrow gravel beach and a series of holocene uplift terraces and above these interglacial marine terraces backed by steep mudstone hills. The terrestrial area has been extensively modified by farming development with practically no native vegetation remaining. Offshore the intertidal platforms extend out to offshore reef systems and a sand silt mud substrate.</p> <p>The site is accessible by vehicle over its whole length from the northern end by the coast road to the Nukutaurua Road and the then by driving across the back beach area.</p>					
Conservation Values:	Natural: ABCDEFH	Cultural: ABCD	Historic: ABCD		
<p>Comment:</p> <p>Natural The land area is highly modified by farming operations. But from the inter tidal platform seawards the site is in a relatively natural state. The natural values of the inter tidal area are given a very high rating by both Ballantine and Morton. The inter tidal area is a feed site for common and rare species of wildlife. Rare species (Bell B, 1986) include Caspian Tern (<i>Hydroprogne caspia</i>), variable Oyster Catcher (<i>Haematopus unicolor</i>), Golden Plover (<i>Pluvialis squatarola</i>). Common species are White Fronted Terns (<i>Sterna striata</i>), Bartailed Godwits (<i>Limosa lapponica baueri</i>), Pied Shags (<i>Phalacrocorax varius varius</i>) and Pied Stilts (<i>Himantopus himantopus leucocephalus</i>) (pers obs). The wide continuous wave cut platform with tidal pools is the best example of its type in the ecological district (Hawkins K, 1990). The geology of the site is interesting. At Table Cape there is a series of holocene uplift terraces backed interglacial marine terraces a geological feature of national significance (C. Ward pers comm). Limestone rock formations appear at the southern extent of the site (Hawkins K, 1990).</p> <p>Cultural The inter tidal rock platforms have definite landscape appeal (pers obs). The site is of cultural significance to Tangata Whenua. A canoe landing site Tauranga waka is marked by planted native seedlings. The site remains important for kaimoana. This is an important east coast recreation area. Four shipwrecks occur offshore - important dive sites.</p> <p>Historical 8 historic sites are recorded including pa site, middens, urupa and Tauranga Waka. The remains of the Old Mahia Road are also marked (Forbes, pers comm). 4 shipwrecks are recorded, Tasmania 1897 the most important. Also Byna 1832, NZ 1836, Coleen 1964.</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
<p>Comment:</p> <p>This site has national rating for the national geological interest of the marine uplift features (Ward) and the marine values of the unique inter tidal habitat (Morton J, pers comm). The Tasmania is one of the more important wreck sites in NZ (G. Carlin pers comm).</p>					
Existing Threats:	1km				
Type & Comment:	<p>Bulk fishing methods, especially set nets and spear fishing represent a threat to juvenile fish and reef fish habitats offshore (Hawkins K, 1990).</p> <p>Recreation vehicles on the back beach area threaten marine values (Hawkins K, 1990).</p> <p>Rubbish - Recreation and junk from fishing vessels (Hawkins K, 1990).</p>				

Modification and Human Use: **AHIJ**

Human occupation has severely modified the terrestrial area, land clearing and pastoral farming. Commercial fishing is an important offshore activity especially cray potting. Extensive free range camping activities in summer, especially diving wreck Tasmania and general shorebased recreation activities. The site is an important kaimoana collection area.

Existing Protection:
Type & Comment:

D

Wairoa District Scheme Rural D Zone protects coastal conservation values. A commercial fishing method restriction applies offshore.

Availability of Information:

Natural	1 2 3	
Cultural	1 2 3	
Historic	1 2 3	S Forbes DOC Rotorua
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communications: C Ward, DOC Gisborne, Geologist. G Carlin, DOC Whangarei, Wreck Diver. W S Ballantine, Auckland University, Scientist. J Morton, Auckland Marine Scientist (retired).

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:

1989 Wairoa District Scheme
 Bell BD 1986 Conservation Status of NZ Wildlife
 Ingram CWW NZ Shipwrecks 1795 - 1975
 Hawkins K 1990 Coastal Resource Inventory Sheet Unit Seven Sites 495 DOC Gisborne
 Morton J 1990 Report on Table Cape Inter Tidal area DOC

Recorded on Existing Database:

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

Comment:

Wairoa County 1986
NZAA SRF M and M Jeal

Other Considerations:

A site with major potential for marine reservation. Both Ballantine and Morton consider the marine inter tidal features of prime importance. The geology of the site is of national significance and the site could include the wreck of the Tasmania. The site is well located to act as a fish breeding site, and a marine advocacy site (Hogan K, pers obs).

Accompanying Maps and Photographs:

Site Name/s:	Pukenui/Maungawhio	Site No:	CRI 05 0009
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	NZMS1 N127 52265 37890	Date:	10/4/90
Brief Description of Site: <p>This site extends 9 kilometres from Mahanga stack to Oraka beach. The site comprises a flat profile beach of fine yellow/brown sand, backed by dune systems extending back to the Mahia tombola. At the southern end of the site is the Maungawhio Lagoon a series of estuarine to freshwater wetlands which, although effected by adjacent residential development and roading are a SSWI rated high. Much of the back beach area has been converted for pastoral farming. Coastal subdivisions occur at each end of the site.</p>			
Conservation Values: Natural: ABCDEFH Cultural: A Historic: B Comment:			
<p>Natural Pukenui Beach is one of the most natural and unspoilt on the East Coast (Hawkins K, 1990). The beach dunes comprise unconsolidated sand with vegetation dominated by adventives, especially Marram (<i>Ammophila arenaria</i>) which predominates, however (<i>Spinifex hirsutus</i>) and the local (Given D, 1990) pingao (<i>Desmoschoenus spiralis</i>) occur here (Hawkins K, 1990). The Pukenui Beach is rated a 6 in the North Island Dune and Black Vegetation Inventory (Partridge). The beach is the western side of the Mahia Tombola, the best example of such a landform in NZ and recommended for protection in the geopreservation index. The Maungawhio Lagoon and isthmus wetlands are a series of estuarine to freshwater wetlands with raupo - rush vegetation, bordered by scrub, dunes and pasture. Numerous waterfowl and wader species are present. Threatened species include: Bittern (<i>Botaurus stellaris poiciloptilus</i>), Banded Rail (<i>Rallus philippensis assimillis</i>), Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>), Caspian tern (<i>Hydroprogne caspia</i>). The area has a high site of SSWI rating and is recognised as a nationally important estuarine area in the WERI index. The estuary is unique in the ecological district for its shellfish population (Hawkins K, 1990). The estuary is a locally important whitebait fishery (Hawkins K, 1990). The Mahanga stack is a .2ha rock stack. It has one of a few colonies of grey faced petrels (<i>Pterodroma macroptera gouldi</i>) on the mainland and has a high SSWI rating (Rasch G, 1990).</p> <p>Cultural The Maungawhio estuary has and conditnues to supply an important food source to the Tangata Whenua. Both shellfish and wetfish, notably flounder and whitebait (Hawkins K, 1990). Important spiritual and cultural site to Tangata Whenua. Part of an important holiday and recreation site for East Coast people (Hawkins K, 1990).</p> <p>Historical Three maori historic sites recorded, middens (Forbes S, pers comm).</p>			
Site Importance: International <u>National</u> Regional Local Unknown Comment:			
<p>This site is of national importance for its wildlife habitat values, the presence of several threatened species and preservation of the nationally unique tombola landform.</p>			
Existing Threats: Type & Comment:			
<p>BCDGH</p> <p>Noxious and domestic animals threaten wildlife and botanical values (Hawkins K, 1990). Adventive plants, especially invasive plants on the wetlands, threaten natural values (Rasch G, 1989). The estuary is threatened by siltation - not properly flushed as a result of causeway construction. Rubbish dumping on estuarine margins and runoff from roads and causeways effects the estuary. Coastal subdivision puts added pressure on the natural values. Shore stabilisation works at Oraka have modified the rivermouth (Hawkins K, 1990).</p>			

Modification and Human Use: AKI

A long history of development has modified the site. Historic land clearing, pastoral farming, plantation forestry, residential subdivision, roading and causeway development. In earlier years considerable work was put into stabilising the dunes. Holiday home subdivisions at Mahia and Oraka are regionally important. Shorebased recreation includes fishing, swimming and maritime enjoyment. Water based recreation includes boat fishing and surfing.

Existing Protection:
Type & Comment:

AD

A commercial fishing restriction banning all methods applies offshore (Weir N, pers comm). Several local purpose reserves are managed by the Wairoa District Council. An esplanade reserve in the north, a camping reserve in the south. Part of the Mangawhio lagoon is a Wildlife Management Reserve. In the Wairoa District Scheme the is zoned Rural D (coastal) and Rural C (wetlands) to protect conservation values.

Availability of Information:

Natural	1 2 3
Cultural	1 2 3
Historic	1 2 3
Threats	1 2 3
Human Mod. & Use	1 2 3

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

Beadel SM 1989 Botanical Conservation Values of the Conservation Estate Wairoa Planning Area
 Beadel SM 1989 A Register of Threatened and Local Plants in Eastern Region DOC
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region
 Williams G 1988 Oraka Erosion Study G Williams Consultants
 Hawkins K 1990 Coastal Resource Inventory Site Form Site 1 Unit 7 8/2/90
 1989 Wairoa District Scheme
 Given D 1990 Threatened Plant and Local Plant List NZ Botanical Region DSIR

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|---|
| 1. WERI | Rated of national importance, see natural |
| 2. SSWI | Rated high, see natural |
| 3. PNA | |
| 4. Geopreservation | The Mahia tombola is the best example in NZ, see natural |
| 5. HPT County Inventories | Wairoa County 1983 NZAA SRF Surveys 1982/84/86 M and M Jeal |
| 6. Other | Proposed coastal reserve file WA 7/4/1 DOC |
| 7. None | Sand Dune and Beach Vegetation Inventory of NZ North Island DSIR Site No. 125 |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Maraetaha Beach	Site No:	CRI 05 0010
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y18 29385 62565	Date:	20/8/90
Brief Description of Site:			
<p>Maraetaha Beach is located at the Maraetaha rivermouth 5 kilometres south of Young Nicks Head Peninsula. The beach is a wide sandy one 3.2 kilometres in length with sand dunes and flat farmland behind. There is no legal access, the beach is private land. The site is approximately 30 hectares.</p>			
Conservation Values:	Natural: ABDEF	Cultural:	Historic:
Comment:			
<p><u>Natural</u> The dunes at Maraetaha Beach are relatively wide, with foredunes in good condition but backdunes containing weeds as well. There are some good slack communities, and adjacent to the dunes there are cliff communities and secondary forest with native species dominating. These dunes are recommended for protection, they have regional significance. These dunes have a rating of 10 in an inventory of sand dune and beach vegetation of North Island (Partridge T, 1989).</p> <p><u>Cultural</u></p> <p><u>Historical</u></p>			
Site Importance:	International	National	<u>Regional</u> Local Unknown
Comment:			
<p>Dune vegetation of a relatively high inventory rating requiring protection and of regional significance (Partridge T, 1989).</p>			
Existing Threats:	CD		
Type & Comment:			
<p>Displacement of native plants by adventives a major problem in Gisborne Area (Partridge T, 1989). Domestic stock grazing on dune areas (Quirk J, pers comm).</p>			

Modification and Human Use: A

Pastoral farming on adjacent sites.

Existing Protection:
Type & Comment:

Nil protection.

Availability of Information:

Natural	<u>1 2 3</u>	Only dune vegetation values recorded
Cultural	<u>1 2 3</u>	
Historic	<u>1 2 3</u>	No sites on dunes recorded
Threats	<u>1 2 3</u>	
Human Mod. & Use	<u>1 2 3</u>	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1 2 3 4 5 6 7</u>
Cultural	<u>1 2 3 4 5 6 7</u>
Historic	<u>1 2 3 4 5 6 7</u>
Threats	<u>1 2 3 4 5 6 7</u>
Human Mod. & Use	<u>1 2 3 4 5 6 7</u>

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:

Partridge 1989/90 The Sand Dune and Beach Vegetation Inventory of NZ DSIR
1989 Cook County Scheme Review No. 1

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|---|
| 1. WERI | No |
| 2. SSWI | No |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | No |
| 6. Other | Sandu Dune and Beach Vegetation Inventory of NZ North Island Site 124 |
| 7. None | |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Orongo Lagoon	Site No:	CRI 05 0011
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y18 29400 62582	Date:	20/8/90
Brief Description of Site: A 12 hectare lagoon located immediately south of Young Nicks Head Peninsula. This site is privately owned and there is no public access.			
Conservation Values: Natural: BC Cultural: Historic: B Comment: <u>Natural</u> A 12 hectare lagoon of rush wetland with grasses, some open water, waders and waterfowl are present. A site of special wildlife interest rated <u>moderate</u> (Rasch G, 1988). <u>Cultural</u> <u>Historic</u> 3 mooru sites of local importance (middens) recorded (Bain P, pers comm).			
Site Importance: International National <u>Regional</u> Local Unknown Comment: This lagoon has a <u>moderate</u> SSWI rating (Rasch).			
Existing Threats: D Type & Comment: The area is grazed by domestic stock.			

Modification and Human Use:

Pastoral farming on margins and grazing of the estuary itself.

Existing Protection:
Type & Comment:

Nil

Availability of Information:

Natural	1	2	3
Cultural	1	2	3
Historic	1	2	3
Threats	1	2	3
Human Mod. & Use	1	2	3

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Historic source P Bain Archaeologist

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:

Rasch G 1988 Wildlife and Wildlife Habitats of Eastern Region DOC PP111
Cook County Scheme No. 1 Review 1989

Recorded on Existing Database:

1. WERI No
2. SSWI Yes
3. PNA No
4. Geopreservation No
5. HPT County Inventories No
6. Other Cook County 1986
7. None NZAA SRF and P Bain

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Young Nicks Head/Te Kuri	Site No:	CRI 05 0012		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	Y18 29409 62601	Date:	20/8/90		
Brief Description of Site:					
<p>Young Nicks Head is a 45 hectare peninsula of hilly grassed farmland rising to 177 metres at Te Kuri Trig. Along the northern side of the peninsula there is an unbroken line of 120 metre high white cliffs which are the dominant feature of the Poverty Bay seascape. The peninsula is privately owned and there is no public access to the site.</p> <p>Young Nicks Head is a historic site of national importance being the first land sighted by Cook in 1769 (Lands and Survey Report). It is also of significance to Tangata Whenua for its association with Pawa, captain of the Horouto Canoe (Karr) and Rangihona Pa is of regional significance (Bain).</p>					
Conservation Values:	Natural: E	Cultural: BCD	Historic: ABE		
Comment:					
<p><u>Natural</u> The eroding white cliffs of Young Nicks Head are a distinctive and unusual landform in Poverty Bay (pers obs).</p> <p><u>Cultural</u> Young Nicks Head is the first, close up, part of New Zealand seen by Captain Cook in 1769. It was reputedly first sighted by the ships boy, young Nick, after whom it was named. The cliffs form the historic backdrop to the view of the Cook Monument on a historic reserve on Kaiti Beach in Gisborne City where Cook first landed in NZ. The view of Young Nicks Head from the memorial is considered of such importance that an area has been designated on the Gisborne City District Planning Scheme, so that the cone of vision necessary for this view is protected from obstruction by buildings (Lands and Survey, 1980). The site is also of significance to Tangata Whenua being the location of an historical incident relating to Te Kuri o Pawa (Kaa, 1988). The landform dominates the Bay has aesthetic and land form qualities (pers obs).</p> <p><u>Historical</u> 3 historic sites recorded in the Cook County Inventory 1986. Rangihona Pa site of regional importance (Bain, 1990). The whole peninsula of national importance for Cooks association and other Pa of local importance (Bain, 1990). Site of special historic value (Cook County Scheme, 1989).</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					
A site of national and historic importance relating to Cooks Landing in 1769 (Bain, 1990).					
Existing Threats:	A				
Type & Comment:					
A site subject to severe erosion because of the fragile nature and construction of the landform (Quirk, 1990).					

Modification and Human Use: AI

Land modified by pastoral farming practices. The area under the cliffs is a well used fishing spot (boats) (Quirk J, 1990).

Existing Protection:

Type & Comment: D

The Peninsula is zoned a place of special historical value in the (Cook County Scheme).

Availability of Information:

Natural	1	2	3
Cultural	1	2	3
Historic	1	2	3
Threats	1	2	3
Human Mod. & Use	1	2	3

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Historic Source P Bain Gisborne Archaeologist
Cultural Source B Kaa Tangata Whenua, Ruatoria

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:

Kaa B 1988 Marine and Coastal Inventory, A Maori Perspective, DOC
 1989 Cook County District Scheme Review No. 1
 L&S 1980 Coastal Reserves Investigation Cook County
 Quirk J 1990 Coastal Resource Inventory Site Sheet Young Nicks Head, DOC Gisborne

Recorded on Existing Database:

- | | |
|---------------------------|------------------|
| 1. WERI | No |
| 2. SSWI | No |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Cook County 1986 |
| 6. Other | NZAA SRF P Bain |
| 7. None | |

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Wherowhero Estuary		Site No:	CRI 05 0013	
Recorders Name:	K P Hogan		Conservancy:	East Coast	
Map/Grid Ref:	Y18 - 29390 62620		Date:	17/8/90	
Brief Description of Site:					
<p>Located at the south eastern end of Poverty Bay between the Waiapaoa rivermouth and Young Nicks Head peninsula. This, 140 hectare, salt meadow, mudflat and open water estuary has been formed by a large sand spit which comprises Muriwai Beach. The estuary has a high SSWI rating because of the high numbers of wading birds present including rare and threatened species (Rasch G, 1989). The estuary is the only one of its size and type in Cook County and it is the only large privately owned estuary in New Zealand (Lands and Survey). Muriwai Beach Spit is rated at 8 in the inventory of sand dunes and beach vegetation of North Island, New Zealand, which, for Poverty Bay, is comparatively high. The beach is modified through native species being replaced by adventives and is of restricted botanical value (Partridge T, 1989). The site is under threat from recreational and other use and invasion of exotic plants (Quirk J, 1990). Public access is limited.</p>					
Conservation Values: Natural: BCDEH Cultural: A Historic: BC					
Comment:					
<p>Natural A 140 hectare saltmeadow, mudflat and open water estuary with high numbers of wading species and migratory sea birds. Threatened species (Bell B, 1986) present are: Wrybill (<i>Anarchynchus frontalis</i>), Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>), Royal Spoonbills (<i>Platalea leucorodia regia</i>) and Caspian Tern (<i>Hydroprogne caspia</i>). Migratory species such as Bartailed Godwits (<i>Limosa lapponica baueri</i>) and several species of water fowl use the estuary. This site has a high SSWI rating (Rasch G, 1989). The Wherowhero Lagoon and estuary are important wildlife areas, being the only habitat in NZ (Lands and Survey). The dune system at Muriwai Beach which forms the estuary has restricted botanical value because of the modification of the beach through replacement of native species by adventives (Partridge T, 1989). However the sand spit landform is one of very few in the Gisborne area (pers obs). This site is a priority one recommended area for protection in the Turanga District Ecological Area. Protected Natural Area survey report for its wildlife and habitat values (Clarkson B, 1990).</p> <p>Cultural This site has a long history of occupation and use by Tangata Whenua (Bain P, pers comm). It is still an area important for taking kaimoana - shellfish and net fishing for flounder and line fishing (Quirk J, 1990).</p> <p>Historical 2 maori archaeological sites of local importance, both middens are recorded (Bain). A european historic site of regional importance is a portion of the historic coast route (Bain P, pers comm).</p>					
Site Importance: International <u>National</u> Regional Local Unknown					
Comment:					
<p>The wildlife values of the site, its high SSWI rating, the presence of threatened wildlife species (Rasch G, 1989) warrant a rating of national importance.</p>					
Existing Threats:					
Type & Comment: CJK					
<p>Spartina (<i>Spartina townsendii</i>) grass threatens the lagoon and estuary (Quirk J, 1990). Adventives are replacing native plants on the dune and beach areas (Partridge T, 1989). Dumping of household refuse and car bodies threatens natural values (Quirk J, 1990). Recreational use, especially use of trail bikes and driving through the estuary also threatens natural values (Quirk J, 1990).</p>					

Modification and Human Use ^{AHJ}

The land has low agricultural values but is used for recreation by campers, picnickers and trail bike riders and provides access to the beach (Lands and Survey). Fishing - shellfish collecting, net fishing and line fishing are a popular use here (Quirk). Kaimoana, especially shellfish (cockles) and net fishing for flounder are an important local use. Margins modified by farming practices.

Existing Protection:
Type & Comment:

D

The estuary and lagoon is private land with no current form of protection (Quirk). The foreshore of Muriwai Beach is zoned foreshore conservation B (Cook County Scheme).

Availability of Information:

Natural	1 2 3	
Cultural	1 2 3	
Historic	1 2 3	Historic Source P Bain Gisborne
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

Quirk J 1990 CRI Inventory Sheets No. 85
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC pp 110
 1989 Cook County Scheme Review No. 1
 Partridge T 1989/90 Inventory of Sand Dunes and Beach Vegetation of North Island NZ (DSIR)
 L&S 1980 Coastal Reserves Investigations Cook County
 Bell BD 1986 Conservation Status of NZ Wildlife
 Clarkson B 1990 Turanga Ecological District Protected Natural Area Survey Report DOC Draft

Recorded on Existing Database:

1. WERI No
2. SSWI Yes, high rating, see natural
3. PNA No
4. Geopreservation Turangi Ecological District - Draft Report
5. HPT County Inventories Cook County Inventory 1986
6. Other NZAA SRF P Bain
7. None North Island Sand Dune Inventory DSIR Site No. 123 Muriwai Beach

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s: Waipaoa River Lagoon	Site No: CRI 05 0014
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: Y18 29392 62645	Date: 17/8/90
Brief Description of Site: <p>A 30 hectare pasture and dune area with extensive mud flats located at the mouth of the Waipaoa River. The site has a moderate/high site of special wildlife interest (SSWI) rating because of the presence of rare, threatened and also common bird species. The site is part Crown land and part private land (Rasch G, 1989). Unformed road access to the beach exists.</p>	

Conservation Values:	Natural: BC	Cultural: A	Historic: B
Comment: <p><u>Natural</u> A 30 hectare pasture dune area with extensive mudflats and also rushes, wildlife species include rare (Bell B, 1986) least Golden Plover <i>Pluvialis fulva</i> and the threatened (Bell B, 1986) Wrybill (<i>Anarhynchus frontalis</i>) and common seabird species. This site has a moderate/high SSWI rating (Rasch). The Kuraua Stream beach rates only a (2) in the Inventory of Sand Dunes of Beach Vegetation because of the high modification of the dune system by native species replacement by adventives (Partridge T, 1989). The Waipaoa river has some international status as a river with the third highest sediment loading in the world (Young/Foster). The site is part of a priority one recommended area for protection in the Turanga Ecological District Protected Natural Area Survey Report for its habitat and wildlife values (Clarkson B, 1990). <u>Cultural</u> Long history of maori habitation on this site and adjacent lands (Bain P, pers comm). A popular fishing camping duck shooting spot (Quirk J, 1990). <u>Historical</u> Several maori historic sites of local importance recorded. Some effected erosion (Bain P, pers comm).</p>			

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment: <p>This site has a SSWI rating of medium/high because of the presence rare and threatened wildlife species.</p>					

Existing Threats: Type & Comment:	<p style="text-align: center;">ABCEJK</p> <p>Erosion and siltation from the Waiapaoa River an obvious threat to lagoon (pers obs) and spartina grass and silver poplars threaten lagoon margins (Quirk J, 1990). Historic sites (Bain P). Trail bike/dune buggy damage occurs (Quirk J, 1990). Household refuse and rubbish dumping occurs on the dunes and estuary (Quirk J, 1990). Shore stabilisation and river control works have been undertaken at the rivermouth following Cyclone Bola (pers obs).</p>
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Modification and Human Use: AHIJ

A long history of human occupation, historic land clearing, pastoral farming and roading. Shore based recreation from Turunui access road includes camping fishing and maritime enjoyment. Kaimoana area for local Maoris (Quirk).

Existing Protection:

Type & Comment:

D

The foreshore and dunes are zoned foreshore conservation B (Cook County Scheme).

Availability of Information:

- 1. Well documented
- 2. Limited information (general)
- 3. Little information (if any)

Natural	<u>1 2 3</u>	
Cultural	<u>1 2 3</u>	
Historic	<u>1 2 3</u>	Source P Bain Gisborne Archaeologist
Threats	<u>1 2 3</u>	
Human Mod. & Use	<u>1 2 3</u>	

Comment:

Sources of Information:

Natural	<u>1 2 3 4 5 6 7</u>
Cultural	<u>1 2 3 4 5 6 7</u>
Historic	<u>1 2 3 4 5 6 7</u>
Threats	<u>1 2 3 4 5 6 7</u>
Human Mod. & Use	<u>1 2 3 4 5 6 7</u>

- 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: 1990 CRI Site Sheet 6/7
 Quirk G 1989 Faces of the River
 Young/Foster 1989 Wildlife and Wildlife Habitats in Eastern Region, DOC
 Rasch G 1989 Cook County Scheme Review No. 1
 Bell BD 1986 Conservation Status of NZ Wildlife
 Partridge T 1989/90 Sand Dune and Beach Vegetation Inventory of NZ North Island, DSIR
 Clarkson B 1990 Turanga Ecological District Protected Natural Area Survey Report DOC (Draft)

Recorded on Existing Database:

1. WERI	Yes, regional significance (Catchment Authority)
2. SSWI	Yes, rated moderate (high) see natural
3. PNA	Turangi ECO district in draft
4. Geopreservation	No
5. HPT County Inventories	Cook County 1986
6. Other	NZAA SRF P Bain
7. None	Sand Dune and Beach Vegetation Inventory DSIR Sit No 122

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Cooks Landing Place	Site No:	CRI 05 0015
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y18 29470 62685	Date:	17/8/90

Brief Description of Site:

Located at the mouth Turanganui River in Gisborne City, this is the site of Cooks first landing in NZ in 1769. It is gazetted a National Historic Reserve. There is a monument to Cook located here and a small reserve also a "cone of vision" allowing an unobstructed view of "Young Nicks Head" across Poverty Bay.

The land mass behind is Titirangi Hill - historically important in relation to Cooks landing (Bain P, pers comm). Also culturally important for its Titirangi pa site and the site of the first european house in Poverty Bay (Bain P, pers comm).

The site was also an important coastal whaling station and the shipwreck Star of Canada is located just offshore to the east (Quirk J, 1990).

Conservation Values: Natural: BF Cultural: ABCDE Historic: ABCDE
 Comment:

Natural A remnant of coastal shrublands contains the rare plant (Bell B, 1986) *Brachyglottis perdicoides* (J Galilee pers comm). Recommended for protection in the Turanga Ecological District Protected natural Area Survey Report (Clarkson B, 1990).

Cultural Cooks first landing site in NZ is of cultural significance to both Maori and Pakeha. The site is a National Historic Reserve and Cooks Monument marks the site. A "cone of vision" allowing an unobstructed view of "Young Nicks Head" is maintained (Quirk J, 1990). Titirangi Pa is an important pa for Tangata Whenua. Titirangi Hill has significant cultural importance to both European and Maori (Quirk J, 1990).

Historical Cooks Landing Site is a gazetted National Historic Reserve, Titirangi Hill - pa site and site of first european house in Poverty Bay. Shore based whaling station Waikahua 1838. Several midden and pas sites of local importance (Bain P, pers comm).

Site Importance: International National Regional Local Unknown
 Comment:

A National Historic Reserve commemorating Captain Cooks first land fall in 1769.

Existing Threats:
 Type & Comment: CEGJK

Clematis vitalba, Honey suckle, Pampas effect Kaiti Beach back beach area. Sewege effluent threatens water quality in the area. Rivermouth has training walls to facilities post access. Dumping of port tailings in vicinity threatens foreshore. Recreation use - rubbish dumping a problem. (Quirk J, 1990).

Modification and Human Use: ABCDEHIJK

Heavy port and industrial development encroaches onto Cooks landing site. Area reclaimed and modified for port development. Commercial port area immediately adjacent to site. Small boats and yacht launching facility at Kaiti Beach. Industrial outfalls at Kaiti beach. Shore based recreation at Kaiti full spectrum. Waterbased recreation especially yachting offshore and scuba diving, Star of Canada. Source of kaimoana, maori.

Existing Protection:
Type & Comment:

AD

Cooks Landing Place is a gazetted National Historic Reserve. Titirangi Hill is a Regional Recreation Reserve.

Availability of Information:

Natural 1 2 3
Cultural 1 2 3
Historic 1 2 3
Threats 1 2 3
Human Mod. & Use 1 2 3

- 1. Well documented
- 2. Limited information (general)
- 3. Little information (if any)

Comment:

Historic/cultural source, P Bain.

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:

Quirk J 1990 CRI Site Sheets 2/3 DOC Gisborne
1989 Cook County Scheme Review No. 1
Ingram CWL NZ Shipwrecks 1795 - 1975
Personal Communication: J Galilee DOC Protected Species Section Gisborne.
Clarkson B Turanga Ecological District Protected Natural Area Survey Report DOC (Draft)

Recorded on Existing Database:

Comment:

- 1. WERI No
- 2. SSWI No
- 3. PNA Turanga Ecological District in Draft
- 4. Geopreservation No
- 5. HPT County Inventories Cook County 1986
- 6. Other NZA SRF P Bain
- 7. None

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Tuahine Point	Site No:	CRI 05 0016		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	Y18 29507 62650	Date:	10/4/90		
Brief Description of Site:					
<p>This site is located immediately south east of Gisborne city, it extends five kilometres from the end of the Kaiti Beach Road to Wainui Beach. The site comprises the northern headland of Poverty Bay. It is a piece of wilderness coast with quite spectacularly convoluted stratified sea cliff extensive wave cut inter tidal platforms, and an offshore island. The site has considerable aesthetic appeal. It's natural values include the presence of a variety of inter tidal marine species especially limpet varieties (pers obs). It is one of the highest landing site rates for juvenile crayfish (Puerulus) in NZ (pers comm MAF Scientist, 1990). The Sponge Bay lagoon has a potential SSWI rating (Rasch, 1989). There is a White Fronted Shag Colony at Tuahine Point (Quirk, 1990). The site has considerable historical and cultural importance to both Maori and Pakeha (pers obs). Several shipwrecks reported here. A lighthouse is located on Tuahine Point (Quirk, 1990). The site is accessible from each end along the foreshore and there is legal vehicle access to Sponge Bay in the centre.</p>					
Conservation Values:	Natural:	Cultural:	Historic:		
Comment:	ABCEH	ABCD	ABCD		
<p>Natural This site has the best and largest area of coastal shrublands and the only coastal herbfields in the Turanga Ecological district. It is a priority one Recommended Area for Protection (RAP) in the Draft Turanga Ecological District Protected Natural Area Report. Tuanotu Island is the only island in the district and has the only example in the district of Karaka forest (<i>Corynocarpus laevigatus</i>). It is also a priority one RAP (Clarkson, 1990). Natural values include the presence of a wide range of intertidal species especially limpets (pers obs). The site requires a detailed intertidal and submarine survey. MAF report that the Tuahine site has one of the highest Puerulus (<i>Jasus edwardsii</i>) landing site rates in the country and is a significant nursery area for crayfish (MAF Scientist personal comment). The Tuahine Point lighthouse has a well established Shag Colony (<i>Phalacrocorax varius varius</i>) (Quirk, 1990). Sponge Bay lagoon is a 5ha site of potential special significance for wildlife. A coastal sandspit with rushes in a lagoon. A resting place for migrant waders (Rasch, 1989).</p> <p>Cultural This site is of significance to both cultures (pers obs). Traditional kaimoana site on inter tidal platforms (Quirk, 1990). The coastal zone has aesthetic and landscape value (pers obs).</p> <p>Historical Important site of early coastal whaling operations 1838 -1852 (Sponge Bay [Papawhariki] and Tuahine Point) (Quirk, 1990). 6 maori archaeological sites of local importance are recorded (Bain). The remains of the old lighthouse at Tuahine Point is a european historical site (Bain). Several shipwrecks at Tuahine Point are recorded, Sir Donald 1887 (Ingram) and 9 other wrecks recorded in Poverty Bay 1843 - 1968 (Ingram). Tuanotu island was described by Banks in 1769.</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:	<p>Significant parts of this site are recommended for priority one protection in Turanga District PNA Survey Report.</p>				
Existing Threats:	<p>Type & Comment: ABCEJM</p>				
<p>A high rate of erosion occurs on sedimentary sea cliffs and shore platforms (pers obs). Siltation inundates the reef systems as does dredge trailings from an adjacent dump site (Quirk 1990). Adventives present include <i>Clematis vitalba</i> (Quirk). The Gisborne Refrigeration Company waste pipe occurs near the island (Quirk). Dredge tailings, household refuse in Sponge Bay are a major problem (Quirk). (M) Sewage outfall in Poverty Bay effects water quality of Poverty Bay (Planning Tribunal Hearing, Quirk, 1990).</p>					

Modification and Human Use: ABHIJ

A long history of human occupation and development; land clearing, pastoral farming and roading. An island adjacent to Tuamotu island has been removed for fill in past years. Important local amenity for shore based and water based activities. A traditional kaimoana site. Popular surf beach at Sponge Bay. (Quirk).

Existing Protection:
Type & Comment:

A

A lighthouse reserve is located at Tuahine Point.

Availability of Information:

Natural	1 2 3	Little marine information available
Cultural	1 2 3	
Historic	1 2 3	
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Historical Source: P Bain, Archaeologist Gisborne

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:

Quirk J 1990 1990 Coastal and Resource Inventory Survey Sheet 2 and 3, DOC Gisborne
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
 Ingram C NZ Shipwrecks 1795/1975
 1989 Cook County Scheme Review No. 1
 Clarkson B 1990 Turanga Ecological District Protected Natural Area Survey Report DOC (Draft)

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--|
| 1. WERI | Yes Sponge Bay, rated local significance |
| 2. SSWI | Potential rating, see natural |
| 3. PNA | Turanga Ecological District, draft |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Cook County 1986 |
| 6. Other | NZAA SRF Site survey 1971/79/85 P Bain |
| 7. None | |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Pouawa	Site No:	CRI 05 0017
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y18 29605 62740	Date:	104/90
Brief Description of Site:			
<p>This site extends 4 kilometres from the mouth of the Waimoko River in the north to the Pouawa River in the south. The site comprises a coastal cliff of remnant modified coastal shrublands, a narrow fine sand beach, an extensive inter tidal wave cut platform and a sub tidal reef system extending out to a sand/mud substrate. The site also includes a sand dune, sand spit and lagoon system at the Pouawa rivermouth. The site is accessible from the foreshore at the Pouawa rivermouth and via a paper road at the Waimoko rivermouth. The beach is used for maritime beach walks and kaimoana collection. Offshore is a commercial craypotting site. Remnants of the Old Coast Road causeway remain at Pariokonohi Point.</p>			
Conservation Values:			
Natural:	AEF	Cultural:	ABCD
Historic:	ABCD		
Comment:			
<p>Natural The terrestrial area has been extensively modified by natural erosion, historic land clearing and pastoral farming right down to the back beach area. A remnant of coastal shrublands and broadleafed forest on a steep sea cliffs between the Pouawa River and Pariokonohi Point - although highly modified it has a low RAP status because of its type scarcity within the ecological district (Galilee pers comm). The intertidal area is a wide wave cut platform of stratified and tilted silt and mud stones. The marine, fauna and flora is abundant and diverse and relatively unmodified (Morton J, 1987). Submarine reef systems extend onto a sand/mud substrate. The reef systems support an abundance and diversity of marine life and are in relatively good condition. (J. Quirk, pers comm). The Pouawa dunes have a rating in the Sand Dune Vegetation Inventory (Partridge T, 1989).</p> <p>Cultural The site is of historical, cultural and spiritual significance to the Tangata Whenua of Whangara. Although a traditional kaimoana site, the local hapu initiated marine reservation investigations in the area.</p> <p>Historical 2 historic sites recorded (P. Bain, 1990). Kaiora Pa located on the clifftop above the Pouawa river is a site of Special Historic Value in the Cook District Scheme. A shipwreck 'The Star of the Evening' 1867 and old steamer - boiler and anchor still visible occurs offshore (Ingram). Part of the causeway around Pariokonohi Point - part of the old coast road remains (Bain P, pers comm).</p>			
Site Importance:			
International	National	<u>Regional</u>	Local Unknown
Comment:			
<p>This site has a regional rating for relative importance of its remnant natural terrestrial values in the ecological district, for the natural and cultural significance of its marine values.</p>			
Existing Threats:			
Type & Comment:	ACI		
<p>Rapidly eroding sea cliffs and down cutting shore platforms (Gibb J, pers comm). Invasive plants threaten succession of remnant natural vegetation on sea cliffs (pers obs). Bulk fishing methods, set nets and trawling, threaten juvenile fish and reef fish on inshore reef systems (pers obs).</p>			

Modification and Human Use: ABHIJ

Human occupation land clearing and farming have modified the terrestrial area. Commercial fishing, especially craypotting and algae collection (*Pterocladia lucida cappiacea*). Shore based recreation includes beach walking, swimming, rock pool exploration and diving, water based recreation, boat fishing and scuba diving. The site is used by Tangata Whenua for kaimoana collection.

Existing Protection:
Type & Comment:

D

Kaioara pa site a site of special historic interest, Cook District Scheme

Availability of Information:

Natural	<u>1</u> <u>2</u> <u>3</u>	
Cultural	<u>1</u> <u>2</u> <u>3</u>	
Historic	<u>1</u> <u>2</u> <u>3</u>	Source P Bain Archaeologist Gisborne
Threats	<u>1</u> <u>2</u> <u>3</u>	
Human Mod. & Use	<u>1</u> <u>2</u> <u>3</u>	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Comment: J Galilee Protected Species DOC Gisborne, J Gibb Geomorphologist DOC Wellington

Sources of Information:

Natural	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Cultural	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Historic	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Threats	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Human Mod. & Use	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>

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:

Quirk J 1990 Coastal Resource Inventory Sheets 47, 48
 1989 Cook County Scheme Review No. 1
 Partridge T 1989/90 An Inventory of Sand Dune Beach Vegetation of NZ North Island DSIR
 Morton J 1990 Report on Pouawa Inter Tidal Area DOC

Recorded on Existing Database:

1. WERI No
2. SSWI No
3. PNA No
4. Geopreservation No
5. HPT County Inventories Cook County 1983
6. Other NZAA_SRF 1985/1971
7. None The Inventory of Sand Dune & Beach Vegetation of NZ North Island DSIR Site No 117

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Waimoko River	Site No:	CRI 05 0018
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y18 29650 62786	Date:	16/8/90

Brief Description of Site:

The Waimoko River estuary and dune system is located one kilometre south of Whangara.

The site comprises a 10 hectare river estuary and associated dune system. A small papa face on the northern river is the site of the endangered plant (*Plantago picta*) (Beadel S, 1990) on the southern bank of the river is a dune system of high botanical conservation value (Partridge/Beadel). Two maori archaeological sites of local importance are recorded.

Conservation Values: Natural: BCDEFH Cultural: Historic: B
 Comment:

Natural The dunes at Waimoko River stand out. Rating 12. Although not containing a great diversity of communities, the area is, however, dominated by (*Spinifex hirsuitus*) has little marram, is in good condition and contains a large population of the vulnerable plant (*Austrofestuca littoralis*). It clearly stands out as priority area for conservation (Partridge T, 1989). The Waimoko dune system is of high botanical conservation value and should be protected (Beadel). The endemic endangered plant (*Plantago picta*) occurs on a papa face on the northern bank of the river. The 10 hectare Waimoko River Estuary a tidal estuary with dunes, mudflats and estuarine vegetation. The threatened (Bell B, 1986) species Banded Dotterel (*Charadrius bicinctus bicinctus*) are present also other waders and waterfowl. The site has a moderate rating in the SSWI Index.

Cultural

Historical 2 historic sites of local importance recorded. Pa site and pits and terraces (P. Bain, pers comm).

Site Importance: International National Regional Local Unknown
 Comment:

The natural values of this site warrant a rating of national importance. A dune system of high botanical conservation (Beadel, 1990) and the presence of threatened species of wildlife. The site has an international rating because of the presence of an endangered endemic plant species (*Plantago picta*).

Existing Threats:
 Type & Comment: C

"Sulla" a creeping plant is choking (*Plantago picta*) out at its site (Quirk J, 1990). Marram (*Ammophila arenaria*) plantings threaten the plant community of the dune system (Beadel S, 1990).

Modification and Human Use:

Existing Protection:

Type & Comment:

D

A paper road to northern bank of rivermouth (unformed) occurs.

Availability of Information:

Natural	<u>1</u> 2 3	No information on marine habitats
Cultural	1 <u>2</u> 3	
Historic	1 2 <u>3</u>	
Threats	1 2 <u>3</u>	
Human Mod. & Use	1 2 <u>3</u>	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Given D 1990 Threatened Plant List and Local Plant List NZ Botanical Region DSIR

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	1 <u>2</u> 3 4 5 6 7
Historic	1 2 3 4 5 <u>6</u> 7
Threats	1 2 3 4 5 <u>6</u> 7
Human Mod. & Use	1 2 3 4 5 <u>6</u> 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:

Quirk J: 1990 CRI Site Sheet No. 46
 1989 Cook County Scheme Review No. 1
 Rasch G: 1989 Wildlife and Wildlife Habitats of Eastern Region (DOC)
 Beadel S: 1990 Vegetation and Flora of Waikomoko River Sand Dunes DOC
 Beadel S: 1990 A Register of Threatened and Local Plants of Eastern Region DOC
 Partridge T: 1989/90 The Sand Dune and Beach Vegetation Inventory of NZ North Island DSIR
 Bell BD: 1986 Conservation Status of NZ Wildlife

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|---|
| 1. WERI | |
| 2. SSWI | Moderate, See Natural |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Cook County |
| 6. Other | NZAA SPF Field Survey Historic Sites 1984/1985 (Bain) |
| 7. None | North Island Sand Dune Inventory DSIR Site No. 115 |

Other Considerations:

This site is located adjacent to the northern extent of a marine reserve proposal (Pouawa) currently under investigation (Hogan).

Accompanying Maps and Photographs:

Site Name/s:	Whangara	Site No:	CRI 05 0019
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y18 29659 62800	Date:	10/4/90

Brief Description of Site:

This site extends 3 kilometres from the Pakarae River in the north to Te Motu o Paikea Island offshore from Whangara Pa. The site comprises an area at Pakarae rivermouth of geologically important features (C. Ward pers comm) extends along the attractive stretch of white sand beach and the Whangara dune system, the most extensive in the area, past the maori pa and settlement at Whangara, the resting place of Paikea eponymous ancestor of Ngati Porou, to the island of Te Motu O Paikea which is the burial place of Paikea and steeped in spiritual significance (Kaa B, 1987). The island is also a site of the endangered endemic plant Plantago picta (Beadel S, 1990).

The land is maori owned but there is public road access to the foreshore (Cook Scheme). The Whangara dunes are an important source of quarried sand for building (Cook County Scheme).

Conservation Values: Natural: BDEFH Cultural: ABCDE Historic: ABCDH
 Comment:

Natural At the Pakarae river mouth are a series of holocene uplift features with the highest rate of uplift on a coastal site in NZ. Rated at 4 metres/thousand years of national geological interest (C. Ward pers comm). The Whangara dune system is one of the larger dune systems in the ecological area. It contains examples of vegetation in better condition than in other dune systems in the district. Worthy of reservation (Beadel S, 1990). A national inventory of sand dune and beach vegetation of North island NZ rates Whangara dunes at (6) six (Partridge T, 1989). An endemic endangered species Plantago picta occurs on the sea cliff at Te Anaopaieka point (300 plants) and on Te Motu o Paikea island (60 plants) (Beadel S, 1990).

Cultural Whangara is the home and resting place of Paikea eponymous ancestor of Ngati Porou. He is buried on Te Motu o Paikea. The island is said to be the whale that brought Paikea to Aotearoa. The site is steeped in history and is of major significance culturally and spiritually to Ngati Porou (Kaa B, 1987). Urupa on headland. The curved meeting houses at Whangara are also significant edifices (White D, pers comm). important offshore kaimoana site to local people.

Historical More than twenty historic sites recorded, including Pas, middens, whale pots and whale bone rated of local importance (Bain P, 1990). Te Motu of Paikea of regional may be of national importance (Bain P, 1990). Whangara island a historic area of special value (Cook County Scheme).

Shipwreck "Lauota" December 1962 (Ingram) page 402.

Site Importance: International National Regional Local Unknown
 Comment:

This site is of national importance because of the nationally significant geological features at Pakarae River (Ward C, pers comm) and for the historic and cultural importance of Paikea to Aotearoa. The site is rated of international importance because of the presence of an endangered endemic species Plantago picta.

Existing Threats:
 Type & Comment: ACDFI

Coastal erosion at Whangara threatens the pa site and headland (Gibb J, pers comm). Domestic stock grazing threatens the dune system, blowouts already occur (Beadel S, 1990). Sand mining and associated marram planting threaten integrity of the Whangara dune system (Beadel S, 1990). Noxious plant Boxthorn (Lycium ferocissimum) on this island threatens rare plants (Quirk J, 1990). Local hapu concerned at effect of commercial fishing on their kaimoana resource (Seymour A, pers comm).

Modification and Human Use: ABHIJ

A long history of human occupation has modified the site, historical land clearing, pastoral farming, sand mining, residential subdivision and marae developments and roading. Commercial fishing includes cray potting, set netting, long lining and sea weed harvesting Agar Weed (*Pterocladia lucida*) and (*P. capillacea*). A sea wall has been erected at Whangara to protect the marae from sea erosion. Shore based recreation includes camping, surf fishing, swimming and maritime enjoyment. Water based recreation is boat fishing and some scuba diving. The inter tidal and offshore reefs are important kaimoana areas for Tangata Whenua.

Existing Protection:
Type & Comment:

D

Te Motu of Paikea is Maori Reserve and also a SSWI in the Cook District Scheme. Whangara Beach foreshore is zoned foreshore conservation B in the Cook District Scheme.

Availability of Information:

Natural	1 2 3	
Cultural	1 2 3	No marine ecology info located
Historic	1 2 3	PC T Seymour DOC Gisborne Karrs Rpt
Threats	1 2 3	P Bain Gisborne Archaeologist
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communications: D White, Opotiki Historian, C Ward Geologist DOC Gisborne

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:

Karr 1989 Marine and Coastal Inventory A Maori Perspective DOC Unpublished
 Quirk J 1990 CRI Survey Sheets 44/45
 1989 Cook County Scheme Review No. 1
 Beadel SM 1990 The Vegetation of Flora of Whangara Sand Dunes DOC
 Partridge TR 1989/90 An Inventory of Sand Dune and Beach Vegetation of NZ North Island DSIR
 Ingram CW NZ Shipwrecks 1795 - 1975
 Beadel SM 1988 A Register of Threatened and Local Plants of Eastern Region DOC
 L&S 1980 Coastal Reserves Investigation Cook County

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--|
| 1. WERI | |
| 2. SSWI | Yes, local significance ecological district |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | No |
| 6. Other | Cook County 1986
NZAA SRF P Bain |
| 7. None | A Sand Dune Beach Vegetation Inventory DSIR Site No. 115 |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Gannet Rock	Site No:	CRI 05 0020
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z17 29765 62961	Date:	15/8/90
Brief Description of Site: A 1 hectare bare sandstone rock located at the southern end of Waihi Beach. Inaccessible except by boat. The site is crown owned land (Rasch, 1989)			
Conservation Values: Natural: C Cultural: Historic: Comment: Natural Gannet Rock is a 1 hectare bare sandstone rock - a nesting area for 200+ Australasian Gannet (<u>Sula bassana serrator</u>). A Site of Special Wildlife Interest rated high (Rasch 1989).			
Site Importance: International <u>National</u> Regional Local Unknown Comment: This site has a high SSWI rating being a nesting area for Australasian Gannets (<u>Sula bassana serrator</u>) (Rasch, 1989).			
Existing Threats: Type & Comment: Nil			

Modification and Human Use:

Nil

Existing Protection:
Type & Comment:

Availability of Information:

Natural	<u>1</u> 2 3
Cultural	1 2 <u>3</u>
Historic	1 2 <u>3</u>
Threats	1 2 <u>3</u>
Human Mod. & Use	1 2 <u>3</u>

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	1 2 3 4 5 <u>6</u> 7
Historic	1 2 3 4 5 <u>6</u> 7
Threats	1 2 3 4 5 <u>6</u> 7
Human Mod. & Use	1 2 3 4 5 <u>6</u> 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:

Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC

Recorded on Existing Database:

1. WERI Nil
2. SSWI Yes, High rating, see natural
3. PNA Nil
4. Geopreservation Nil
5. HPT County Inventories Nil
6. Other
7. None

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Cooks Cove/Pourewa Island	Site No:	CRI 05 0021		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	Z17 29760 62997	Date:	9/4/90		
Brief Description of Site:					
<p>Located at the southern end of Tolaga Bay. A large site comprising the Tolaga Bay Wharf, the Cooks Cove Historic Site, Cooks Cove Walkway, the Hole in the Wall, a site of Maori rock drawings, Te Kararoa Pa Site, Cooks Monument, Mitre Rocks and Pourewa island.</p> <p>Cooks Cove is the site where Cook landed Endeavour on October 23 1769 to provision the ship and learn native customs etc. Banks and Solander undertook botanical studies. Banks described natural features including the "Hole in the Wall" and Te Kararoa pa site.</p> <p>The Cooks Cove Walkway affords access to the natural and historical features of the area and is the most used walk on the East Coast (Quirk J, 1990). Little Blue Penguins nest at Hole in the Wall (Quirk J, 1990).</p> <p>Mitre Rocks and Pourewa island are sites of special wildlife interest (Rasch, 1989).</p>					
Conservation Values:	Natural: BCEH	Cultural: ABCDE	Historic: ABCEH		
Comment:					
<p>Natural Joseph Banks in 1769 called "The Hole in the Wall" an extraordinary natural curiosity. Mitre rocks are rated of high special wildlife interest (SSWI). They are a one hectare area of steep rocks clothed in boxthorn <i>Lycium ferrocissimum</i> and grass. Muttonbird burrows are present Crown land (Rasch, 1989). Pourewa island is one of two islands in the Waiapu Ecological District which support tall shrub or forest vegetation. The occurrence Pourewa (<i>Paratrophis banksii</i>) is notable as it is not otherwise known on East Cape. The island warrants protection (Daniel, 1985). The island is joined to the mainland by a submerged sand area which is forming a tombolo (Daniel). Pourewa island has breeding populations of common seabirds and unused muttonbird burrows. It is Maori land and has a moderate/high SSWI rating (Rasch, 1989).</p> <p>Cultural A site of importance to both maori and european cultures being the site of the first cultural exchange between the races during Cooks visit in 1769 is commemorated by a monument and reservation of the site (Cook County Scheme, 1989). The site has a long history of maori habitation - several important pa sites occur including Te Kararoa Pa described by banks in 1769. The area remains culturally important to Tangata Whenua (Bain, undated). Several important kaimoana sites are known offshore (Quirk, 1990).</p> <p>Historical Several important historical sites associated with Cook Landing Place, Te Kararoa Pa, Hole in the wall and Pourewa Island are recorded. Seven maori archaeological sites recorded including several pa sites and of special note are some maori rock drawings (Bain, 1990).</p> <p>Tolaga Bay wharf is a site of more recent history (Bain, 1990).</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					
<p>A site of national importance due to the natural values - Mitres Rocks and Pourewa island are sites of special wildlife interest (Rasch) and high cultural and historical value (Bain). The site of the maori rock drawings are also of national significance (Bain, 1990). Proposed as a scenic, historic and native reserve of national significance by Lands and Survey in 1980.</p>					
Existing Threats:	ACDK				
Type & Comment:					
<p>Coastal area subject to severe erosion (pers obs). Noxious and adventive weeds especially Boxthorn (<i>Lycium ferrocissimum</i>) threaten SSWI sites (Rasch). Grazing stock threaten botanical and wildlife values on Pourewa island SSWI site (Rasch). Recreation use can threaten sensitive historic sites especially rock drawings (Bain). Wild animals, particularly goats threaten botanical values on Pourewa island (Daniel).</p>					

Modification and Human Use: AHI

This site is modified by a long history of occupation; land clearing, farming developments and commercial fishing, private camping occurs at Cooks Cove. Cooks Cove Walkway has the highest use on East Coast (Quirk J, 1990). Shorebased recreation includes enjoyment of the walkway, swimming and fishing. Tolaga Bay is a commercial port area now relatively unused. Waterbased recreation is boat fishing and scuba diving (Quirk J, 1990).

Existing Protection:
Type & Comment:

AD

Cooks Cove is designated a historic place of special value (Cook County Scheme). The Cooks Cove Walkway is a nationally gazetted walkway (Cook County Scheme, 1989).

Availability of Information:

Natural	1 2 3	No information on marine values
Cultural	1 2 3	
Historic	1 2 3	
Threats	1 2 3	
Human Mod. & Use	1 2 3	

Historic Source P Bain Archaeologist Gisborne

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

Quirk J 1990 Coastal Resource Inventory Site Sheet 3 21/2/90 DOC Gisborne
 1989 Cook County Scheme Review No. 1
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region (DOC)
 L&S 1980 Coastal Reserves Investigation Cook County (Lands and Survey)
 Bain P ? Survey Report Pourewa/Cooks Cove/(DOC) Unpublished
 Daniel LJ 1985 Pourewa Island - East Coast Rotorua Botanical Society Newsletter No. 5

Recorded on Existing Database:

1. WERI
2. SSWI
3. PNA Yes, See Natural
4. Geopreservation No
5. HPT County Inventories No
6. Other Cook County 1986
7. None NZAA SRF P Bain

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Uawa Estuary	Site No:	CRI 05 0022
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z17 29738 92000	Date:	24/5/90
Brief Description of Site:			
<p>Located at Tolaga Bay this site comprises the 200ha estuary of the Uawa River. The estuary has been formed by a 1.5 kilometre sand spit which occurs at the rivermouth. The tidal influence extends 20 kilometres inland to Maungatuna. The river is one of the best whitebait fisheries on the East Coast (Quirk, 1990).</p> <p>Tolaga Bay township is located at the top end of the estuary. The sand spit is privately owned. A camping ground is located at the base of the sand spit.</p> <p>Much of the estuary is flanked by foreshore conservation reserves managed by Cook County.</p>			
Conservation Values:	Natural: BCDEFH	Cultural: ACD	Historic: B
Comment:	<p>Natural The estuary is a site of special wildlife interest (SSWI) rated moderate to high (Rasch, 1989). A 200 hectare river estuary comprising <i>Spartina</i> (<i>Spartina townsendii</i>) mudflats, rush, sedge, estuarine, wetland and dune vegetation. Diverse wader and field species are present including threatened (Bell, 1986) Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>) and threatened (Bell, 1986) Reef Heron (<i>Egretta sacra sacra</i>) (Rasch, 1989). The district has few habitats for wading species hence the importance of this site (L. W. McCaskill). The Uawa is one of the better whitebait rivers on the East Coast. Kokopu (<i>Galaxias brevipiana</i>) and Inanga (<i>Galaxias maculatus</i>) are present and <i>G. maculatus</i> spawn in the estuary (J Quirk 1990 personal comment). An inventory of sand dune and beach vegetation rates the Uawa river spit a six (6) (Partridge, 1989).</p> <p>Cultural A site of significance to local people for historical cultural and kaimoana values. Details unknown (pers obs). The site has a certain landscape value (pers obs).</p> <p>Historic 3 historic sites of local importance are recorded. 2 pa sites, 1 pit and midden. These overlook the estuary (Bain, 1990).</p>		
Site Importance:	International	<u>National</u>	Regional Local Unknown
Comment:	<p>A site of medium/high rating for its wildlife values. The presence of several threatened species of wildlife warrants a national rating. Rated of national significance in WERI Database.</p>		
Existing Threats:	BC		
Type & Comment:	<p>Periodic siltation of the estuary from the Uawa river occurs (Quirk, 1990). Adventive plants effect botanical and wildlife values notably <i>Spartina</i> spp. (<i>Ulex eroppeus</i>) and Boxthorn (<i>Lycium ferocissimum</i>) (Rasch, 1989).</p>		

Modification and Human Use: ABH

A long history of use, historic land clearing, the close proximity to Tolaga Bay town, stock grazing of the estuary margin and the close proximity to the holiday park have modified the site. Roading has modified the estuary margins. Shore based recreation on margins includes waterfowl shooting/whitebaiting/camping/fishing and swimming on the beach side of the sand spit (pers obs).

Existing Protection:
Type & Comment:

D

The Cook District Scheme has gazetted much of the estuarine margins as conservation zones A and B to protect the natural values of the site (Cook County Scheme, 1989).

Availability of Information:

Natural	<u>1</u> 2 3	
Cultural	1 <u>2</u> 3	
Historic	<u>1</u> 2 3	Source P Bain Archaeologist Gisborne
Threats	<u>1</u> 2 3	
Human Mod. & Use	1 <u>2</u> 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	1 2 3 4 5 <u>6</u> 7
Historic	<u>1</u> 2 3 4 5 6 7
Threats	1 2 3 4 5 <u>6</u> 7
Human Mod. & Use	1 2 3 4 5 <u>6</u> 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:

Quirk J 1990 Coastal Reserve Inventory Site Sheet Nos 29/30 11/2/90
 1989 Cook County District Scheme Review No. 2
 Rasch G 1989 Wildlife and Wildlife Habitat in Eastern Region, DOC
 Partridge T 1989 The Sand Dune and Beach Vegetation Inventory of NZ North Island DSIR
 L&S 1980 Coastal Reserves Investigation Cook County Lands and Survey Dept
 Bell B 1986 Conservation Status of NZ Wildlife NZ Wildlife Service Occasional Publication No. 12

Recorded on Existing Database:

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

Comment:

Yes, rated of regional significance by catchment authority
 Yes, see natural
 No
 No
 Cook County 1986
 NZAA SPF P Bain
 North island Sand Dune Inventory DSIR Site No. 111

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Mauterepa Island	Site No:	CRI 05 0023		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	Z17 29765 62034	Date:	16/8/90		
Brief Description of Site: <p>A 1.8 hectare island located 600 metres off Te Karaka point at the northern extremity of Tolaga Bay.</p> <p>A steep island partly covered in grass and scrub surrounded by a quite extensive inter tidal wave cut platform. This island is a major visual feature of the seascape and is a known breeding area for several species of coastal birds.</p> <p>A particularly large species of the Limpet (<u>Cellana flava</u>) occurs here (pers obs).</p> <p>Recommended as a nature reserve - unalienated Crown land (Lands and Survey).</p>					
Conservation Values:	Natural: ABC	Cultural: AD	Historic:		
Comment:	<p><u>Natural</u> A natural feature of the northern Tolaga Bay seascape (Lands and Survey). The island is a known breeding area for coastal birds including Fluttering Shearwaters (<u>Puffinus gavia gavia</u>) and Freshwater Shearwaters.</p> <p>A particularly large form of the Limpet (<u>Cellana flava</u>) occurs here (pers obs). The island has an extensive inter tidal and submarine reef system which supports a diverse and abundant variety of marine life (pers obs).</p> <p><u>Cultural</u> Important for Tangata Whenua for kaimoana and cultural/spiritual reasons (pers obs).</p>				
Site Importance:	International	National	<u>Regional</u>	Local	Unknown
Comment:	<p>Recommended for zoning as a nature reserve of regional importance for landscape and natural values (Lands and Survey).</p>				
Existing Threats:	C				
Type & Comment:	<p>The adventive plant Boxthorn (<u>Lycium ferocissimum</u>) occurs on the island (Quirk J, 1990).</p>				

Modification and Human Use:

Existing Protection:
Type & Comment:

Availability of Information:

Natural	1	2	3
Cultural	1	2	3
Historic	1	2	3
Threats	1	2	3
Human Mod. & Use	1	2	3

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

Source: Coastal Reserves Investigation Cook County Lands and Survey 1980

Recorded on Existing Database:

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

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Anaura Bay	Site No:	CRI 05 0024		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	Z16 29750 63160	Date:	27/8/90		
Brief Description of Site:					
<p>Anaura Bay is located 20 kilometres north of Tolaga Bay. The site is a 6 kilometre sweep of white sand beach from Nuhiti headland in the north to Motuoroi island in the south. The beach is backed by the 225 hectare Anaura Bay Scenic Reserve and areas of pastoral farmlands. The Waipare River enters the Bay at its centre. The site has a very high recreational use, overnight camping is permitted at the camping grounds in arecreation reserve. Swimming, fishing and diving are popular past times.</p> <p>Several archaeological sites are recorded the site of historical importance being visited by Cook in 1769 (Bain, 1990). The Motuoroi island is one of only two islands in the Waiapu Ecological District which support tall shrub and forest vegetation (Daniel, 1985).</p>					
Conservation Values:	Natural: ABDF	Cultural: ABCD	Historic: ABC		
Comment:					
<p>Natural The 225 hectare Anaura Bay Scenic Reserve is the only appreciable tract of coastal forest in the Waiapu Ecological District. It is part of a more or less contiguous tract which rises from the coast to 600 metres above sea level, it represents one of the few intact altitudinal sequences in the ecological district (Daniel, 1990). The Scenic Reserve contains the rare endemic plant (<i>Brachyglottis perdicidides</i>) (Beadel, 1989). The Anaura Bay beach scores a 4 in the inventory of NZ North Island sand dune and beach vegetation inventory (Partridge 1989/90). Motuouori Island is one of only two islands in the Waiapu Ecological District which support tall shrubs and forest vegetation. Despite severe modification and the presence of adventive plants, rats and wekas, the island has a high regeneration potential and therefore warrants protection (Daniel). Offshore several reefs are exposed which support a great abundance and variety of marine life including two Spot Demoiselle (<i>Chromis dispilus</i>) at their southern limit on East Coast (Quirk). Motuoroi has a moderate rating as site of special wildlife interest for its coastal broadleafed shrubland, nesting area for Black-Billed Gulls (<i>Larus dominicanus</i>) and nesting shorebirds and presence of Weka (<i>Gallirallus australis hectori</i>) (Rasch, 1989).</p> <p>Cultural The site has cultural and spiritual importance to Ngati Porou because of the historical incidents associated with the site. It remains important as a source of kaimoana (Kaa, 1989). The landscape and aesthetic qualities of the site are well recorded (personal observation).</p> <p>Historical Cook landed at Anaura Bay 1769. Motuoroi Island was described by Monkhouse during the visit. Several maori historic and archaeological sites recorded, including the Motuori Pa described by Monkhouse (Walls, 1987).</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					
The site has priority one Protected Natural Area Values in the Waiapu Ecological District and is historically important for Cooks visit in 1769.					
Existing Threats:					
Type & Comment:	ABCDGI				
<p>The Waipare river caused flooding aggradation and sediment problems during Cyclone Bola (Quirk, 1990). Wild animals and domestic stock are threatening botanical values on the site (Quirk, 1990). Adventive plants (a wide range) are influencing the vegetation regeneration on Motuouri Island (Walls, 1987). At the south end of Anaura Bay several batches are located on the foreshore with some associated sea protection works (Quirk, 1990).</p>					

Modification and Human Use: AHIJ

The back beach is modified by historical land clearing and pastoral farming (Quirk, 1990). The island has been heavily modified by historical land clearing and maori occupation (Walls, 1987). Several beaches and a recreation reserve cater for recreation use. Shorebased recreation of camping, swimming, fishing and diving is important. Waterbased recreation is boat fishing and scuba diving. The site is an important local kaïmoana supply (Quirk, 1990).

Existing Protection:
Type & Comment:

A

Anaura Bay Scenic Reserve. DOC administered recreation reserve.

Availability of Information:

Natural	<u>1</u> 2 3
Cultural	1 <u>2</u> 3
Historic	<u>1</u> 2 3
Threats	1 2 <u>3</u>
Human Mod. & Use	1 2 <u>3</u>

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communication: Quirk J, DOC Gisborne, Galilee J, DOC Gisborne Species Protection

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	<u>1</u> 2 3 4 5 6 7
Historic	<u>1</u> 2 3 4 5 6 7
Threats	<u>1</u> 2 3 4 5 <u>6</u> 7
Human Mod. & Use	1 2 3 4 5 <u>6</u> 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:

Bassett A Coastal Resource Inventory Site Sheets Unit 4 Site 18, 19, 20
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
 Daniel LJ 1990 Draft Management Plan Anaura Bay Scenic Reserve DOC (in Draft)
 Daniel LJ 1985 Rotorua Botanical Society Newsletter No. 5
 Walls G 1987 Wellington Botanical Society Bulletin - Motuoroï Island
 Beadel SM 1989 A Register of Threatened and Local Plants of Eastern Region DOC
 Partridge T 1989/90 An Inventory of Sand Dune and Beach Vegetation of NZ North Island DSIR
 Karr R 1989 Marine and Coastal Inventory, A Maori Perspective DOC Unpublished

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--|
| 1. WERI | No |
| 2. SSWI | Motuoroï Island, Moderate Rating See Natural |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Cook County Inventory |
| 6. Other | NZAA SRF P Bain |
| 7. None | Sand Dune and Beach Vegetation Inventory DSIR Site No. 108 |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Kurutau Trig	Site No:	CRI 05 0025
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z15 29874 63594	Date:	14/8/90

Brief Description of Site:

A one hectare area of Pohutukawa trees (Metrosideros excelsa) located near the Kuritai Trig, station number S42 at 302 metres above the Aramoana Stream.

This site has a site of special wildlife interest rating of moderate being a nesting colony for Shags (Rasch).

Conservation Values:	Natural: C	Cultural:	Historic:
Comment:	<p>Natural A 1 hectare site of Pohutukawa trees (<u>Metrosideros excelsa</u>) being a nesting colony for Pied Shags (<u>Phalacrocorax varius varius</u>) and Little Shags (<u>Phalacrocorax melanoleucos brevirostris</u>). Rated of moderate SSWI value (Rasch G, 1989).</p>		

Site Importance:	International	National	<u>Regional</u>	Local	Unknown
Comment:	<p>Site of moderate SSWI rating in Waiapu County (Rasch G, 1989).</p>				

Existing Threats:	D
Type & Comment:	<p>Wild animals, possums, pose a threat to pohutukawa forest (pers obs).</p>

Modification and Human Use: A

Pastoral farming.

Existing Protection:
Type & Comment:

D

The Waiapu District Scheme Rural Zoning is designed to protect and maintain coastal values.

Availability of Information:

Natural	<u>1</u> <u>2</u> <u>3</u>	SSWI Report
Cultural	<u>1</u> <u>2</u> <u>3</u>	
Historic	<u>1</u> <u>2</u> <u>3</u>	
Threats	<u>1</u> <u>2</u> <u>3</u>	
Human Mod. & Use	<u>1</u> <u>2</u> <u>3</u>	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Rasch G 1989 Waiapu District Scheme Review No. 2
1989 Wildlife and Wildlife Habitats of Eastern Region, DOC

Sources of Information:

Natural	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Cultural	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Historic	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Threats	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>
Human Mod. & Use	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>

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:

Rasch G Wildlife and Wildlife Habitats of Eastern Region, 1989 DOC

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|------------------------|
| 1. WERI | No |
| 2. SSWI | Yes, reference (Rasch) |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | No |
| 6. Other | No |
| 7. None | No |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Waiapu River	Site No:	CRI 05 0026
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z15 29925 63655	Date:	9/4/90
<p>Brief Description of Site:</p> <p>A 1400ha site at the mouth of the Waiapu River. A shingle flood plain and estuarine area with high numbers of common wading species, coastal birds and waterfowl.</p> <p>The Waiapu catchment area was deforested between 1880 and 1930 resulting in dramatic accelerated erosion of stream catchments, massive stream bed aggradation, the fastest rates of coastal accretion on the coast occur at the rivermouth. The Waiapu is the major source of beach material from Whakariki Point to Hicks Bay (Gibb pers comm). Some shingle extraction undertaken. Public access to the estuary via a formed road.</p>			
Conservation Values:	Natural: BC	Cultural:	Historic:
<p>Comment:</p> <p>Natural A 1400ha shingle flood plain at the Waiapu rivermouth. A large modified habitat which contains all species of the habitat type in the region including the threatened (Bell B, 1986) Banded Dotterel (<u>Charadrius bicinctus bicinctus</u>). Rated a moderate/high SSWI (Rasch G, 1989).</p> <p>In the WERI index the site has regional importance for catchment authority values. Having diverse avifauna. A large reasonably unmodified habitat.</p> <p>Cultural Traditional area of Ngati Porou. Locally important kaimoana area, several fishing and shellfish grounds known, Te Pito, Te Whakua, Rukupo. 2 kilometre off is Tokaititore a fishing reef (Kaa B, 1988).</p>			
Site Importance:	International	<u>National</u>	Regional Local Unknown
<p>Comment:</p> <p>A site with a moderate/high SSWI rating for its wildlife habitat value and the presence of threatened species of wildlife warrants a national rating.</p>			
Existing Threats:	BK		
Type & Comment:	<p>Massive streambed aggradation continues to modify the estuarine habitat (Gibb J, pers comm). Recreation fires in the driftwood have posed a threat in recent years (pers obs).</p>		

Modification and Human Use: AHi

A long history of modification and pastoral farming, stock grazing and roading. Gravel mining operations undertaken periodically. Shore based recreation fishing, shooting, kaïmoāna collection, water based recreation boat fishing.

Existing Protection:
Type & Comment:

D

The Waiapu District Scheme Rural Zoning is designed to protect and maintain coastal values.

Availability of Information:

Natural	<u>1 2 3</u>	
Cultural	<u>1 2 3</u>	Source B Karr Report
Historic	<u>1 2 3</u>	Source P Bain Archaeologist
Threats	<u>1 2 3</u>	
Human Mod. & Use	<u>1 2 3</u>	

- 1. Well documented
- 2. Limited information (general)
- 3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1 2 3 4 5 6 7</u>
Cultural	<u>1 2 3 4 5 6 7</u>
Historic	<u>1 2 3 4 5 6 7</u>
Threats	<u>1 2 3 4 5 6 7</u>
Human Mod. & Use	<u>1 2 3 4 5 6 7</u>

- 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:

1989 Waiapu District Scheme Review No. 2
 Karr R 1989 Marine and Coastal Inventory, A Maori Perspective DOC Unpublished
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region, DOC
 Bell BD 1986 Conservation Status of NZ Wildlife
 Gibb G 1981 Coastal Hazard Mapping of Waiapu County

Recorded on Existing Database:

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

Comment:

Yes, regional significance
EC157 TC Harrington SG Moore 12/11/83 rated moderate/high, see natural

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	East Island/Whangaokeno	Site No:	CRI 054027
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z14 29017 63750	Date:	01/03/90

Brief Description of Site:

An 8 hectare island located 2 kilometres off East Cape. The island is steep sided rising to 129 metres it is clothed in grass and coastal shrubland. The island is currently uninhabited. A lighthouse located on the island was abandoned in 1922. The island is important for its botanical and wildlife values. It is culturally and spiritually significant to Ngati Porou and remains an important source of kaimoana.

Conservation Values: Natural: Cultural: Historic:
 Comment: BCEFH

Natural Whangaokeno is a priority one Recommended Area for Protection in the Pukeamaru Protected Natural Area Survey Report. Whangaokeno is the largest island in the Ecological District and has high botanical and wildlife values. The endangered plant (Beadel S, 1988) (Plantago picta) is scattered on the sea cliffs (more than 50 plants. (Beadel S, 1988)).

Wildlife values are very high due to the presence of breeding colonies of fluttering shearwater (Puffins gania gania), sooty shearwater (Puffins griseus), grey faced petrel (Pterodroma macroptera gouldi) and black winged petrel (Pterodroma nigripennis), white faced petrel (Pelagodroma marina mooriana) and also little blue penguins (Eudyptula minor iradalei). Kiore established here has caused the extinction of the green form of tuatara known as (Whangaokeno) (Regnier C, 1988). (Rasch G, 1989) reports that the island has Site of Special Wildlife Interest rating of moderate for its wildlife values. The island is a gazetted wildlife refuge.

Cultural Whangaokeno also known as "Kaiawas Isle" remains an important source of kaimoana to the local people. Rituals relating to traditional gathering are strictly adhered to. No information available on Maori occupation (Karr B, 1987). The island is an important attribute to the aesthetic quality of the seascape of East Cape (pers obs).

Historical The old lighthouse site abandoned in 1922 has historical interest (Bain). Ingram reports seventeen shipwrecks at East Cape between 1810-1973 some are associated with the island.

Site Importance: International National Regional Local Unknown
 Comment:

The presence of the endemic endangered species Plantago picta warrants a rating of international importance. The PNA wildlife and recreational values rate national importance.

Existing Threats:
 Type & Comment: AD

High rate of erosion of island could threaten botanical values (pers obs).

The presence of Kiore on the island could threaten wildlife values (pers obs).

Modification and Human Use: AS

Historic land clearing in earlier times has modified the island ecology.
The lighthouse development at the eastern end of the island is now abandoned.
An important kaimoana area for Tangata Whenua (Kaa B, 1987).

Existing Protection:
Type & Comment: AD

The Waiapu County Scheme Rural Zone is designed to protect and maintain coastal values. A coastal hazard zoning is designed to prevent inappropriate development (Waiapu District Scheme).
The island is a designated Wildlife Refuge Reserve.

Availability of Information:

Natural	<u>1</u> 2 3	No marine ecological information located
Cultural	1 <u>2</u> 3	Karrs report
Historic	1 2 <u>3</u>	P. Bain Archaeologist, Gisborne
Threats	<u>1</u> <u>2</u> 3	
Human Mod. & Use	1 <u>2</u> 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	1 2 3 4 5 <u>6</u> 7
Historic	<u>1</u> 2 3 4 5 <u>6</u> 7
Threats	<u>1</u> 2 3 4 5 <u>6</u> 7
Human Mod. & Use	<u>1</u> 2 3 4 5 <u>6</u> 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:

Karr 1988	Marine and Coastal Inventory - A Maori perspective DOC unpublished
Regnier C	1988 Pukeamaru Ecological District Protected Natural Area Survey DOC
	1988 Waiapu District Scheme Review No. 2
Beadel S	1988 A Register of Threatened and Local Plants in Eastern Region DOC
Rasch G	1989 Wildlife and Wildlife Habitats of Eastern Region DOC
Ingram CW	Shipwrecks of N.Z. 1795 - 1975
Gibb J	1981 Coastal Hazard Mapping of Waiapu County

Recorded on Existing Database:

1. WERI	No	Comment:
2. SSWI	Yes. See Natural	
3. PNA	Pukeamaru PNA Survey. See Natural	
4. Geopreservation	No	
5. HPT County Inventories	Waiapu County 1983	
6. Other	NZAA SRF (P. Bain)	
7. None		

Other Considerations:

Lands and Survey Coastal Reserves Investigation Waiapu County, Lands and Survey undated.

Accompanying Maps and Photographs:

Site Name/s: East Cape	Site No: CRI 05 0028
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: Z14 29995 63753	Date: 28/02/90
<p>Brief Description of Site:</p> <p>This site extends from the Rangiatea Recommended Area for Protection at Te Wharenaonao point around the coast as far as the Waikuta Stream. The site comprises rapidly eroding mudstone coastal cliffs and shore platforms interspersed by alluvial plains and sand beaches of the Turanui Catchment. The site is accessible by the coast road. The alluvial plains of the Turanui Catchment are under pastoral farming regimes. The central area is the lighthouse recreation reserve which has in recent years become a popular recreation attraction (Lands and Survey Report). The sea cliffs associated with the lighthouse reserve and the adjacent cliffs have significant populations of vulnerable and endangered plants (Regnier, 1988).</p> <p>The intertidal and subtidal area is important for kaimoana for local people (Kaa B, 1988). Ingram reports 17 known shipwrecks off the Cape between 1810 - 1973 - lighthouse remains.</p>	
<p>Conservation Values: Natural: BFGH Cultural: ABCD Historic: ABCD</p> <p>Comment:</p> <p>Natural The coastal cliffs of the Lighthouse Reserve which rise to 100 metres have a sparse vegetation cover including the endemic endangered species (<i>Plantago picta</i>). It is the best example of this land form - vegetation association on the mainland in the district. The area is recommended for protection (RAP) priority two in the Pukeanaru Ecological Area PNA survey report (Regnier C, 1988). As are the same features on the adjacent sea cliffs. The Rangiatea RAP to the west also has the most viable southern population of <i>Tawapou Planchonella costata</i> in the district and the vulnerable plant (Beadel S, 1989) <i>Plantago picta</i> occurs on the site (Regnier, 1988). Also site of last known rare plant (<i>Pisonia brunoniana</i>) on the mainland of N.Z. (Beadel S, 1989).</p> <p>Cultural The site has important seascape and aesthetic values (pers obs). Since the east coast road from Te Araroa was upgraded in 1967 a visit to the East Cape has become a major attraction of the East Coast (Lands and Survey Report). The site is an important kaimoana site and of historical cultural and spiritual significance to Ngati Porou (Kaa B, 1988).</p> <p>Historical P. Bain records three historic sites of local importance. The site is deeply associated with Maori history (Kaa B, 1988). 17 shipwrecks recorded off East Cape between 1810 (Maru) - 1973 (Tradewind) (Ingram).</p>	
<p>Site Importance: <u>International</u> National Regional Local Unknown</p> <p>Comment:</p> <p>The site is rated of international importance because of the presence of the endemic endangered species (<i>Plantago picta</i>). The other values on the site, the PNA values and the recreation cultural and historical importance warrant national rating.</p>	
<p>Existing Threats:</p> <p>Type & Comment: ACD1</p> <p>An area of rapidly eroding seacliffs and down cutting shore platforms. High sediment loadings from East Coast rivers effect shore and reef systems (Gibb pers comm). Adventive plants, domestic stock and wild animals threaten the botanical values of the site (Galilee pers comm). Bulk fishing methods, trawling seining and set netting, threaten juvenile fish and reef fish (personal observation).</p>	

Modification and Human Use: AS

The site is extensively modified by a long history of human occupation, land clearing, farming, roading. Commercial fishing, cray potting, long lining and set netting is important (pers obs).

Recreation use increasing year by year. Visitor look at seascapes, small percentage visit the lighthouse (Lands and Survey). Important kaimoana site (Kaa B, 1988). Lighthouse now automated.

Existing Protection:
Type & Comment:

AD

The Waiapu Scheme Rural Zoning is designed to protect and maintain coastal values. A lighthouse reserve is administered by the Ministry of Transport. The Waiapu district scheme has the east cape foreshore zoned an amenity protection area. A coastal hazard zone is designed to prevent inappropriate development.

Availability of Information:

Natural	<u>1</u> 2 3	No marine information located
Cultural	1 <u>2</u> 3	Source Karr report
Historic	1 2 <u>3</u>	Source P. Bain, Archaeologist
Threats	1 <u>2</u> 3	Gibb and personal observation
Human Mod. & Use	1 2 <u>3</u>	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communications: John Galilee, DOC Protected Species Officer

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	1 2 3 4 5 <u>6</u> 7
Historic	1 2 3 4 5 <u>6</u> 7
Threats	1 2 3 4 5 <u>6</u> 7
Human Mod. & Use	1 2 3 4 5 <u>6</u> 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:

Karr Marine and Coastal Inventory, A Maori Perspective DOC Unpublished
 Regnier C 1988 Pukeamaru Ecological District, Protected Natural Area Survey Report, DOC
 1989 Waiapu District Scheme, Review No. 2
 Gibb J 1981 Coastal Hazard Mapping of Waiapu County
 Beadel S M 1989 A Register of Threatened and Local Plants Eastern Region
 Ingran CW Shipwrecks of N.Z. 1795 - 1975.
 Coastal Reserves Investigation, Waiapu County (Lands and Survey) Undated

Recorded on Existing Database:

1. WERI	No
2. SSWI	No
3. PNA	Pukeamaru Ecological District PNA Report. See Natural.
4. Geopreservation	No
5. HPT County Inventories	Waiapu County 1983. See History.
6. Other	NZAA Site Records, Archaeological Survey 1985 (Bain)
7. None	

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Hautai Beach	Site No:	CRI 05 0029
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z14 29960 63785	Date:	28/02/90

Brief Description of Site:

The Hautai Beach site comprises the extent of the sand beach between Horoera point to Te Wharenaonao point, some 5 kilometres, and extends inland to the base of the marine terraces. The Hautai Beach is an accreting fine sand beach derived of material predominantly from the Waiapu river system with contributions of material from the Waiapu River (Gibb, 1981). The beach itself is a rather ordinary dune system which is backed by an extensive shifting sand plain (Partridge, 1989/90). The coast road bisects the coastal plain and the beach, dune system and sand plain is grazed by domestic stock.

The site is a category 2 Recommended Area for Protection in the Pukeamaru Protected Natural Area Survey Report (Regnier, 1988). Partridge (89/90) rates it as the best sand dune/vegetation beach in the eastern Bay of Plenty.

Conservation Values:	Natural: BDEFH	Cultural: D	Historic: AB
Comment:			

Natural The Hautai Beach area comprises a lupin (*Lupinus arboreus*) dune system with an extensive shifting sand plain that is unique in the district (Regnier, 1988). (*Austrofestuca littoralis*), a plant species recently rated vulnerable (Galilee, pers comm) is scattered along the base of the (*Spinifex hirsutus*) covered foredune. (*Mazus pumilio*), a vulnerable plant (Beadel) found in only two other localities in the district, occurs throughout pasture turf on poorly drained stable sand flats. Kanuka (*Leptospermum erocoides*) forest on sand dunes with an understory of ongaonga (*Urtica ferox*) is unique in the district (Regnier, 1988). The area is also of archaeological interest (Regnier, 1988). The Hautai Beach scores the best rating (eleven) in the eastern Bay of Plenty in an inventory of sand dunes and beach vegetation. This score is mainly the result of the presence of sand plain vegetation behind a rather ordinary dune system (Partridge, 89/90).

Cultural The dune system and sand plain have a certain landscape value being the only example of their type in the area (pers obs). The Hautai dune area has a long history of Maori habitation and is of significance to Ngati Porou (Hovell).

Historical Four sites were recorded in the Archaeological Survey of 1985. They are several middens, remains of ovens, and a pa site. These sites are of local importance (P. Bain).

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					

The presence of vulnerable plants (*Austrofestuca littoralis* and *Mazus pumilop*) on a land form unique to the ecological district warrant a national rating.

Existing Threats:	
Type & Comment:	ACDM

Wind erosion of the sand plan initiated by grazing stock pastoral farming is very obvious (pers obs). Adventive plants, domestic stock and wild animals threaten many of the botanical and wildlife values on the site (Galilee, 1990).

The coast road also reduces the quality of the sand plain landform (pers obs).

Modification and Human Use: **AHIJ**

Historical land clearing, pastoral farming and roading have modified the site. Commercial fishing occurs offshore - cray potting, trawling long lines and set netting. Shore based recreation includes scenic drives to east cape, camping, fishing, swimming and general maritime enjoyment. Waterbased recreation is boat fishing, snorkle and scuba diving (pers obs). The site is important for kaimoana collection both intertidal and offshore reefs (Kaa B, 1988).

Existing Protection:
Type & Comment:

D

The Waiapu District Scheme Rural Zone is designed to protect and maintain coastal values. A coastal hazard zoning prevents inappropriate development (Waiapu District Scheme, 1989).

Availability of Information:

Natural 1 2 3 No marine ecological information located
 Cultural 1 2 3 Source Karr report
 Historic 1 2 3 P. Bain Archaeologist Gisborne
 Threats 1 2 3 Gibb report and personal observation
 Human Mod. & Use 1 2 3 Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communications: Hovell S, Tangata Whenua, Te Araroa
 Galilee J, Protected Species Officer, DOC Gisborne

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:

Karr 1988 Marine and Coastal Inventory, A Maori Prespective DOC Unpublished
 Regnier C 1988 Pukeamaru Ecological District Protected Natural Area Report, DOC
 1989 Waiapu District Scheme Review No. 2
 Gibb G 1981 Coastal Hazard Mapping of Waiapu County
 Beadel SM 1989 A Register of Threatened and Local Plants of Eastern Region DOC
 Partridge T 1989/90 The Sand Dune and Beach Vegetation Inventory of N.Z. North Island DSIR

Recorded on Existing Database:

1. WERI No
2. SSWI No
3. PNA Pukeamaru Ecological District PNA Survey Report, see Natural
4. Geopreservation No
5. HPT County Inventories Waiapu County 1983
6. Other NZAA SPF P. Bain
7. None Sand Dune and Beach Vegetation Inventory DSIR Sites 97/98/99

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Awatere - Horoera	Site No:	CRI 05 0030
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z14 29845 63827 - 29940 63805	Date:	26/2/90

Brief Description of Site:

This site extends ten kilometres from the Awatere Rivermouth to Horoera Point. The shore at Te Araroa is built of soft sandstones and siltstones. These soft sedimentary rocks can weather into a variety of distinct shore forms. At Te Araroa there are large stacks and shelves with level tops, heavily undercut by erosion and there can be found a wealth of local fossil shells (Morton J, pers comm). Quite extensive intertidal wave cut platforms occur. At Marunou a small sandy beach occurs and the Orutua River crosses the foreshore just west of Horoera Point. A narrow coastal plain occurs behind the back beach area is developed for pastoral farming and is crossed by the coast road. The site is backed by often spectacular sedimentary cliffs rising to 200 metres.

The site has a number of natural values and is of cultural significance to the Ngati Porou.

Conservation Values:	Natural: ABCDEFGH	Cultural: ABCD	Historic: AED
Comment:	Hawd		

Natural The spectacular cliffs east of Te Araroa comprise the northern portion of the Kakanui natural area. A priority one recommended area for protection in the Pukeamaru Ecological District. The site includes the most extensive marine terrace system in the district with some unique, and some of the best examples of land form - vegetation associations. Two unique vegetation types are one relatively large monodominant stand of Puriri (*Vitex lucens*) forest and the other is ~~Hawd~~ Beach (*Nothofagus truncata*) forest. Associated with the marine terrace (Regnier 1988) two plants of the endangered endemic species (*Clianthus puniceus*) occurs here. Also the wood rose vulnerable endemic species (*Dactyloctenium aegyptium*) occurs on the marine terraces and the local plants (*Austrofestuca littoralis*) occurs on the foreshore at Orutua Beach (Beadel S, 1988). The Orutua coast has a moderate site of special wildlife interest rating being an area of mudstone, dunes, pasture and rivermouth. Common coastal waters and waterfowl are present (Rasch G, 1989). The ecological patterns include a vegetation sequence from coastal shrubland, scrub and forest (Regnier). The intertidal and submarine habitats are important marine species habitats and fish breeding areas (pers obs). Maruhou Beach rates a score of 8 in an inventory of North Island dune systems (Partridge T, 1989).

Cultural The coastal area is of historical cultural and spiritual significance to Ngati Porou. Offshore several important fishing reefs and rocks are known. At Hokowae Orutua are the foot prints of Rongokako in the mudstone shore platforms (Kaa B, 1988). Spectacular seacliffs and shore platforms have landscape and aesthetic value (pers obs).

Historical No recorded sites (P. Bain pers comm). Kaa reports several important sites not recorded (Kaa B, 1988). Port Elliot sank off Horoera Point 1924 (Ingram).

Site Importance:	<u>International</u>	National	Regional	Local	Unknown
Comment:					

Site of endemic endangered species (*Clianthus puniceus*) and vulnerable endemic species (*Dactyloctenium aegyptium*) rates international importance. Majority of site rates of national importance for the priority one RAP status in the ecological district PNA report.

Existing Threats:	ABCDI
Type & Comment:	

High sediment loadings from East Coast rivers affect the offshore reef systems - there is a northern littoral drift from the Waiapu River (Gibb J, pers comm).

Adventive plants, domestic stock and wild animals threaten botanical and wildlife values of the site (pers obs).

Bulk fishing methods, trawling seining and set netting threaten juvenile reef fish habitats (pers obs).

Modification and Human Use: AHIJ

Historical land cleaning, pastoral farming and roading has modified the site. Commercial fishing is an important local use, cray potting, trawling longlines and set nets. Shore based recreation includes camping, fishing, swimming and intertidal pool exploration. Water based recreation is boat fishing, scuba and snorkel diving (pers obs). The intertidal and offshore reefs are important for kaimoana (Kaa B, 1988).

Existing Protection:

Type & Comment: D

The Waiapu District Scheme Rural Zoning is designed to protect and maintain coastal values. The Waiapu District Scheme zones the Orutua rivermouth an amenity protection area. A coastal hazard zoning prevents inappropriate development.

Availability of Information:

Natural	<u>1</u> 2 3	No marine ecology data located	1. Well documented
Cultural	1 <u>2</u> 3	Source Karrs report	2. Limited information (general)
Historic	1 2 <u>3</u>	Source P. Bain Archaeologist Gisborne	3. Little information (if any)
Threats	1 <u>2</u> 3	Personal observation and Gibb report	
Human Mod. & Use	1 <u>2</u> 3	Personal observation	

Comment:
Morton J Personal Communication

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	1 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:

Karr 1988 Marine and Coastal Inventory, A Maori Perspective, DOC Unpublished
 Regnier 1988 Pukeamaru Ecological District Protected natural Area Survey Report DOC
 1989 Waiapu District Scheme Review No. 2
 Gibb G 1981 Coastal Hazard Mapping Waiapu County (Water and Soil Conservation)
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
 Beadel SM 1988 A Register of Threatened and Local Plants of Eastern Region
 Ingram CW NZ Shipwrecks 1795 - 1975

Recorded on Existing Database:

Comment:

1. WERI	
2. SSWI	Yes, see Natural
3. PNA	Pukeamaru Ecological District PNA Report, see Natural
4. Geopreservation	No
5. HPT County Inventories	An Inventory of Sand and Beach Vegetation of NZ North Island DSIR Site No. 97
6. Other	
7. None	

Other Considerations:

T R Partridge 1989/90 The Sand Dune and Beach Vegetation of NZ North Island DSIR

Accompanying Maps and Photographs:

Site Name/s: Awatere	Site No: CRI 05 0031												
Recorders Name: K P Hogan	Conservancy: East Coast												
Map/Grid Ref: Z14 29845 62825	Date: 19/2/90												
<p>Brief Description of Site:</p> <p>This site comprises the river delta of the Awatere River and adjacent foreshore. Located immediately east of Te Araroa township. The site is a site of special wildlife interest with a <u>moderate</u> rating (Rasch G, 1989).</p> <p>Included in the site is a 200 year old pohutukawa tree located at the local college. This tree is reputed to be the largest in N.Z., named Te Waha O Rerekohu the tree is tapu and significant to Ngati Porou (Kaa B, 1988).</p> <p>Whetumatarau Pa site is also included in the site and is an important pa site and major landscape feature (Waiapu scheme).</p>													
<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Conservation Values:</td> <td style="width: 25%;">Natural:</td> <td style="width: 25%;">Cultural:</td> <td style="width: 25%;">Historic:</td> </tr> <tr> <td>Comment:</td> <td style="text-align: center;">C</td> <td style="text-align: center;">BDE</td> <td style="text-align: center;">ABD</td> </tr> </table> <p>Natural A 10 ha rivemouth delta and beach. Coastal species present include the threatened (Bell B, 1986) <u>banded dotterel</u> (<i>Charadrius bicinctus bicinctus</i>) and shags and gulls. The site has a site of special wildlife interest rated <u>Moderate</u> (Rasch G, 1989).</p> <p>Cultural The pohutukawa (<i>Metrosideros excelsa</i>) tree located at the local college is an important local tree of cultural significance to Ngati Porou - named Te Waha O Rerekohu after an important chief of the district (Kaa B, 1989). (Waiapu Scheme rates the tree a natural feature of special interest). Reputed to be the largest pohutukawa in N.Z. (Kaa B, 1988).</p> <p>Whetumatarau Pa is an important pa site and a major landscape feature noted in the Waiapu District Scheme and natural feature of special interest.</p> <p>History Te Araroa was an important early coastal whaling operational base (Kaa B, 1988). Two shipwrecks occurred off Te Araroa - Bertha Bolher 1918, Vectus 1952 (Ingram).</p>		Conservation Values:	Natural:	Cultural:	Historic:	Comment:	C	BDE	ABD				
Conservation Values:	Natural:	Cultural:	Historic:										
Comment:	C	BDE	ABD										
<table style="width: 100%; border: none;"> <tr> <td style="width: 20%;">Site Importance:</td> <td style="width: 20%; text-align: center;">International</td> <td style="width: 20%; text-align: center;">National</td> <td style="width: 20%; text-align: center;"><u>Regional</u></td> <td style="width: 20%; text-align: center;">Local</td> <td style="width: 20%; text-align: center;">Unknown</td> </tr> <tr> <td>Comment:</td> <td colspan="5">Wildlife values in the river delta have a moderate site of special wildlife interest (Rasch G, 1989). The historical/cultural features are of regional significance (Kaa B, 1988).</td> </tr> </table>		Site Importance:	International	National	<u>Regional</u>	Local	Unknown	Comment:	Wildlife values in the river delta have a moderate site of special wildlife interest (Rasch G, 1989). The historical/cultural features are of regional significance (Kaa B, 1988).				
Site Importance:	International	National	<u>Regional</u>	Local	Unknown								
Comment:	Wildlife values in the river delta have a moderate site of special wildlife interest (Rasch G, 1989). The historical/cultural features are of regional significance (Kaa B, 1988).												
<p>Existing Threats:</p> <p>Type & Comment:</p> <p style="text-align: center;">ABJI</p> <p>Most of the site lies within a coastal hazard zone resulting from flooding from the sea during storm events and through migration of the river mouths (Gibb J, 1988).</p> <p>The east coast rivers have high sediment loadings and aggradation (Gibb J, pers comm).</p> <p>The location of the town dump at the Awatere river mouth threatens PNA, wildlife and aesthetic values of the site.</p>													

Modification and Human Use: AB

The site has been significantly modified by human development. The closeness of the Te Araroa township, the location of the town refuse dump, construction of the coast road bridge adjacent to the site. The site was a commercial port area for coastal shipping - only the wharf piles remain.

Existing Protection:
Type & Comment:

D

The Waiapu District Scheme Rural Zoning is designed to protect and maintain coastal values. A coastal hazard zone is designed to prevent inappropriate development. The Waiapu District Scheme recognises the site of the Pohutukawa tree at Waiapu school as a natural feature of special interest. The Whetumairau Pa site is a maori and historic reserve.

Availability of Information:

Natural	1 2 3	No marine information located
Cultural	1 2 3	Karr report
Historic	1 2 3	Source P. Bain Archaeologist
Threats	1 2 3	Personal observation
Human Mod. & Use	1 2 3	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

Karr 1988 Marine and Coastal Survey, A Maori Perspective DOC Gisborne Unpublished
 Regnier C 1988 Pukeamaru Ecological District Protected Natural Area Survey Report DOC
 1989 Waiapu District Scheme Review No. 2
 Gibb G 1989 Coastal Hazard Mapping Waiapu County (Water and Soil Conservation)
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
 Ingram CW 1975 NZ Shipwrecks 1795 - 1975
 Bell BD 1986 Conservation Status of NZ Wildlife

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|---|
| 1. WERI | |
| 2. SSWI | Yes, see Natural |
| 3. PNA | Pukeamaru Ecological District PNA Report, See Natural |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Waiapu County 1983 |
| 6. Other | Inventory of Dune and Beach Vegetation DSIR Site 96 |
| 7. None | |

Other Considerations:

Beadel SM 1989 A Register of Threatened and local Plants in Eastern Region DOC
 Bell BD 1986 Conservation Status of NZ Wildlife

Accompanying Maps and Photographs:

Site Name/s:	Karakatuwhero	Site No:	CRI 05 0032
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z14 29815, 63841	Date:	19/2/90
Brief Description of Site:			
<p>This site is a 200 ha area in the environs of the Karakatuwhero Rivermouth comprising a shingle beach, shingle dune systems, lagoons wetlands an estuary. The site has important natural and wildlife values. SH35 crosses the back beach area and south of the highway is pastoral farmland. Te Araroa townships is located 3 kilometres along the beach to the east.</p> <p>The gravel beach is comprised predominantly of material from the Karakatuwhero and Awatere river systems. The beach gravels grade from coarse material at Te Araroa to fine well sorted sand at the north end of the beach. The beach has a history of accretion. The Karakatuwhero river mouth is unstable and migrates 1.5 km either side of its central positions (Gibb, 1981).</p>			
Conservation Values:	Natural: ABCEFG	Cultural: ADC	Historic: B
Comment:			
<p>Natural A priority one Recommended Area for Protection in the Pukeamaru Ecological District Protected Natural Area survey report - the shingle dune system is a unique land form in this district comprising a series of parallel shingle dune ridges and hollows that represent old shorelines. The area includes a range of vegetation types that reflect drainage and salinity gradients. The coastal wetlands comprise one of the few and most extensive salt meadows in the district. Coastal herbs include the threatened (Beadal) plant (<i>Mazus pumilio</i>) and other uncommon species. Remnant kahikatea (<i>Dacrycarpus dacrydioides</i>) occur on a poorly drained alluvial terrace adjacent to the dune system. (<i>Coprosma propinqua</i>) and (<i>Polygonum decipiens</i>) both found in association with kahikatea are rare in the district. Both freshwater and saline wetlands have high wildlife values. The Karakatuwhero rivermouth supports the highest number of wetland birds in the district (Regnier, 1988). The Karakatuwhero river estuary has a high site of special wildlife interest (Rasch, 1989). A nesting site for threatened (Bell, 1986) N.Z. Dotterel (<i>Charodrius obscurus</i>) 1 pair (OSNZ Survey No. 1988) and threatened (Bell, 1986) Banded Dotterels (<i>Charodrius bicinctus bicinctus</i>) (Rasch, 1989).</p> <p>Cultural A Traditional site at Hine-O-Tokata rock is of historical cultural and spiritual significance to Ngati Porou (Karr). The bleak ruggedness of the beach has a wilderness quality which gives the site an aesthetic and seascape value (pers obs).</p> <p>Historical A Significant cultural site for historical importance (Kaa, 1988). 1 pa site of local importance overlooks the area (Bain, 1990).</p>			
Site Importance:	International	<u>National</u>	Regional Local Unknown
Comment:			
<p>A priority one recommended area for protection in the Pukeamaru Ecological Survey Report (Regnier, 1988). A site of special wildlife interest rating high for wildlife values at Karakatuwhero estuary includes presence nesting threatened species N.Z. Dotterel and Banded Dotterel.</p>			
Existing Threats:	ABDF		
Type & Comment:			
<p>The area is considered a coastal hazard zone because of flooding from the sea during storm events and the migrating rivermouth (Gibb, 1981).</p> <p>East Coast rivers have high sediment loadings. (Gibb, 1981).</p> <p>Domestic stock threaten the wildlife values of the site (pers obs).</p> <p>Gravel and shingle extraction operations near the rivermouth have the propensity to damage the PNA and wildlife values on the site (pers obs).</p>			

Modification and Human Use: AH

Developments which have modified the site are historical land clearing, pastoral farming, roading and metal extraction operations. Shore based recreation is maritime enjoyment and surf casting. Access to the site is limited.

Existing Protection:
Type & Comment:

D

The Waiapu District Scheme Rural Zoning is designed to protect and maintain coastal values. The site has several local purpose reserves designed to protect the site. A foreshore reserve, an Amenity Protection Reserve on the river banks and a Wildlife Protection Reserve in the lagoons and wetlands (Waiapu District Scheme). A Coastal Hazard Zoning is designed to prevent inappropriate development.

Availability of Information:

Natural	<u>1</u> 2 3	
Cultural	1 <u>2</u> 3	
Historic	1 <u>2</u> 3	Source B. Karr Report
Threats	1 <u>2</u> 3	Source P. Bain Archaeologist
Human Mod. & Use	1 <u>2</u> 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1</u> <u>2</u> 3 4 5 6 7
Cultural	1 <u>2</u> 3 4 5 <u>6</u> <u>7</u>
Historic	1 2 3 4 5 <u>6</u> <u>7</u>
Threats	1 2 3 4 5 <u>6</u> <u>7</u>
Human Mod. & Use	1 2 3 4 5 <u>6</u> <u>7</u>

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:

Kaa B	1988 Marine and Coastal Survey, A Maori Perspective DOC Gisborne Unpublished
Regnier C	1988 Pukeamaru Ecological District Protected Natural Area Survey DOC
	1989 Waiapu District Scheme Review No. 2
Bell BD	1986 Conservation Status of NZ Wildlife
Gibb G	1981 Coastal Hazard Mapping of Waiapu County
Rasch G	1989 Wildlife and Wildlife Habitats of Eastern Region DOC
Beadel SM	1989 A Register of Threatened and Local Plants in Eastern Region DOC

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--|
| 1. WERI | |
| 2. SSWI | |
| 3. PNA | Yes, see Natural |
| 4. Geopreservation | Pukeamaru Ecological District PNA Survey, see Natural |
| 5. HPT County Inventories | |
| 6. Other | Waiapu County 1983 |
| 7. None | Ornithological Society of NZ Biannual Census of Waders 1985-1989 (DOC Opotiki) |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Haupara	Site No:	CRI 05 0033
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Z14 29804 63875	Date:	19/2/90

Brief Description of Site:

This site comprises that part of the Haupara Peninsula located between the state highway and the sea. Located between Onepoto Bay to the north and Te Araroa beach to the south the headland rises to 169 metres at Te Koau TR16 and covers approximately 200 hectares. The coastal margins rise steeply from a narrow intertidal rock shelf through remnant coastal forest. The state highway significantly modifies the upper levels of the site. The Hicks Bay Motel occupies a prominent position on the northern flank on the peninsula. The site is a prominent landscape feature (pers obs).

The site has important ecological values (Regnier C, 1988) and has significant historical and cultural to the Tangata Whenua (Kaa B, 1988) and is of ecological interest (Regnier C, 1988).

Conservation Values: Natural: ABDEFH Cultural: ABCD Historic: B
 Comment:

Natural This site is the seaward extent of the Te Koau priority one recommended area for protection in the Pukeamaru Ecological Area Protected Natural Area Survey. Together Te Koau natural area and Pukeamaru Scenic Reserve provide the only continuous altitudinal sequence from coastal and lowland to montane vegetation types in the district. The coastal associations are of particular importance as they do not occur in Pukeamaru Scenic Reserve. The Puriri - Pohutukawa - Tawa forests are the best representative examples in the district. The rare plant (*Brachyglottis perdicioides*) found on sea cliffs is the largest population in New Zealand (Beadel S, 1989). *Olearia solandri* growing on the coast at Te Koau is the only sighting in the district. The endangered (Beadel) plant (*Plantago picta*) also occurs here (50 plants in seepage at Haupara point (Beadel). Thick beds of limestone and associated caves occur near Haupara Point (Regnier C, 1988). Largest and best example of puriri (*Vitex lucens*) tree is located near the Hicks Bay Motel, and object of special interest (Waiapu Scheme).

Cultural The Te Koau Peninsula is a prominent landscape feature in the area (pers obs). Several sites important to Ngati Porou occur on the coast to the south and below the Hicks Bay Motel. Te Hororoa, Te Kuri, Whakawai, Te Koau, prominent battle and fishing grounds and Raepawa burial caves (B. Kaa, 1988).

Historic 1 maori historic site recorded, pa site on headland (P. Bain pers comm), of local importance.

Site Importance: International National Regional Local Unknown
 Comment:

This site is a priority one recommended area for protection in the Pukeamaru ecological area and the site of significant populations of rare *Brachyglottis perdicioides* rates national significance however the presence of the endemic endangered plant *Plantago picta* warrants an international rating.

Existing Threats: 0
 Type & Comment:

Noxious animals, particularly possums, threaten the pohutukawas/puriri forest (pers obs).

Modification and Human Use: AFHIJ

The site has been modified by the State Highway construction development of a metal complex and pastoral farming on the margins. Tourism associated with motel and state highway lookout and several short walks with coastal views. Numerous artificial cuts were made to accommodate the state highway. Shore based recreation involves recreational walking and enjoyment of the seascape and shore based fishing. Water based recreation is boat fishing and scuba diving. The intertidal and offshore reefs are important for kaimoana.

Existing Protection:
Type & Comment:

D

Waiapu District Scheme Rural Zoning is designed to protect and maintain important coastal values.

Availability of Information:

Natural	<u>1</u> 2 3	No marine information located
Cultural	1 <u>2</u> 3	Source B. Karr, Tangata Whenua
Historic	<u>1</u> 2 3	P. Bain, Archaeologist
Threats	1 <u>2</u> 3	Personal observation
Human Mod. & Use	1 <u>2</u> 3	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1</u> 2 3 4 5 <u>6</u> 7
Cultural	1 2 3 4 5 <u>6</u> 7
Historic	1 <u>2</u> 3 4 5 <u>6</u> 7
Threats	<u>1</u> 2 3 4 5 <u>6</u> 7
Human Mod. & Use	<u>1</u> 2 3 4 5 <u>6</u> 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:

Karr B 1988 Marine and Coastal Inventory, A Maori Perspective DOC Gisborne Unpublished
 1989 Waiapu District Scheme Review No. 2
 Regnier C 1988 Pukeamaru Ecological District Protected Natural Area Survey DOC
 Beadel SM 1989 A Register of Threatened and Local Plants in Eastern Region DOC

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	No
3. PNA	Pukeamaru Ecological District PNA Report, See Natural
4. Geopreservation	No
5. HPT County Inventories	Waiapu County 1988
6. Other	NZAA SRF P. Bain
7. None	

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s: Hicks Bay	Site No: CRI 05 0034
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: Z14 29775 63885	Date: 19/2/90
Brief Description of Site:	
<p>The Hicks Bay site comprises the Wharekahika river plain which is bounded in the north by the Matakaoa range and to the south takes in Onepoto Point, a low rock headland which extends into the sea. The site comprises a 3 kilometre fine sand flat profile beach which is influenced by the notoriously unstable Wharekahika rivermouth which migrates periodically from one side of the bay to the other. Hicks Bay is the distal end of the east coast long shore drift system. The Wharekahika river is a subsidiary source of beach material. The beach has a history of accretion (Gibb J, pers comm).</p> <p>The back beach area comprises dune systems succeeding to pastoral land. A small marae and community is located on the southern end of the Bay. The Hicks Bay Wharf is located near the rivermouth. The site has significant maritime and wildlife values</p>	
<p>Conservation Values: Natural: ABCDFH Cultural: ABCD Historic: ABCD</p> <p>Comment:</p> <p>Natural This site has a high diversity of representative vegetation types associated with the lagoon, Wharekahika rivermouth, dune system and extensive sand plain. The largest collection of the rare plant (Beadel S, 1989) pingao (<i>Desmoschoenus spiralis</i>) in the region are located at Hicks Bay amongst <i>Spinifex hirsutus</i> on foredunes and <i>Carex pumila</i> on the sand plain. Wildlife values are high with large numbers of estuarine birds present (Regnier C, 1988). The Hicks Bay estuary and beach has a high site of special wildlife interest rating for the estuarine wetland and freshwater rush-sedge wetland behind the dune. Presence of a nesting pair of threatened (Bell B, 1986) N.Z. Dotterel (<i>Charadrius obscurus</i>) nesting the endangered (Bell) White Heron (<i>Egretta alba modesta</i>) and the threatened Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>) and large numbers of common water fowl, waders and field birds (Rasch G, 1984). An inventory of N.Z. sand dune and beach vegetation rates the Hicks Bay beach a nine (Partridge T, 1989).</p> <p>Cultural This site has significant historical cultural and spiritual significance to Ngati Porou, Te Rahui pa located above Omuruiti Point. Manaku on beach. The pingao resource is of particular significance (Kaa B, 1989). The beach is a maritime wilderness with aesthetic and landscape values (pers obs). Freezing Work 1921-26, Hicks Bay Wharf are sites of Special interest recorded in (Waiapu Scheme).</p> <p>Historical Two historical sites (Maori) of local importance recorded (P. Bain pers comm). Fishing vessel Taonui sank 1973 (Ingran).</p>	
<p>Site Importance: International <u>National</u> Regional Local Unknown</p> <p>Comment:</p> <p>Priority one recommended area for protection Pukeamaru Ecological Area (Regnier C, 1988). Site of special wildlife interest rating high for wildlife values (Rasch G, 1984). Nesting area for threatened wildlife signify a site of national importance.</p>	
<p>Existing Threats: ABCDK</p> <p>Type & Comment:</p> <p>Gibb identified a coastal hazard zone extending to the state highway mainly due to the threat through the migration of Wharekahika rivermouth (Gibb J, 1981).</p> <p>Sediment loadings of the east coast river are all high (Gibb J, 1981).</p> <p>Adventive plants (Partridge T, 1989) domestic stock and hares threaten the native species on the dune system (pers obs).</p> <p>Recreation vehicles also pose a threat to the sand dune areas (pers obs).</p>	

Modification and Human Use: ACDHIJ

A long history of occupation has modified the site. Historical land clearing, pastoral farming, roading residential subdivision, wharf construction and deforestation of the hinterland. Commercial fishing is an important local enterprise, cray potting, long lines, set nets, seaweed collection. Trawlers from Gisborne and Tauranga also work offshore. Shore based recreation includes camping, swimming and fishing off the beach and the wharf. Waterbased is predominantly boat fishing and diving. Hicks Bay has the only hard beach safe boat launching facility between Waihau Bay and Tokomaru Bay. The area is important for kaimoana and also the most important pingao collection area for East Coast iwi (Karr B, 1988).

Existing Protection:
Type & Comment:

D

Waiapu District Scheme Rural Zoning is designed to protect and maintain important coastal values. A coastal hazard zone recognises areas subject to natural erosion and flooding. There are four local purpose reserves: The Onepoto Peninsula has several reservations and scenic reserves. A landing reserve, a recreation reserve and Onepoto bay foreshore is also reserved. The Hicks Bay Freezing Works and the jetty are sites of special value (Waiapu District Scheme).

Availability of Information:

Natural	<u>1</u> 2 3	Little marine information located
Cultural	<u>1</u> 2 3	Karr report
Historic	<u>1</u> 2 3	P. Bain Archaeologist, Gisborne
Threats	<u>1</u> 2 3	
Human Mod. & Use	<u>1</u> 2 3	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	<u>1</u> 2 3 4 5 6 7
Historic	<u>1</u> 2 3 4 5 6 7
Threats	<u>1</u> 2 3 4 5 6 7
Human Mod. & Use	<u>1</u> 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:

1989 Waiapu District Scheme, Review No. 2
 Bell BD 1986 Conservation Status of N.Z. Wildlife
 Gibb J 1981 Coastal Hazard Mapping of Waiapu County
 Regnier C 1988 Pukeamaru Ecological District Protected Natural Area Report DOC
 Rasch G 1984 Wildlife and Wildlife Habitats of Eastern Region, DOC
 Beadel S 1989 A Register of Threatened and Local Plants in Eastern Region DOC
 Kaa B 1988 A Marine and Coastal Inventory, A Maori Perspective, DOC Gisborne, Unpublished

Recorded on Existing Databases:

Comment:

- | | |
|---------------------------|---|
| 1. WERI | No |
| 2. SSWI | No |
| 3. PNA | Pukeamaru Ecological District Survey, See Natural |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Waiapu County 1983 |
| 6. Other | NZAA SRF P. Bain |
| 7. None | Sand Dune Vegetation Inventory, Site No. 93/94 |

Other Considerations:

Partridge TR 1989/90 The Sand Dune and Beach Vegetation Inventory of N.Z. North Island DSIR
 Owen Keith 1989/90 N.Z. Dotterel Survey of Bay of Plenty, Rotorua DOC File SPE019

Accompanying Maps and Photographs:

Site Name/s:	Matakaoa	Site No:	CRI 05 0035
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y14 29700 63940	Date:	27/3/90

Brief Description of Site:

This site extends 34 kilometres from Cape Runaway in the east to the western bank of the Wharekahika river in the east. The site comprises the northern seaward face of the volcanic Matakaoa range, the intertidal area and the littoral marine habitats. The coast is an exposed volcanic rock coastline subject to high energy wave attack. There is a wide horizontal wave cut platform, deeply indented by surge channels and interrupted by partly eroded stacks. The back shore comprises a steep fall of wave smoothed basalt, backed by a narrow rolling marine terrace under pastoral regime or by steeper hill country of reverting coastal forest. Offshore the marine habitats are influenced by both the warm Auckland current and the cooler Canterbury current. The 100 metre contour draws close to shore. The site has significant marine scientific value (Morton, 1989). Access is limited to access roads at Lottin Point and at Matakaoa Point.

Conservation Values:	Natural: ABCFGH	Cultural: ABCD	Historic: ABC
Comment:			

Natural Although the land area has been for the most part modified by a long history of maori and european occupation. The site, especially the pohutukawa (*Metrosideros excelsa*) forested sea cliffs and the intertidal area retains its naturalness (pers obs). The marine ecology is of significant scenic environmental and scientific interest. Many of its biological features can justify its being labelled unique. The convergence of warm and cold currents, transitional sites and overlaps of marine species the closeness of the 100 metre contour to shore, the accession of tropical elements, presence of species of very restricted distribution such as (*Denpropona lamellosum*). The Matakaoa volcanic coast has many of the marine characteristics of a clean strip offshore island (all Professor Morton, 1989). The Pukeamaru Protected Natural Area Survey recognised several sites requiring protection. The Otanga Recommended Area for Protection at Lottin Point is a priority one site being an important forest type remnant in the district. Waenga and Aunui are also recommended for protection for the same reasons. At Hicks Bay the vulnerable (Beadel) (*Carmichaelia williamsii*) and rare (Beadel, 1989) (*Brachyglottis perdicoides*) are found on the sea cliff wall near the Wharekahika Rivermouth (Regnier, 1988).

Cultural The visual qualities of the coast are of national significance and require priority management for preservation (Opotiki District Scheme, 1987). The site has significant aesthetic and landscape qualities (S. Smale personal comment). The site has significant historical cultural and spiritual significance for Tangata Whenua. Whanau Apanui and Ngati Porou (Karr, 1988).

Historical A large number of maori historic sites of local importance are recorded (P. Bain, 1990). Several European historical sites: lighthouses and Hicks Bay wharf are also noted.

Site of early coastal whaling activities and early european settlement are also recorded (P. Bain, 1990).

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					

This site is of significant scenic environmental and scientific interest, many of its marine biological features are unique (Morton, 1989). The Pukeamaru ecological district PNA survey recognised several priority one RAP's (Regnier, 1989). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).

Existing Threats:
Type & Comment: ABCDIK

Many landslips on steep faces on farmland have resulted from severe storm events such as Bola (pers obs).

Pine tree plantations on seaward face threaten the aesthetic value and naturalness of the site. A wide range of adventive plants and wild animals and domestic stock threaten botanical values on this site (pers obs). Recreation fires threaten pohutukawa forest where access permits camping (Hosking, 1989). Bulk fishing methods, trawling, seining and set netting threaten the juvenile fish habitats and reef fish habitats of the inshore reef systems (pers obs).

Modification and Human Use: ADHIS

A long history of pre-european and post-european occupation have modified the site. Historic land clearing, pastoral farming, maori gardens, roading, residential developments and forestry. Commercial fishing is important - cray fishing, netting and long lining. A boat ramp at Lottin Point permits trailer boat launchings. Boats are launched also at Hicks Bay to reach the Matakaoa end of the site. Recreational use is important and predominantly shore based fishing and diving and maritime enjoyment centered on the Lottin Point and Matakaoa Point accesses. Waterbased recreation is boat fishing and scuba diving. The accessible areas of Lottin Point and Matakaoa are important for inter-tidal kaimoana (pers obs). Several important offshore fishing reefs are used by Tangata Whenua (Kaa, 1988).

Existing Protection:
Type & Comment:

D

The western half of the site is in the Opotiki County and the Rural A Coastal Zoning applies. The Waiapu County has a rural zoning designed to protect and maintain important coastal values and recognising a Coastal Hazard Zone in areas subject to natural erosion processes and sea flooding. An esplanade reserve is located at the Lottin Point road end.

Availability of Information:

Natural	1 2 3	
Cultural	1 2 3	Source Bob Karr report
Historic	1 2 3	Source P. Bain Archaeologist, Gisborne
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communications: Morton J, Prof, Auckland, Marine Biologist retired.
Waititi W, Tangata Whenua, Whanau Apanui, Whangaparaoa.

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:

Regnier BD 1988 Pukeamaru Ecological District Protected Natural Area Report DOC
1987 Opotiki District Scheme Review No. 2
1989 Waiapu District Scheme Review No. 2
Karr B 1989 Marine and Coastal Inventory, A Maori Perspective, Unpublished DOC Gisborne
Morton J 1989 Lottin Point Survey Report, Unpublished DOC Files, Gisborne
Hosking TP 1989 Pohutukawa Conservation, DSIR

Recorded on Existing Database:

1. WERI	No
2. SSWI	No
3. PNA	Pukeamaru PNA Survey Report, See Natural
4. Geopreservation	No
5. HPT County Inventories	Opotiki Inventory 1983/Waiapu County 1983
6. Other	NZAA SPF P. Bain
7. None	

Comment:

Other Considerations:

Beadel SM 1989 Threatened and Rare Plants of Eastern Region, DOC
Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region, DOC
Bell BD 1986 Conservation Status of NZ Wildlife, NZ Wildlife Service, Occasional Publication

Several areas of this site are under investigation for marine reserve proposals - all are centred on the Lottin Point area.

Accompanying Maps and Photographs:

Site Name/s:	Cape Runaway/Tikirau	Site No:	CRI 05 0036
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y14 29510 63935	Date:	27/3/90

Brief Description of Site:

A 500 ha peninsula at the eastern extremity of the Bay of Plenty being western extend of the Matakaoa Range. The peninsula, which is maori land, rises to 328 metres at Tikirau trig. The shoreline comprises rock platforms, sea cliffs, caves, small pocket beaches and several offshore islands. The marine environment is rich, varied and in good condition. Above the foreshore, pohutukawa *Metrosideros excelsa* forest and reverting farmland occur on steep slopes. The site is a regionally important recommended area for protection in the Pukeamaru Protected Natural Areas programme (Regnier, 1988). Domestic stock, cattle, sheep and goats are still grazed. The site was considered to have moderate value on the Sites of Special Wildlife Interest (SSWI) register when it was surveyed in 1985. Cape Runaway is the northern limit of Bull Kelp (*Durvillia antarctica*) which occurs in the shallow subtidal zone. The area has a long maori history - fishing reefs are important to Tangata Whenua, especially the Blue Moki grounds off the Cape (pers obs). There is walking access only to the site. An automated lighthouse is located at the Cape. The site has a moderate rating for its wildlife values (Rasch, 1989).

Conservation Values:	Natural:	Cultural:	Historic:
Comment:	ABCFG	ABCD	BC

Natural Tikirau is a well defined and distinctive natural area, one third being covered in coastal forest of pohutukawa/karaka (*Corynocarpus laevigatus*)/puriri and tawa/puriri (Regnier, 1988). *Olearia alluda* is common here but infrequent in the rest of the district. (*Lastreopsis velutina*) has a limited distribution (*Vitex lucens*). Otawahata island is a nesting area for 150 white fronted terns *Sterna striata*. The site is a priority two, recommended area for protection in the Pukeamaru Ecological District. Protected natural area survey report (Regnier). Offshore area variety of marine communities in predominantly clear water which is important for the abundance and diversity of marine life the area support (pers obs). It is also an important juvenile fish habitat (MAFFish, 1989). The Cape is the northern extent of Bull Kelp (*Durvillia antarctica*) on mainland N.Z. (Ballantine pers obs).

Pied Shag (*Phalacrocorax varius varius*) colonies nest in pohutukawa forest (pers obs). The site has a moderate Site of Special Wildlife Interest rating for its scenic importance. One of the wildlife values of the area is the presence of the green gecko (*Naultinus elegans elegans*) noted in SSWI.

Cultural Tikirau is of historical, cultural and spiritual significance to Tangata Whenua, the Kuaetangohia of Whangaparaoa. To Maori, several important fishing reefs occur offshore, especially the Blue Moki grounds off Cape Runaway (W. Waititi pers comm). The unusual qualities of the coast are of national significance and require priority management for preservation (Opotiki District Scheme). The site has important aesthetic and landscape values (S. Smale pers comm).

History There are at least 20 sites recorded of local importance (P. Bain, pers comm). A whaling station was located just north of the Whangaparaoa estuary in earlier times (D. White, pers comm).

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:	The PNA values and cultural and historic values warrant regional importance. However the natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme).				

Existing Threats: CDIK
Type & Comment:

Noxious and adventive plants, wild animals (possums and goats) and domestic stock (cattle and sheep) threaten the botanical values of the site.

Bulk fishing methods, trawling, seining and set netting threaten juvenile fish and reef fish habitats (MAFFish). Set netting is considered in particular threat to the Blue Moki (W. Waititi pers comm). Paua poaching/commercial is reputed to be rife (pers obs).

Modification and Human Use: ^AHIJK

The land area has been modified by a long history of use, historical land clearing, pastoral farming. Much of the site is reverting but stock grazing and firewood cutting continues. Commercial fishing is important - cray potting, long lining and set netting. Recreation boat fishing is important as is scuba diving. Shore based recreation is limited through lack of access to the site.

The Cape Runaway light is automated.

The marine area is an important kaimoana area, predominantly boat fishing offshore reef systems.

Existing Protection:

Type & Comment: DH

The Opotiki District Scheme Rural A Coastal Zoning precludes inappropriate development. MAFFish operate a bulk fishing method ban for trawling and danish seining landward of a line between Orete Point and Cape Runaway to protect important juvenile fish habitats (MAFFish). A periodic rahui on set netting on the moki grounds at the Cape is put in place.

Availability of Information:

Natural	<u>1</u> <u>2</u> <u>3</u>	No marine ecological information	1. Well documented
Cultural	<u>1</u> <u>2</u> <u>3</u>	Pers comm N. Waititi Tangata Whenua Whangaparaoa	2. Limited information (general)
Historic	<u>1</u> <u>2</u> <u>3</u>	P. Bain Archaeologist	3. Little information (if any)
Threats	<u>1</u> <u>2</u> <u>3</u>	Pers obs	
Human Mod. & Use	<u>1</u> <u>2</u> <u>3</u>	Pers obs	

Comment:

Personal Communication: Ballantine W S, Scientist, Leigh Marine Laboratory.
Marine information is based on personal observation when scuba diving the area (K Hogan, 1989).
Personal Communication: Bain P, Archaeologist, Gisborne.

Sources of Information:

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

Comment:

1987 Opotiki District Scheme Review No. 2
MAFFish 1989 Auckland Fishery Management Plan MAFFish
Regnier CE 1988 Pukeamaru Ecological District Protected Natural Area Survey Report DOC
Bell BD 1986 Conservation Status of NZ Wildlife
Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
Hosking GP 1989 Pohutukawa Conservation, DSIR

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	OP1 GLDK 12/11/83 Moderate Rating, See Natural
3. PNA	Pukeamaru Ecological District PNA Report, See Natural
4. Geopreservation	
5. HPT County Inventories	Opotiki County Inventory, See History
6. Other	NZAA SPF P. Bain
7. None	

Other Considerations:

Bell, B D 1986 The Conservation Status of New Zealand Wildlife, New Zealand Wildlife Service, Wellington, occasional publication No. 12, 103pp

Accompanying Maps and Photographs:

Site Name/s:	Whangaparaoa Bay	Site No:	CRI 05 0037
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y14 29505 63905	Date:	27/3/90

Brief Description of Site:

Site comprises Whangaparaoa beach and Whangaparaoa estuary.

The beach extends 2.5 kilometres from the Waikanapanapana bluffs in the west; it comprises a steep profile shingle beach with a heavy driftwood content and an extensive dune system. Several small lakelets occur behind the dune system. The 30 hectare Whangaparaoa river estuary has a high site of special wildlife interest rating for its wildlife values. The Waitewake stream mouth is also rated highly being a nesting area for threatened N.Z. Dotterel (*Chadrius obscurus*) (Bell, 1986). The waitewake stream mouth is also a Tauranga Waka site.

Road access to the estuary from the state highway exists from Whangaparaoa.

Domestic stock graze the dune areas. The rivermouth is an important local fishery and boat launch site giving access to Cape Runaway.

Conservation Values:	Natural:	Cultural:	Historic:
Comment:	ABCDEFH	ABCD	AB

The Whangaparaoa beach and estuary is a priority one recommended area for protection in the Pukeamaru Protected Natural Area Programme survey report (Regnier, 1988). A high diversity of representative vegetation types in good condition are found on the large dune system, in lakelets, in dune hollows and at the Whangaparaoa rivermouth. A variety of wildlife is associated with this wide range of habitats. Most notable are breeding pairs of the threatened N.Z. Dotterel (*Chadrius obscuris*), the threatened Australian Bittern (*Botaurus stellaris poeciloptilus*), Spotless crane (*Porzana tabuensis plumbea*) and Fernbird (*Bowdleria punctata vealeae*) (Bell, 1986). This site has the most extensive areas in the district of *Scirpus pungens*/*S.cernuus*-*Triglochin striatum*. The *Plagianthus divaricatus*-*Leptocarpus similis* rush-shrubland is the best example in the district. The rare plant (Beadel 1989) pingao (*Desmoschoenus spiralis*) occurs here (Regnier, 1988). The dune system inventory awards the Whangaparaoa beach system an 8 rating (Partridge, 1989/90) which is of high value nationally. Waitewake rivermouth has a high special wildlife interest rating because of the presence of nesting N.Z. Dotterel. The Whangaparaoa River Estuary has a high site of special wildlife interest rating because of high wildlife values. These include the Whangaparaoa lakelets have a moderate/high site of special wildlife interest rating for their wildlife values (Rasch, 1989). Locally important green mussel rocks (*Perna canaliculus*) occur off the mouth (pers obs). Important juvenile fish habitats occur offshore (MAFFish, 1989).

Cultural The mouth of the Waitewake stream is a Tauranga waka site being the landing place of the Tainui canoe (P. Bain pers comm).

The unusual land/seascape qualities of the coast are of national significance and require priority management for preservation (Opotiki District Scheme).

Historic Several historic sites of local importance are recorded in the Opotiki County Inventory 1989. Pa and urupa on the estuary are of local importance. The Tauranga waka site is of national importance (Bain pers comm).

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					

This site is of national importance; several species of threatened wildlife are present, the site is a priority one recommended area for protection in the Pukeamaru Ecological District PNA programme and the Tauranga Waka site is of national importance.

**Existing Threats
Type & Comment:**

CDIJK

Severe flooding of the Whangaparaoa river causes erosion and siltation threatening the habitat of threatened bird species, mussels and juvenile fish. Adventive plants (marram) have modified the dune system succeeding native species (Partridge). Domestic stock and wild animals (possums) threaten botanical values and wildlife values (personal observation). Recreation use is a major threat to such a sensitive site camping, vehicles, fires, wildlife disturbance. Dumping of rubbish from farms, campers and domestic rubbish is reducing the quality of the site. Over fishing has depleted the mussel rocks considerably in recent years (personal observation).

Modification and Human Use: AHUJK

A long history of human use has modified the site. Historic land clearing, pastoral farming, roading and residential development. The rivermouth is an important local boat launch area. Commercial fishing is important especially cray potting, long lining and set netting. Shore based recreation is also important here, based on camping and fishing at the rivermouth and surf casting from the beach and general maritime enjoyment. Waterbased recreation is boat fishing. Traditional fishing is important several fishing reefs and rocks known (personal observation).

Existing Protection:
Type & Comment:

DH

The Opotiki District Scheme Rural A Coastal Zone precludes inappropriate development. Several local purpose reserves exist at the Whangaparaoa rivermouth, a recreation reserve on the foreshore and a landing reserve at the rivermouth. MAFFish operate a bulk fishing method ban for trawling and danish seining landward of a line between Orete Point and Cape Runaway to protect important juvenile fish habitats (MAFFish, 1989). A rahui on the taking of mussels from rocks at the Whangaparaoa rivermouth is periodically enforced (personal observation).

Availability of Information:

Natural	<u>1</u> 2 3	No marine ecological information found
Cultural	1 <u>2</u> 3	Personal comments from Tangata Whenua
Historic	<u>1</u> 2 3	P. Bain Archaeologist, Gisborne
Threats	1 <u>2</u> 3	Personal observation
Human Mod. & Use	1 2 <u>3</u>	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Sources of Information:

Natural	<u>1</u> 2 3 4 5 6 7
Cultural	1 2 3 4 5 <u>6</u> 7
Historic	<u>1</u> 2 3 4 5 <u>6</u> 7
Threats	1 2 3 4 5 <u>6</u> 7
Human Mod. & Use	<u>1</u> 2 3 4 5 <u>6</u> 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:

1987 Opotiki District Scheme Review No. 2
 MAFFish 1989 Auckland Fishery Management Plan
 Regnier CE 1988 Pukeamaru Ecological District Protected Natural Area Survey Report DOC
 Partridge T 1989/90 The Sand Dunes and Beach Vegetation Inventory of NZ North Island, DSIR
 Beadel SM 1989 A Register of Threatened and Local Plants in Eastern Region, DOC
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region, DOC
 Bell BD 1986 Conservation Status of NZ Wildlife
 Personal Communication: Bain P, Conservancy Archaeologist, Department of Conservation, Gisborne

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--|
| 1. WERI | No |
| 2. SSWI | EC17 Waitewake Stream EC18 Whangaparaoa Swamp OP2 Estuary, See Natural |
| 3. PNA | Pukeamaru PNA Report, Regnier, See Natural |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Opotiki County 1983, See History |
| 6. Other | Sand Dune Vegetation Inventory DSIR Site No. 92 |
| 7. None | NZAA SPF P. Bain |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s: Waikanapanapana	Site No: CRI 05 0038
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: Y14 29485 63887	Date: 07/8/90
Brief Description of Site: Located between Oruaiti beach in west and Whangaparaoa beach in the east this site extends for 3 kilometres. The site comprises an extensive intertidal offshore reef system built of a horizontal strata of soft sandstone and siltstone of miocene age backed by near vertical 60 metre sea cliffs. This type of geology occurs from Te Araroa down the east coast to Mahia. The Waikanapanapana site is the only example in the Bay of Plenty. The soft sedimentary rocks weather into a variety of distinct shore forms (DSIR, 1975). No public access to the site exists other than along the foreshore from Oruaiti beach. Pastoral farming begins on the cliff tops above the beach.	
Conservation Values: Natural: ACE Cultural: ACD Historic: B Comment: Natural A seascape unique in the Bay of Plenty has a wilderness quality about it (pers obs). Remnant pohutukawa forest (<i>Metrosideros excelsa</i>) occurs on the sea cliffs. The intertidal wave cut platform is very wide, 100 metres, plus it has extensive beds of Neptune's necklace (<i>Hormosira banksii</i>). The submarine reef system is important for the abundance and variety of marine life it supports. The area is locally known as a crayfish (<i>Jasus edwardsi</i>) nursery area (local fisherman) and a MAF fish fishing restriction ban is designed to protect important juvenile fish habitats in the area (MAF Fish, 1989). Pied Shags (<i>Phalacrocorax varius varius</i>) nest in the pohutukawa forest. Cultural The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987). The intertidal offshore reefs are important areas for kaimoana for Tangata Whenua. Several kohutu/toka are known offshore. These are of cultural and spiritual significance to tangata whenua (pers comm). Historical Two historic sites of local importance occur on the cliff tops (Bain, pers comm). These are recorded in the Opotiki County Inventory, 1987.	
Site Importance: International <u>National</u> Regional Local Unknown Comment: The intertidal and marine geology and habitat is unique to Bay of Plenty (pers obs). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).	
Existing Threats: ACDU Type & Comment: Noxious and adventive plants threaten pohutukawa remnants (personal observation). The cliffs subject to a high rate of natural erosion (pers obs). Recreation fires threaten pohutukawa forest remnants (Hosking, 1989). Refuse dumping from farmlands above the sea cliffs detracts from the aesthetic qualities of the site (pers obs).	

Modification and Human Use: AHIJK

Pastoral farming occurs on the marine terraces and in the stream valleys. Commercial fishing is important - cray potting, long lining, set netting and also seaweed harvesting for Agar weed *Pterocladia lucida* P. capillacea. Shore based recreation comprises beach walking, rock pool study, snorkeling and diving. Water based recreation is boat fishing and scuba diving. The inter tidal and offshore reefs are important for kaimoana.

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme Rural and Coastal Zone precludes inappropriate development. MAFFish operate a bulk fishing ban for trawling and danish seining landward of a line between Orete Point and Cape Runaway to protect important juvenile fish and habitats (MAFFish, 1989).

Availability of Information:

Natural	1 2 3	Little marine information available
Cultural	1 2 3	
Historic	1 2 3	
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

The marine information is based on personal observation when scuba diving (Hogan K, DOC, 1989).

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:

1987 Opotiki District Scheme Review No. 2
 MAFFish 1989 Auckland Fishery Management Plan, MAFFish
 Hosking GP 1989 Pohutukawa Conservation Report DSIR
 DSIR 1975 Geological Map of N.Z. No. 6 East Cape
 Personal Communication: Bain P, Archaeologist Gisborne DOC
 Te Moana L, Tangata Whenua, Whanau Apanui, Te Apanui

Recorded on Existing Database:

- | | |
|---------------------------|----------------------------------|
| 1. MERI | No |
| 2. SSWI | No |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Opotiki County 1983, See History |
| 6. Other | NZAA SPF P. Bain |
| 7. None | |

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Waihau Bay	Site No:	CRI 05 0039
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y14 29470 63875	Date:	27/3/90

Brief Description of Site:

The site extends nearly 5 kilometres from the Waihau Bay boat haven to the eastern end of Oruaiti beach. From the boat haven to Oruaiti beach, the intertidal zone comprises nearly vertically tilted sandstone and siltstone rock strata. Below a narrow steep shingle beach (Morton, pers obs) offshore quite extensive intertidal wave cut platforms occur above an extensive shallow weed zone reef system.

SH35 cuts the back beach area. Remnant pohutukawa (*Metrosideros excelsa*) forest occurs on the back beach area on the faces of the raised marine terraces behind (pers obs). Oruaiti beach is a fine sand, flat profile beach with a wide dune system behind; pohutukawa forest occurs on the dunes.

The site is an important recreation area. Oruaiti beach is known as the safest beach on the coast (Opotiki Holiday Guide). A motor camp and a small subdivision are located here (pers obs).

Conservation Values:	Natural: BCEFG	Cultural: ABCD	Historic: B
Comment:			

Natural Oruaiti beach and the pohutukawa forest on the adjacent seacliffs are the seaward extend of the Tapuaeoharuru, priority one, recommended area for protection in the Pukeanaru ecological district protected natural area survey being the seaward extent of a continuous altitudinal sequence from coastal to lowland forest. It includes the best examples of *Spinifex hirsutus* grassland and pohutukawa dominant forest in the district (Regnier, 1988). An inventory of N.Z. dune systems vegetation rates the Oruaiti dunes 8 (Partridge, 1989/90). The intertidal wave cut platform and shallow water reef systems support a variety of marine habitats and is of considerable importance for the abundance and diversity of marine life present (pers obs). Northern Blue Penguins (*Eudyptula minor irredalei*) nest on the back beach area (pers obs). Important juvenile fish habitats occur offshore (MAFFish, 1988).

Cultural An important recreation and holiday site. A site of significance to Tangata Whenua for historical cultural and spiritual reasons. A number of kahuty and toka occur offshore (L. Te Moana, pers comm). The visual qualities of the coast are of national significance and require priority management for preservation (Opotiki District Scheme, 1987).

Historic Eleven historic sites of local importance are recorded in the Opotiki Historic Place Inventory, 1983 (P. Bain, pers comm).

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					

The sand dunes and pohutukawa forest on the site are a priority one recommended area for protection in the Pukeanaru ecological district PNA report (Regnier, 1988). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme).

Existing Threats:	CDIJKH
Type & Comment:	

Adventive plants, domestic stock, noxious animals and recreation activities such as camping threaten the succession and health of the pohutukawa forest (personal observation). Unmonitored seaward harvesting operations threaten the marine ecologies of the reefs. Recreation use, especially trailbikes threaten the sand dunes at Oruaiti (personal observation). Recreation fires threaten pohutukawa forests (Hosking).

Modification and Human Use: ADHIJK

The land area is modified by a long history of human use and historical land clearing, pastoral farming, roading, residential sub division and holiday parks. Commercial fishing is locally important especially cray potting, long lining, set netting and also seaweed harvesting Agar weed *Pterocladia lucida* and *P. capillacea*. Shore based recreation includes free range camping on back beach road reserves, maritime enjoyment, fishing. Oruaiti Beach is probably the best swimming beach on the coast. Water based recreation is important especially boating, fishing and diving. The site is important for kaimoana in both the inter tidal area and offshore reefs (pers obs).

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme Rural and Coastal Zone precludes inappropriate development. Much of the foreshore west of Oruaiti Beach is road reserve of Transit N.Z. A recreation reserve is located on the dunes at Oruaiti on the seaward side of the State Highway. The back beach area at Oruaiti east is also road reserve of Transit N.Z. MAFFish operate a bulk fishing ban for trawling and danish seining landward of a line between Orete Point and Cape Runaway to protect important juvenile fish habitats (MAFFish, 1989).

Availability of Information:

Natural	1 2 3		1. Well documented
Cultural	1 2 3	No information on marine ecology	2. Limited information (general)
Historic	1 2 3	P.C. Len Te Moana Tangata Whenua Whanau Apanui of Te Kaha	3. Little information (if any)
Threats	1 2 3	P. Bain Archaeologist	
Human Mod. & Use	1 2 3	Personal Observation	
		Personal Observation	

Comment:

Marine information based on personal observation from scuba surveys.

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:

MAFFish 1987 Opotiki District Scheme Review No. 2
 1989 Auckland Fishery Management Plan
 Regnier CE 1988 Pukeamaru Ecological District Protected Natural Area Survey Report DOC
 10,000 Club 1990 Opotiki and East Coast Holiday Guide DOC Opotiki
 Partridge T 1989/90 The Sand Dunes and Beach Vegetation Inventory of NZ North Island DSIR

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	No
3. PNA	No
4. Geopreservation	Pukeamaru PNA Survey, See Natural
5. HPT County Inventories	No
6. Other	Opotiki County 1983, See History
7. None	Sand Dune Inventory DSIR Site 91 NZAA SPF P. Bain

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s: Orete Point	Site No: CRI 05 0040
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: Y14 29430 63880	Date: 27/3/90
<p>Brief Description of Site:</p> <p>A low peninsula located immediately north of Waihou Bay.</p> <p>A low peninsula made of raised marine terraces heavily modified by a long history of use and pastoral farming. Offshore a wide intertidal wave cut platform and a wide shallow weed zone marine habitat occurs.</p> <p>The peninsula is interesting and recommended for preservation in the geopreservation index.</p> <p>Important recreation and kaimoana fishing reefs occur offshore.</p> <p>Legal access is via the foreshore at low tide.</p>	
<p>Conservation Values: Natural: CDEG Cultural: ADE Historic: ABCD</p> <p>Comment:</p> <p>Natural Orete Point is geologically different from the hinterland being inverted stratified sedimentary rock. The site is recommended for preservation in the geopreservation index. Offshore an extensive reef system occurs in shallow water supporting a variety of marine habitats and of considerable importance for the abundance and diversity of marine life they support (pers obs). The Orete point area is a known crayfish <i>Jaysus edwardsii</i> nursery area. (Local crayfishermen pers comm). Important juvenile fish habitats occur offshore (MAFFish, 1989).</p> <p>Cultural The area has historical/cultural and spiritual significance to the Tangata Whenua because of incidents and events that have occurred in the past several important kahutu/toka sites occur offshore (Te Moana, pers comm). The natural beauty of the coastline gives a distinctive character and appeal to this area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p> <p>Historic Long history of use. A pa site of local importance recorded (P. Bain). Scene of early coastal whaling activity. The site of first dairy farm in Opotiki County (D. White, pers comm).</p> <p>Shipwreck - SS Thomas Russell 1885 located at Orete Point (Ingram).</p>	
<p>Site Importance: International <u>National</u> Regional Local Unknown</p> <p>Comment:</p> <p>Recommended for protection geopreservation index and the natural beauty of the coastline gives a distinctive character and appeal to this area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p>	
<p>Existing Threats: BDHIK</p> <p>Type & Comment:</p> <p>Periodic inundation of marine habitats by Raukokore river sediments occurs (pers obs). Seaward harvesting represents a threat if it continues to be unmonitored (pers obs). Bulk fishing methods trawling, seining and set netting threaten juvenile fish and reef fish habitats (MAFFish, 1989). Domestic stock, wild animals, and recreational fires threaten the few pohutukawa trees that remain (pers obs).</p>	

Modification and Human Use: ADHIJK

The land area is modified by a long history of human use, historical land clearing, pastoral farming, roading, residential and marae building developments. Commercial fishing is locally important, cray potting, trawling, seining, set nets and long lines as well as seaweed harvesting Agar Weed (*Pterocladia lucida*) (*P. capillacea*). Shore based recreation is maritime enjoyment and swimming. Waterbased is boat fishing, scuba diving and kaimoana collection. The site is an important kaimoana collection area.

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme Rural A Coastal Zoning precludes inappropriate development. MAFFish operate a bulk fishing ban - trawling and danish seining landward of a line between Orete Point and Cape Runaway to protect important juvenile fish habitats (MAFFish, 1989). Much of the land adjacent to the foreshore on Orete Point is under Maori Affaris 439 Trust (J. Rua, pers com).

Availability of Information:

Natural	1 2 3	No information on marine ecologies	1. Well documented
Cultural	1 2 3	P.C. Tangata Whenua L Te Moana, J Rua, Raukokore	2. Limited information (general)
Historic	1 2 3	P Bain Archaeologist, Dave White Opotiki Historian	3. Little information (if any)
Threats	1 2 3	Personal observation	
Human Mod. & Use	1 2 3	Personal observation	

Comment:

Marine information is based on personal observation from scuba diving trips (Hogan K).

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:

1987 Opotiki District Scheme Review No. 2
MAFFish 1989 Auckland Fishery Management Plan
Regnier CE 1988 Pukeamaru Ecological District Protected Natural Area Survey Report DOC
Ingram CW ? NZ Shipwrecks 1795 - 1975

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	No
3. PNA	Pukeamaru Ecological Area PNA Survey 1988
4. Geopreservation	Yes, Recommended for Preservation DOC Gisborne, See Natural
5. HPT County Inventories	Opotiki County 1983, See History
6. Other	NZAA SPF P Bain
7. None	

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Taratuia Point	Site No:	CRI 05 0041
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y14 29413 63853	Date:	27/3/90
Brief Description of Site:			
<p>This site extends 2.5 kilometres from the eastern edge of the Raukokore estuary to the base of the Orete peninsula. Offshore extensive, shallow weed zone reef systems occur made of uplifted and tilted stratified sandstone and siltstone. The land area is pastoral farmland on raised marine terraces. Only isolated pohutukawa (<i>Metrosideros excelsa</i>) trees remain. The area has a long history of maori occupation. Two maraes are located just behind the back beach area, Wairuru and Maru O Hine Maka. Also located close to the foreshore is the Raukokore primary school and two historical churches. The state highway crosses the back beach area for most of the site permitting ready access to the foreshore. Free range camping occurs on the adjacent road reserves. A natural hard beach boat launching area is located in front of Maru O Hine Maka marae.</p>			
Conservation Values:			
Comment:	Natural: CE	Cultural: ABCDE	Historic: ABC
<p>Natural The land area has been modified by a long history of human use, now pastoral farming dominates but pohutukawa (<i>Metrosideros excelsa</i>) coastal forest occurs on cliffs and benches between the series of raised marine terraces that occur inland. Offshore an extensive reef system occurs in shallow water supporting a variety of marine habitats and of considerable importance for the abundance and diversity of marine life they support (pers obs).</p> <p>The stratified reef system is an unusual landform in the area and has a certain aesthetic quality (pers obs).</p> <p>Cultural The site is an important kaimoana source - offshore many kohutu/toka are sacred to Tangata Whenua (L. Te Moana, pers comm).</p> <p>The site is also significant to Tangata Whenua for cultural and historical incidents and events that have occurred (L. Te Moana, pers comm). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p> <p>Historical More than 20 historic sites of local importance are recorded (Bain, 1990). The area was heavily involved in the early days of coastal whaling (D. White, pers comm). The Raukokore Anglican Church is an important historic site (Opotiki District Scheme, 1987).</p>			
Site Importance:			
Comment:	International	<u>National</u>	Regional Local Unknown
<p>The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p>			
Existing Threats:			
Type & Comment:	BDHIK		
<p>Periodic inundation of marine habitats by Raukokore river sediments occurs (pers obs).</p> <p>Seaweed harvesting represents a threat if it continues to be unsupervised and not based on careful research (especially <i>eklonia</i> harvesting) (pers obs).</p> <p>Bulk fishing methods trawling, seining and set netting threaten juvenile fish and reef fish in inshore habitats (MAFFish, 1989).</p> <p>Domestic stock, wild animals, possums and recreational fires threaten the remnant pohutukawa forest (pers obs).</p>			

Modification and Human Use: ADHIJK

The land area is modified by a long history of human use, historical land clearing, pastoral farming and horticulture, roading, building developments, houses, maraes, schools and churches. Commercial fishing is locally important. Craypotting, trawling, long lining, set netting and sea weed harvesting Agar Weed (*Pterocladia lucida*) and (*P. Capillacea*). Shore based recreation includes free range camping, boating, swimming, diving, kaimoana and maritime enjoyment. Water based recreation is boating, fishing and scuba diving. The site is important for kaimoana collection, both inter tidal and submarine reefs (Te Moana, pers comm).

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme Rural A Coastal Zone precludes inappropriate development. The road reserves which in several places reach the foreshore protect public access. Several small reserves occur, a school reserve and maori reserves associated with the two maraes (Opotiki District Scheme, 1987).

Availability of Information:

Natural	1 2 3		1. Well documented
Cultural	1 2 3	Except for marine ecological information	2. Limited information (general)
Historic	1 2 3	Personal comment Len Te Moana Kaumatua Whanau Apanui	3. Little information (if any)
Threats	1 2 3	P. Bain Archaeologist, Dave White Opotiki Historian	
Human Mod. & Use	1 2 3	Personal observation	
		Personal observation	

Comment:

Marine information is based on personal observation when scuba diving (pers obs, Hogan, 1989).

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:

1987 Opotiki District Scheme No. 2 Review
MAFFish 1989 Auckland Fishery Management Plan
Hosking GP 1989 Pohutukawa Conservation Report DSIR
Personal Communication: Te Moana L. Kaumatua, Te Kaha
: White D, Historian, Opotiki
: Bain P, Archaeologist, Gisborne

Recorded on Existing Database:

Comment:

1. MERI	No
2. SSWI	No
3. PNA	Pukeamaru PNA Survey Report Regnier 1989
4. Geopreservation	No
5. HPT County Inventories	Opotiki County 1983, See History
6. Other	NZAA SPF P. Bain
7. None	

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Raukokore	Site No:	CRI 05 0042
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	Y14 29390 62825	Date:	8/2/90

Brief Description of Site:

This site comprises an area of 120 hectares at the mouth of the Raukokore river. The site comprises a steep profile cobble beach, with a major cobble/gravel bar at the rivermouth. Cobble dunes occur behind the coreshore - those west of the rivermouth have heavy driftwood debris. The back beach area is a flat pebble beach with Tauhinu scrub (*Cassinia leptophylla*) and Pohutukawa (*Metrosideros excelsa*) forest succeeding to farmland. Several important wetlands occur. This site is a priority one recommended area for protection in the motu ecological areas protected national areas report. Road access exists to the eastern side of the river from SF35. The whole site periodically grazed by domestic stock (cattle/sheep and goats) (pers obs).

Conservation Values:	Natural: ABCDEFG	Cultural: ABCD	Historic: B
Comment:	<p>Natural A priority one recommended area for protection in the Motu ecological area survey report. Tauhinu scrub (<i>Cassinia leptophylla</i>) and scrub and Raupo reed land and lagoon vegetation (<i>Plagianthus divericatus</i>), (<i>Juncus microcephalus</i>), (<i>Ruppia polycarpa</i>) cabbage tree (<i>Cordyline australis</i>) swamp and remnant tarairi (<i>Beilschmiedia tarairi</i>) forest at Raukokore rivermouth and vicinity. The only example of lagoon vegetation in the district and the only intact landform of its type. A special feature is the presence of the vulnerable (Beadel S, 1989) shrub, (<i>Chamichaelia williamsii</i>) (Clarkson D, 1986). The estuary has a moderate/high site of special wildlife interest rating because of the presence of threatened Banded Dotterels (<i>Charadrius bicinctus bicinctus</i>), Caspian tern (<i>Hydroprogne caspia</i>) the rare variable Oyster Catcher (<i>Haematopus unicolor</i>) and other common birds. A breeding colony of Black backed gulls (<i>Larus dominicanus</i>) occur at the rivermouth (Rasch G, 1989). Papatea beach is the best example of gravel beach vegetation in the Bay of Plenty (Partridge T, 1989).</p> <p>Cultural Tangata Whenua have several sites of cultural and spiritual importance in the area. Several kahututu/oka occur offshore (L. Te Moana, P C). An urupa is located at the rivermouth (pers obs). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987). The estuary and cobble dune systems have degree of wilderness and aesthetic appeal (pers obs).</p> <p>Historic Two historic sites (maori) of local importance are recorded in the Opotiki County Historic Places Inventory (P. Bain, pers comm).</p>		

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:	<p>The site is a priority one recommended area for protection and in the Motu ecological area PNA survey report, several threatened species of wildlife are present the natural beauty of the coast is such that it is an environmental asset of national significance.</p>				

Existing Threats:
Type & Comment: CDIJK

Noxious and adventive plants threaten botanical values on the site (Clarkson D, 1986). Domestic stock graze the site and threaten botanical wildlife values (cattle, sheep, goats) (Clarkson). Wild animals, possums threaten the pohutukawa forest (pers obs).

Rubbish disposal and dumping of car bodies at the estuary threatens aesthetic values (pers obs). Bulk fishing methods, trawling, seining and set netting threaten juvenile fish and reef fish habitats (MAFFish, 1989). Recreation fires pose a significant threat to pohutukawa forest (Hoskings G, 1989).

Modification and Human Use: AHJJ

Margins of the site have been modified by a long history of human occupation especially land clearing and domestic stock grazing and pastoral farming. Periodic harvesting of Agar Algae occurs. Commercial fishing is locally important. Cray potting, trawling, long lines and set nets are all employed. Shore based recreation includes maritime enjoyment and surf casting. Water based recreation is boating/fishing and diving. The site is a traditional kaimoana site for Tangata Whenua. A mussel rock is located off Papatea Bay.

Existing Protection: Type & Comment:

D

The Opotiki District Scheme Rural A Coastal Zone precludes inappropriate development. A local bylaw prevents overnight camping at the estuary.

Availability of Information:

Natural	1	2	3	Except for marine ecological information.
Cultural	1	2	3	P.C. Len Te Moana Kaumatua Whanau Apanui
Historic	1	2	3	Source P. Bain Gisborne Archaeologist
Threats	1	2	3	Personal observation
Human Mod. & Use	1	2	3	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

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:

- Clarkson DB 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
- Regnier CE 1988 Pukeamaru Ecological District Protected Natural Area Survey Report DOC
- 1987 Opotiki District Scheme Review No. 2
- MAFFish 1989 Auckland Fishery Management Plan
- Hosking GP 1989 Pohutukawa Conservation Report DSIR
- Beadel SM 1989 A Register of Threatened and Local Plants Eastern Region DOC
- Rasch G 1989 Wildlife and Wildlife Habitat of Eastern Region DOC

Recorded on Existing Database:

Comment:

1. WERI
2. SSWI EC10 P Anderson 4/10/83 Mod/High Rare Habitat Type, See Natural
3. PNA Motu Eco District PNA Report/Pukeamaru Eco District PNA Report, See Natural
4. Geopreservation No
5. HPT County Inventories Opotiki County 1983 See History.
6. Other NZAA SPF P. Bain
7. None Sand Dune Inventory DSIR Site 87/89

Other Considerations:

Sources Continued: Partridge TR 1989/90 The Sand Dune and Beach Vegetation Inventory of N.Z. North Island DSIR

Accompanying Maps and Photographs:

Site Name/s:	Whanarua - Te Paraua	Site No:	CRI 05 0043		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	Y14 29340 62815	Date:	7/2/90		
Brief Description of Site:					
<p>This site extends some 8 kilometres from Trig 6194 in the west to the start of the cobble beach at Papatea Bay. The site comprises a succession of headlands and small bays. The foreshore is rock platforms with pohutukawa (<i>Metrosideros excelsa</i>) forested sea cliffs behind several offshore islands and small stacks occur. Many of the small bays have gravel pocket beaches. Offshore quite extensive reef systems occur. Whanarua Bay has a subdivision built almost to the foreshore, Maraehako Bay has a privately owned public camping ground. Both bays are well used recreation areas. State highway 35 crosses the site just above sea cliffs and at the base of the headlands. Pastoral farming horticulture and forestry occur. A subdivision is located near the highway at Whanarua. In recent years several small 'life style' blocks have been developed.</p>					
Conservation Values:	Natural: ABCFH	Cultural:	Historic:		
Comment:					
<p>Natural Much of this site has natural maritime successions from the pohutukawa forested sea cliffs through the intertidal zone to the offshore reef systems. Offshore stacks and islands add considerably to the natural values aesthetic qualities of this site (pers obs). The Whanarua Bay area is the seaward extent of a first priority recommended area for protection in the Motu ecological district protected natural area survey report being the best example of a complete altitudinal succession from coastal pohutukawa forest association to montane beech forest. Special features include the occurrence of the vulnerable plant (<i>Beadel S.</i> 1989) (<i>Carmichaelia williamsii</i>) and Hochstetters Frog (<i>Leiopelma hochstetterii</i>) a species of limited distribution (Bell B, 1986) in the coastal Whanarua Stream (Clarkson B, 1986). Two other priority one RAP's are Motu Kaimeanui island and Motu Papuku iti and nui islands these are the three best examples of islands in the ecological district (Clarkson B, 1986).</p> <p>Cultural The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987). This site has some of the better examples of seascapes of high aesthetic value (pers obs). The maritime zone has cultural and spiritual significance to Tangata Whenua. Several kohatu/toka fishing reefs are located offshore (pers obs).</p> <p>Historic 27 historic sited maori of local importance are recorded in the Opotiki County Inventory. Maraehako was a centre of coastal whaling and shipping in earlier times (D. White pers comm).</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					
<p>The recommendation for category one protection in the PNA survey, the presence of a vulnerable endemic plant and the undoubted high aesthetic and landscape qualities of this site warrant a national rating.</p>					
Existing Threats:	CDIKLM				
Type & Comment:					
<p>Adventive plants, domestic stock and wild animals threaten the pohutukawa forest association (pers obs). Recreational fires are seen as a major threat to pohutukawa forest (Hoskings G, 1989). Bulk fishing methods, trawling, seining and set netting threaten juvenile fish and reef fish or inshore habitats (MAFFish, 1989).</p> <p>Subdivisions on the foreshore threaten the very high aesthetic values (pers obs).</p> <p>Illegal structures on the foreshore threaten the very high aesthetic quality of the site (pers obs).</p>					

Modification and Human Use: ADHIJ

A long history of human occupation has modified the area. Land clearing, farming, horticulture, forestry, roading and residential subdivision and boat launching facilities. Shore based recreation includes camping, maritime enjoyment swimming, fishing, boating. Sea based recreation is boating, fishing and diving. Commercial fishing is important cray potting, trawling long lines and set nets are employed. The area is an important kaimoana site both inter tidal and offshore.

Existing Protection:
Type & Comment:

D

The islands of Motu Papuku iti and nui are Maori Reserves. The Opotiki District Council Rural A Coastal Zoning precludes inappropriate development. An ODC administered recreation reserve is located on the foreshore of Whanarua Bay. A road reserve exists on the foreshore of Maraehako Bay. Several small reserves exist i.e. a burial reserve and a depot reserve. The subdivision is zoned residential A in the Opotiki District Scheme.

Availability of Information:

Natural 1 2 3 No marine ecological information
Cultural 1 2 3
Historic 1 2 3 Dave White Opotiki Historian
Threats 1 2 3 P. Bain Archaeologist, Gisborne
Human Mod. & Use 1 2 3

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Marine and cultural information based on my observations (Hogan).

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:

Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
1987 Opotiki District Scheme Review No. 2
MAFFish 1989 Auckland Fishery Management Plan
Hosking GP 1989 Pohutukawa Conservation Report DSIR
Beadel SM 1989 A Register of Threatened and Local Plants of Eastern Region DOC

Recorded on Existing Database:

Comment:

1. WERI No
2. SSWI No
3. PNA Motu Ecological District PNA Survey 1986, See Natural
4. Geopreservation No
5. HPT County Inventories Opotiki County 1983, See History
6. Other NZAA SPF P. Bain
7. None

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s: Waikawa	Site No: CRI 05 0044
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: X14 29270 63805	Date: 5/2/90
<p>Brief Description of Site:</p> <p>This site extends from the Pahaoa Marae headland in the west to the trig point 6194 just east of the Tokatea QEII property, a distance of 7 kilometres.</p> <p>The foreshore comprises greywacke rock wave cut intertidal platforms. The coast is sharply indented by alternating headlands and bays, many of the bays have small pocket beaches. Behind the littoral zone sea cliffs occur with remnant pohutukawa (<i>Metrosideros excelsa</i>) forest associations. A number of small offshore islands occur. Offshore an extensive reef system occurs. State highway 35 follows the coast above the sea cliffs, adjacent lands are primarily used for pastoral farming, small copses of native bush remain. Above the road a major pine plantation occurs. A residential subdivision is located just south of Waikawa Point. The area is important for commercial and recreational fishing. Public access to the foreshore occurs at Waikawa stream mouth.</p>	
<p>Conservation Values: Natural: BCF Cultural: ABCD Historic: AB</p> <p>Comment:</p> <p><u>Natural</u> The eastern corner of the site comprises a natural vegetation succession through maori reserve and QEII trust owned land to the foreshore. This area is part of the Whanarua/Kereru corridor - the best example of a complete altitudinal sequence from coastal pohutukawa (<i>Metrosideros excelsa</i>) forest to montane beech forest (<i>Nothofagus</i> spp.) in the Motu ecological district. It is a priority one recommended area for protection (Clarkson, 1986). The intertidal and submarine reef habitats are important for their variety and for the abundance and diversity of marine life they support (pers obs).</p> <p><u>Cultural</u> The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987). The coastal area has numerous sites of historical cultural and spiritual significance to the Tangata Whenua. Offshore several important fishing reefs and rocks kohatu/toka are known (pers obs). The Waikawa Reef is an important dive spot (pers obs).</p> <p><u>Historical</u> Eleven historic sites (maori) of local importance are recorded in the Opotiki County Inventory.</p>	
<p>Site Importance: International <u>National</u> Regional Local Unknown</p> <p>Comment:</p> <p>The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme).</p>	
<p>Existing Threats: CDIKM</p> <p>Type & Comment:</p> <p>A wider range of adventive plants threaten succession of pohutukawa forest associations (pers obs). Domestic stock and wild animals (possums threaten pohutukawa forest associations) (pers obs). Recreational fires pose a major threat to pohutukawa forest associations (Hoskings, 1989). Bulk fishing methods trawling, seining and set netting threaten juvenile fish and reef fish on inshore habitats (MAFFish, 1989). Pine forests located on seaward faces threaten aesthetic values (pers obs).</p>	

Modification and Human Use: ADHIJ

Above the sea cliffs the land has been modified by a long history of occupation, historical land clearing, pastoral farming, horticulture, forestry, roading, subdivision. Commercial fishing is locally important, craypotting, trawling, long lining and net fishing. Several private boat ramps are located here. Shore based recreation includes maritime enjoyment, fishing, camping. Water based includes boating, fishing and diving. The inter tidal and offshore reef systems are important for kaimoana (pers obs).

Existing Protection:
Type & Comment:

DF

The Opotiki District Scheme Rural A Coastal Zone precludes inappropriate development. Several small local reserves occur including an Esplanade Reserve on the foreshore of the Waikawa subdivision and small burial, marae, cemetery and road reserves. A State Highway Reserve at the Waikawa rivermouth permits public access to the foreshore. Tokata is a Queen Elizabeth II Trust owned property on the coast.

Availability of Information:

Natural	1 2 3	No information on marine ecology
Cultural	1 2 3	Personal observation
Historic	1 2 3	Source D. White Opotiki Historian
Threats	1 2 3	Personal observation
Human Mod. & Use	1 2 3	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Marine information is based on personal observations while scuba diving (Hogan).

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:

Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
 1987 Opotiki District Scheme Review No. 2
 MAFFish 1989 Auckland Fishery Management Plan, MAFFish
 Hosking GP 1989 Pohutukawa Conservation Report DSIR

Recorded on Existing Database:

- | | |
|---------------------------|--|
| 1. WERI | No |
| 2. SSWI | No |
| 3. PNA | Motu Ecological District PNA Report, See Natural |
| 4. Geopreservation | |
| 5. HPT County Inventories | Opotiki County Inventory 1983, See History |
| 6. Other | |
| 7. None | |

Comment:

Other Considerations:

The marine area offshore tokatea has potential as a marine reserve. Possibility of extending the Whanarua/Kereu corridor to include the intertidal and subtidal habitats (Hogan).

Accompanying Maps and Photographs:

Site Name/s:	Kereu	Site No:	CRI 05 0045
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	X14 29250 63760	Date:	5/2/90
Brief Description of Site:			
<p>This site extends from the base of the Wharekura peninsula in the west to the end of the gravel cobble beach on the Mangaroa headland a distance of 4 kilometres.</p> <p>The shore comprises a rockshelf of greywacke origin covered by a coarse gravel/cobble steep profile beach, backed by sea cliffs with remnant pohutukawa (<i>Metrosideros excelsa</i>) forest. The reef substrate is exposed at the lower littoral zone. Extensive reef systems occur offshore. The Kereu river enters the bay at the eastern end of the site - it has a permanent shingle bar at the rivermouth and a small freshwater wetland. SH35 follows the foreshore at Mangaroa and provides access to the foreshore. Behind the sea cliffs the marine terraces are modified by pastoral farming and horticulture. A small subdivision is located immediately above the sea cliffs at Mangaroa headland.</p>			
Conservation Values:	Natural: BCF	Cultural: ACD	Historic: AB
Comment:			
<p>Natural The Kereu river estuary is the seaward end of the Whanarua/Kereu corridor a priority one Recommended Area for Protection in the Motu Ecological District Protected Natural Area Survey Report. The corridor is the best example of complete altitudinal sequence from coastal pohutukawa forest to montane beech forest. A special feature is the presence of a local (Beadel, 1989) plant species <i>cammine rata</i> (<i>Metrosideros camminea</i>) (Clarkson, 1986). Pied Shags (<i>Phalacrocorax varius varius</i>) nest in the pohutukawa trees. The offshore reef habitats are important for their variety and for the abundance and diversity of marine life they support (pers obs).</p> <p>Cultural The marine area has a number of important fishing rocks and reefs kohatu/toka important to Tangata Whenua. The coastal area has numerous sites of historical incidents and events which give those sites cultural and spiritual significance to the Whanau a Kaiapo of Mangaroa marae (C. Whiting personal comment). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p> <p>Historical 8 historic maori sites of local importance are recorded in the Opotiki County Historic Places Inventory. The Mangaroa area played a major role in early coastal whaling activities on the coast (D. White, pers comm).</p>			
Site Importance:	International	<u>National</u>	Regional Local Unknown
Comment:			
<p>The inclusion of the site in a priority one Recommended Area for Protection in the Motu Ecological District PNA report warrants national significance. The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p>			
Existing Threats:	CDFIJ		
Type & Comment:			
<p>A variety of noxious and adventive plants in the pohutukawa forest associations prevent succession (pers obs). Domestic stock and wild animals (possums) damage the pohutukawa forest association (pers obs). Shingle mining and refuse dumping at the Kereu rivermouth threaten coastal processes and the ecology of the estuarine and the foreshore wetland (pers obs). Bulk fishing methods - trawling, seining and set netting threaten juvenile fish and reef fish in inshore habitats (MAFFish, 1989).</p>			

Modification and Human Use: ABHIJ

A long history of development has modified the land behind the sea cliffs. Historical land clearing, pastoral farming and horticulture. A papakaianga housing development is located at the Kereu bridge. The coastal state highway modifies the back beach area. Extensive river control works at the Kereu Bridge site have modified the river channel. Commercial fishing is important offshore: includes cray potting, trawling, long lining and set netting. A small subdivision is located at Mangaroa Point. Shore based recreation includes camping, fishing, swimming, diving and maritime enjoyment. Water based recreation is boat fishing and scuba diving. The offshore reefs and intertidal area are important kaimoana sites (pers obs).

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme Rural A Coastal Zone precludes inappropriate development. Several small reserves occur on the site, an Esplanade Reserve on the foreshore at Mangaroa Point subdivision. A small Recreation Reserve at the Kereu rivermouth, and Urupa Burial Reserve at Mangaroa Opotiki District Scheme, 1987).

Availability of Information:

Natural	<u>1</u> 2 3	Except for information on marine ecology PC from C. Whiting DOC Gisborne Tangata Whenua Dave White Opotiki Historian Personal observation Personal observation	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 2 <u>3</u>		

Comment:

Marine information obtained by personal observation on scuba diving trips (Hogan K, DOC 1989).

Sources of Information:

Natural	1 <u>2</u> 3 4 5 6 7	1. Derived info. from existing literature & databases
Cultural	1 <u>2</u> 3 4 5 6 7	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	1 <u>2</u> 3 4 5 6 7	4. Recent DOC survey including sampling & analysis
Human Mod. & Use	1 2 3 4 5 <u>6</u> 7	5. Recent DOC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
 1987 Opotiki District Scheme Review No. 2
 Beadel SM 1989 A Register of Threatened and Local Plants Eastern Region DOC
 MAFFish 1989 Auckland Fishery Management Plan

Recorded on Existing Database:

Comment:

1. WERI	
2. SSWI	No
3. PNA	No
4. Geopreservation	Motu Ecological Area PNA Survey Report, See Natural
5. HPT County Inventories	
6. Other	Opotiki County 1983, See History
7. None	

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Te Kaha	Site No:	CRI 05 0046
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	X14 29217 63742	Date:	2/9/90

Brief Description of Site:

This site extends for 6 km from the Waikanae Stream at Hariki Beach to Wharekura Point at Maraetai Bay. The Te Kaha area has a long history of intensive maori occupation. It is one of the major communities on the coast centred on the Tukaki marae and the boat launching facilities. Farming, horticulture, forestry, commercial and recreational fishing and tourism are the main occupations. The maritime zone is a mixture of exposed greywacke reef and wave cut platforms and small pocket gravel beaches. A fine sand pocket beach occurs at Maraetai Bay. The sea cliffs are lower and interspersed by areas which slope gently to the waters edge. Isolated pohutukawa (*Metrosideros excelsa*) copses occur on sea cliffs and offshore extensive reef systems with a variety of marine habitats occur. These are important juvenile fish and marine species habitats. The area has a rich cultural history and is an important maritime recreation area (pers obs).

Conservation Values: Natural: Cultural: Historic:
 Comment:

Natural The land area has been modified to the waters edge by long term occupation. The remnant pohutukawa (*Metrosideros excelsa*) copses retain a certain value for their scarcity in the area (J. Galilee pers comm). The intertidal and submarine reef habitats are important for their variety and for the abundance and diversity of marine life they support (pers obs). Pied Shags (*Phalacrocorax varius varius*) nest in the pohutukawa copses.

Cultural The mana whenua are Whanau Te Ehotu and Taihau Hine Te Kahu. Almost every area is marked by reference to historical incidents and events. The maritime zone and offshore fishing reefs and rocks are culturally and spiritually significant to them (J. Phares, pers comm). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987). The maritime area is a nationally important recreation resource. Offshore reef systems such as "Snapper Alley off Te Kaha Point" are important recreational resources (pers obs). The Whanau Apanui area school use the maritime zone for educational purposes (Bill Tawhai pers comm).

Historical 13 historic sites (maori) of local importance are recorded in the Opotiki County Inventory. The site has a long history of incidents and events of historical importance to Tangata Whenua. Te Kaha was the scene of a major coastal whaling effort and an important coastal shipping port. Sites of early influence include old factories and churches (B. White, pers comm).

Site Importance: International National Regional Local Unknown
 Comment:

The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki Scheme, 1987). The maritime area is a nationally important recreation area (pers obs).

Existing Threats: DIJK
 Type & Comment:

Domestic stock and wild animals, possums, threaten the pohutukawa forest associations (pers obs). Bulk fishing methods, trawling, seining, set netting threaten juvenile fish and reef fish in inshore habitats (MAFFish, 1989).

Recreation fires are a significant threat to pohutukawa forrest (Hosking, 1989).

Refuse dumping at various sites reduces the quality of the sea scape (pers obs).

Modification and Human Use: ADHIJ

A long history of occupation has modified the maritime zone. Historic land clearing, farming, horticulture, forestry and residential development. Hotels, motels, holiday camps and college. Commercial and recreational fishing are important occupations. Cray potting, set netting and long lining and recreation boat fishing. Marine farming for mussels is a developing venture as in sea weed harvesting. Shore based recreation includes the full spectrum of opportunities. Water based includes boating, fishing, swimming and diving. Two good boat launches exist. The site is an important kaimoana source for Tangata Whenua and local Europeans.

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme Rural A Coastal Zone precludes inappropriate development. Several small maori reserves occur on the coast - Urupa and landing reserves. Several small esplanade reserves occur on the pohutukawa forested cliffs in front of small residential subdivisions. A Opotiki District Council Recreation Reserve oa Maraetai bay affords access to the foreshore. Local bylaws preclude over night camping.

Availability of Information:

Natural	<u>1</u> 2 3	Except for information on marine ecology PC Joe Phares Chairman Te Ehuti Iwi Authority Te Kaha	1. Well documented
Cultural	1 <u>2</u> 3		2. Limited information (general)
Historic	1 2 <u>3</u>	Source Dave White Opotiki Historian	3. Little information (if any)
Threats	<u>1</u> 2 3		
Human Mod. & Use	1 2 <u>3</u>	Personal observation	

Comment:

Marine information obtained by personal observation on scuba diving trips (Hogan).

Sources of Information:

Natural	1 <u>2</u> 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 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 <u>6</u> 7	5. Recent DOC survey excluding sampling & analysis
		6. Experience
		7. Expert opinion

Comment:

1987 Opotiki District Scheme Review No. 2
 Hosking 1989 Pohutukawa Conservation Report DSIR
 Personal Comment: John Galilee, DOC Gisborne
 Bill Tawhai, Principal Whanau Apanui Area School, Te Kaha.
 MAFFish 1989 Auckland Fishery Management Plan

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	No
3. PNA	No
4. Geopreservation	No
5. HPT County Inventories	Opotiki County 1983, See History
6. Other	
7. None	

Other Considerations:

The environs of Maraetai are considered to have potential as a marine reserve. The area is representative of the Ta Kaha maritime zone and could be a baseline area for comparing the condition of adjacent habitats. The natural amenities of the bay will allow the maximum use of the recreational opportunities marine reserves provide.

Accompanying Maps and Photographs:

Site Name/s:	Awanui	Site No:	CRI 05 0047
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	X15 28205 63300	Date:	26/3/90

Brief Description of Site:

This site extends for 5 km from the extreme eastern side of Omaio Bay around Motunui island along the coast to the start of Hariki Beach. The site comprises remnant pohutukawa *Metrosideros excelsa* forest on sea cliffs, an offshore island joined to the mainland by an intertidal rock platform and an extensive intertidal platform and offshore reef system with a variety of marine habitats in relatively good condition (pers obs).

Pastoral farming and horticulture is practiced on marine terraces above the sea cliffs.

Motunui Island is a maori reserve and urupa. The marine areas is important for commercial fishing and maritime recreation. Mussel farms are located in the lee of the island.

No public access to the forshore exists other than from the Omaio Beach at the western and Hariki Beach at the eastern end. Access is permitted at several places with the owners permission.

Conservation Values:	ACDF	ACDE	ABC
Comment:	Natural:	Cultural:	Historic:
Natural	The intertidal rock platforms and offshore reef systems are some of the best examples in the area. The offshore reefs extend the length of the site, the marine habitats vary according to depth. Extensive shallow weed zones, bare rock areas and deep reefs abound with great variety of marine life (pers obs). The pohutukawa forested sea cliffs south of Motunui island are a priority three recommended area for protection with Motu Ecological District Protected Natural Area Survey report for their wildlife value as a quite extensive Pied Shag (<i>Phalacrocorax varius varius</i>) rookery in the pohutukawa forest (Clarkson B, 1986). The Pohutukawa forest and intertidal rock platforms and offshore reefs are a relatively unmodified maritime succession with high aesthetic and sea scape quality (pers obs).	Cultural	The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset and national significance (Opotiki Scheme, 1987). Motunui island is a maori historic reserve of significance to Tangata Whenua. Two marae are located here. The marine area has several fishing reefs and rocks (White D, pers comm). Local schools use the Motunui island area for educational purposes (pers obs).
Historical	20 historic sites (maori) of local importance recorded in Opotiki County Inventory. The lee of Motunui island was an important coastal shipping port in earlier times, and also a coastal whaling station. The landward end of the island is the site of a benchmark cut in rocks for the HMS Penguin Bathymetric survey of 1902 (D. White, pers comm).		

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:	The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki Scheme, 1987).				

Existing Threats:	CDI
Type & Comment:	Adventive plants prevent succession in coastal pohutukawa forest associations (pers obs). Domestic stock and wild animals (possums) threaten pohutukawa and forest associations (pers obs). Recreation fires are a significant threat to pohutukawa forest (Hosking G, 1989). Bulk fishing methods, trawling, seining and set netting threaten juvenile fish and reef fish habitats (MAFFish, 1989).

Modification and Human Use: ADHIJ

Historical land clearing farming and orcharding have modified all the land behind the coastal cliffs. Commercial fishing, cray potting, trawling, set netting and long lining occur offshore. Marine farms 3, are located in the lee of Motonui island (mussel farms). Shore based recreation includes fishing, scuba, snorkel and maritime enjoyment. Water based recreation includes boat fishing and scuba diving. The inter tidal platforms and offshore reefs are important kaimoana areas for two local hapus. The lee of Motonui is a maori boat launching area (pers obs).

Existing Protection: D
Type & Comment:

The Opotiki District Scheme Rural A Coastal Zone precludes inappropriate development. Motonui island is a gazetted Maori Historic Reserve. The land area adjacent to Motonui is a gazetted landing area for the benefit of the Whanau Apanui people.

Availability of Information:	No detail of marine ecology located	1. Well documented
Natural	1 2 3 Source Dave White Opotiki Historian	2. Limited information (general)
Cultural	1 2 3 Source Dave White Opotiki Historian	3. Little information (if any)
Historic	1 2 3 Personal observation	
Threats	1 2 3 Personal observation	
Human Mod. & Use	1 2 3	

Comment: Marine information is based on personal observations when scuba diving (Hogan).

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

Comment: 1987 Opotiki District Scheme Review No. 2
MAFFish 1989 Auckland Fishery Management Plan
Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report, DOC
Hosking GP 1989 Conservation of Pohutukawa DSIR

Recorded on Existing Database:	Comment:
1. WERI	No
2. SSWI	No
3. PNA	Motu Ecological District PNA Survey Report 1986, See Natural
4. Geopreservation	No
5. HPT County Inventories	Opotiki County 1983, See History
6. Other	
7. None	

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Whitianga	Site No:	CRI 05 0048
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	X15 28155b 63645	Date:	25/3/90

Brief Description of Site:

This site extends 8 kilometres from the Motu River in the west to Omaio Bay in the east. The site comprises two major headlands, Whitianga Bay and the eastern rocky shore of Omaio Bay. The site comprises comparatively natural maritime successions from Pohutukawa (*Metrosideros excelsa*), Puriri (*Vitex lucens*), Tawa *Beilschmiedia tawa* vegetation types on marine terraces through pohutukawa forest associations on sea cliffs to intertidal rock platforms to extensive offshore reef systems (pers obs).

The Tokata Scenic Reserve is located at the western end of the site. Most of Whitianga Bay is recommended for protection in the Motu Ecological Area Protected Natural Area Report (Clarkson, 1986). The site is a popular summer holiday camping area (pers obs).

Public access to the foreshore at this site is limited to access through Tokata Scenic Reserve at the western extremity and the Hoani Waititi Memorial Recreation Reserve at the eastern extremity of the site.

Conservation Values:	Natural:	Cultural:	Historic:
Comment:			

Natural Although modified the natural successions through the maritime zone are some of the best in the district (pers obs). Tokata Scenic Reserve is a 1.7 hectare narrow strip of pohutukawa (*Metrosideros excelsa*), puriri (*Vitex lucens*). Coastal forest inadequately represented in reserves in the district (Clarkson, 1989). The pohutukawa forest associations on the sea cliffs are recommended for protection being the seaward extent of the priority two, Motu Corridor a complete altitudinal sequence from the coast to the Raukumara subalpine area and including the Raukumara Wilderness Area. A marine terrace and low hills above Whitianga Bay are a priority one RAP being one of three best examples of Pohutukawa/Puriri/Tawa and Tawa/Pohutukawa/Puriri forest types in the ecological district (Clarkson, 1986). Pied Shags (*Phalacrocorax varius varius*) nest in pohutukawa trees on coastal cliffs (pers obs). Whitianga Bay is part of an important snapper (*Chrysophrys auratus*) spawning area (MAFFish, 1989). The intertidal and offshore reef systems have a variety of marine habitats and support many juvenile fish species, reef fish and other marine species (pers obs).

Cultural Whitianga Bay has historical, cultural and spiritual significance to the Whanau Tua Hiawa Hapu who are Mana Whenua. The waters of Whitianga Bay and surrounding seas have many sacred reefs and rocks kohatu/toka important for the fishing and other reasons (M. Delamare pers comm). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki Scheme, 1987). This is particularly true of Whitianga Bay (pers obs). The area is a regionally important recreation area, especially summer camping over the holiday period (pers obs). Schools have annual campouts at Whitianga Bay for maritime educational programmes (pers obs).

Historical Twenty historic sites (maori) of local importance are recorded in the Opotiki County H.P.T. inventory. The site has important connection with coastal whaling, especially Tokata Point (White).

Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					

Tokata Scenic Reserve is a national reserve (Clarkson, 1989). The priority one recommended areas for protection in the Motu Ecological District PNA programme warrant a national rating (Clarkson, 1986). The coastal scenery of the area is an environmental asset of national significance (Opotiki Scheme, 1987).

Existing Threats:	CDHIRM
Type & Comment:	

A wide variety of adventive plants prevent succession in pohutukawa forest associations (pers obs). Domestic stock and wild animals (possums) threaten pohutukawa forest associations (pers obs). Recreation use threatens pohutukawa forest associations by fire (Hosking, 1989) and also by removal of understory shrubs in the forest association (pers obs). Power transmission lines reduce the aesthetic and seascape quality of the site (pers obs). Bulk fishing methods, trawling, seining and set netting threaten juvenile fish and reef fish in inshore habitats (MAFFish, 1989). Public access to Whitianga Bay has recently been closed threatening recreation use (pers obs). Marine farming proposals also have the propensity to diminish aesthetic quality (pers obs).

Modification and Human Use: AEHIJ

Back beach areas have been modified by pastoral farming, horticulture and forestry, also roading and power transmission lines. Commercial fishing occurs in the Bay-cray potting, trawling, set nets and long lines. Mussel farming is a new venture site approved by MAFFish several applications are in process. Power transmission lines cross the site. Several artificial cuts on headlands facilitate road lines. Free range camping is an important local use - severely reduced coast lands are available for this purpose in recent years. Camping, swimming, fishing, snorkel and scuba are popular. Fishing from boats also important local use. Important kaioana source for local marae (Delamare, pers comm).

Existing Protection:

Type & Comment: ADG

Tokata Scenic Reserve is a National Reserve. The Opotiki District Scheme Rural A Coastal Zone prevents inappropriate development. MAFFish operate a seasonal commercial fishing ban and recreational gear restrictions to protect the snapper spawning grounds. Local maori landowners restrict and control coastal camping activities on their lands. A recreation reserve camping ground administered by Opotiki District Council is located at the Omaio end of site.

Availability of Information:

Natural	1 2 3	Little Marine Information Located
Cultural	1 2 3	
Historic	1 2 3	
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Marine information obtained by personal observation when scuba diving on site (Hogan DOC 1989).

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: B 1989 Biological Survey of Reserves in West Gisborne DOC
 Clarkson B 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
 1987 Opotiki District Scheme Review No. 2
 MAFFish 1989 Auckland Fishery Management Plan, MAFFish
 Hoskings G 1989 Conservation of Pohutukawa DSIR
 Personal Communications: Delamare M, Tangata Whenua, Whitianga Bay, Opotiki
 : White D, Historian, Opotiki

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--|
| 1. WERI | |
| 2. SSWI | No |
| 3. PNA | No |
| 4. Geopreservation | Motu Ecological Area PNA Survey Report B Clarkson, See Natural |
| 5. HPT County Inventories | No |
| 6. Other | Opotiki County Inventory 1983, See History |
| 7. None | |

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Motu Estuary	Site No:	CRI 05 0049						
Recorders Name:	K P Hogan	Conservancy:	East Coast						
Map/Grid Ref:	X15 28140 63610	Date:	5/2/90						
Brief Description of Site:									
<p>Located 30 kilometres east of Opotiki the Motu River, a gazetted wild and scenic river, is the largest catchment discharging into the eastern Bay of Plenty. It is the major source of new material to the coast between the river and Opotiki (Smith 1986). The 150ha estuarine area comprises largely gravel bed, exotic vegetation and a small amount of raupo (Rasch, 1989). The highly mobile estuarine area is rapidly accreting seaward (pers obs).</p> <p>The estuary is an area of special wildlife interest and is recommended for protection in the Motu Ecological District Protected Natural Area survey report (Clarkson, 1986). It is also a productive and valued white bait fishery (Saxton, 1987) and an important Kahawai fishery (MAFFish, 1989). Access to the estuary is possible from Houpoto beach in the west and from the state highway in the east.</p>									
<table style="width:100%; border:none;"> <tr> <td style="width:30%;">Conservation Values:</td> <td style="width:30%;">Natural: ABCF</td> <td style="width:15%;">Cultural: ABCD</td> <td style="width:25%;">Historic: AB</td> </tr> </table>				Conservation Values:	Natural: ABCF	Cultural: ABCD	Historic: AB		
Conservation Values:	Natural: ABCF	Cultural: ABCD	Historic: AB						
<p>Comment:</p> <p>Natural Although the Motu estuary has been considerably modified by farming and roading etc, it still retains a degree of wilderness quality (pers obs). The estuary has a high use by large numbers of common birds during the summer. It is a nesting area for several threatened (Bell, 1986) species. N.Z. Dotterel (<i>Charadrius obscurus</i>), Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>), Reef Heron (<i>Egretta sacra sacra</i>) and rare species. Variable Oyster Catcher (<i>Haematopus unicolor</i>) and common birds Pied Stilts (<i>Himantopus himantopus leucacephalus</i>) and Southern Black Backed Gulls (<i>Larus dominicanus</i>) and White Fronted Terns (<i>Sterna striata</i>) and the threatened Caspian Tern (<i>Hydroprogne caspia</i>). The importance of the estuary to birdlife warrants a moderate/high rating on the site of special wildlife interest index (Rasch, 1989). The Motu estuary is a priority two recommended area for protection in the Motu Ecological District PNA Survey Report - it is the seaward end of a complete altitudinal sequence from the coast to the Raukumara sub alpine area and includes the gazetted Motu wilderness (Clarkson, 1986). The Motu estuary has a low use but valued whitebait fishery, predominantly (<i>Galoxia brevipinnis</i>) (Saxton, 1987). The estuary is also a significant recreational fishing area for Kahawai (<i>Aripiustrutta</i>). The area offshore the Motu Estuary is an important snapper (<i>Chrysophrys auratus</i>) spawning area (MAFFish, 1989).</p> <p>Cultural The Motu estuary is of historical cultural and spiritual significance to the Tangata Whenua especially Ngati Horonoana and Whanau Tua Hiawa Hapus of Whanau Apanui. The Motu Kahawai fishery is a culturally significant fishery. Several sacred rocks relating to historical and cultural incidents are located within the estuary (Delamare/White, pers comm). The Motu Kahawai fishery also has a cultural significance to europeans. The "Kahawai Run" is an annual event (Saxton, 1987).</p> <p>Historical 17 historic sites (Maori) of local significance are recorded in the Opotiki County Historic Places Trust inventory. Several significant maori and european historic events are associated with the estuary (White, pers comm).</p>									
<table style="width:100%; border:none;"> <tr> <td style="width:30%;">Site Importance:</td> <td style="width:15%;">International</td> <td style="width:15%; text-decoration: underline;">National</td> <td style="width:15%;">Regional</td> <td style="width:15%;">Local</td> <td style="width:20%;">Unknown</td> </tr> </table>				Site Importance:	International	National	Regional	Local	Unknown
Site Importance:	International	National	Regional	Local	Unknown				
<p>Comment:</p> <p>The nesting activities of several species of threatened wildlife warrants national importance as does the Wild and Scenic River designation.</p>									
<p>Existing Threats: ACDIKM</p> <p>Type & Comment:</p> <p>The estuary is subject to periodic flooding, aggradation and deposition of detritus (McColl, 1986). Adventive plants have modified the estuary significantly especially Willows spp. and Pampas (<i>Cortaderia</i> spp.) (pers obs). Domestic stock are a threat to nesting wildlife (pers obs). Recreation fires in the driftwood are a threat to nesting wildlife and adjacent pohutukawa forest (personal observation). Adjacent pine plantations detract from the aesthetic qualities of the estuary (pers obs). Bulk fishing methods, trawling, seining and set nets threaten juvenile fish and reef fish habitats (pers obs).</p>									

Modification and Human Use: ABEF

Long term pre-european habitation, pastoral farming, roading and pine plantations have significantly modified the site. Commercial fishing, cray potting, netting and trawling occur offshore. Roading, bridging and river protection works occur. Several large power cables cross the estuary. Artificial cuts have been made to facilitate roading access. Shore based recreation is important - white baiting, kahawai fishing, firewood collection and camping maritime enjoyment. Water based recreation is boat fishing only (pers obs). The estuary is a major source of kaimoana to two hapus of Whanau Apanui (Delanere, pers comm).

Existing Protection:
Type & Comment:

AD

The Motu river is a gazetted Wild and Scenic River. The Opotiki District Council Rural A Coastal Zone precludes inappropriate development. MAFFish operate a commercial fishing ban and an amateur fisher gear restriction between 1st December and 31 March in an area 6 nautical miles radius of Tokata Rock to protect an important snapper spawning area (MAFFish).

Availability of Information:

Natural	1 2 3	Little marine information available
Cultural	1 2 3	
Historic	1 2 3	Source D White Opotiki Historian
Threats	1 2 3	Personal observation
Human Mod. & Use	1 2 3	Personal observation

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communication: Delanere M, Opotiki
White D, Historian, Opotiki

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:

Smith WK 1986 Motu River Sediments, Water Quality Centre
1987 Opotiki District Scheme Review No. 2
Bell BD 1986 Conservation Status of NZ Wildlife, NZ Wildlife Service Occasional Publication
Saxton BA 1987 Species Composition and Relative Importance of Whitebait Fisheries BOP MAFFish
MAFFish 1989 Auckland Fisheries Management Plan, MAFFish
Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
McColl 1986 Motu River, A Description of Catchment Channel, Waters and Sediments (NWSCA)

Recorded on Existing Database:

1. WERI	
2. SSWI	No
3. PNA	EC88 R Parrish 9/10/83 - Mod/High Rating, See Natural
4. Geopreservation	Motu Ecological District PNA Report, See Natural
5. HPT County Inventories	No
6. Other	Opotiki County 1983, See Historical
7. None	

Comment:

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Maraenui	Site No:	CRI 05 0050
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	X15 28097 63573	Date:	24/3/90

Brief Description of Site:

This site is located between Hawaii Beach in the west and Houputo Beach in the east, a distance of seven kilometres. It comprises a series of headlands, marine terraces and coarse gravel beaches, intertidal reefs, associated with the headlands - backed by sea cliffs rising spectacularly to 224 metres at Maraenui Point. Pohutukawa (*Metrosideros excelsa*) forest associations occur on the sea cliffs. State Highway 35 cuts through the sea cliff face and across the marine terraces and affords spectacular seascapes - views of White Island, the eastern Bay of Plenty coastline and the Motu River estuary. A rock stack Tokatea adds considerably to the quality of the seascape. The tenure of the land below the State Highway is maori which had been reserved under a Maori Affairs 439 Trust. Above the State Highway is a mixture of 439 Trust reserved native bush and pine plantation.

Conservation Values: Natural: ACFH Cultural: ABD Historic: ABC
 Comment:

Natural The beach and seacliffs below the road on the Maraenui Bluff is a relatively natural coastal wilderness area (pers obs). A marine terrace at Te Uritukituki Beach is a priority one recommended area for protection in the Motu Ecological District Protected Natural Area survey report being one of the three best examples of Pohutukawa (*Metrosideros excelsa*), Puriri (*Vitex lucens*) forest a type much reduced in its former extent. Tokata Rock is a priority two recommended area for protection being a nesting area for White Fronted Terns (*Sterna stricta*) (400-500) and red billed gulls (*Larus novaehollandie scopulinus*) (20). Tokata Rock has a site of special wildlife interest rating of moderate for the same reasons (Clarkson B, 1989). Pied Shags (*Phalacrocorax varius varius*) nest in pohutukawa trees on the sea cliffs, Blue Penguins (*Eudyptula minor irredate*) inhabit the driftwood at Blakes Bay (pers obs). The marine area off Maraenui is an important snapper (*Chrysophrys auratus*) spawning area (MAFFish, 1989). The marine environs of Maraenui and Blakes Bay are also known as a shark breeding area (M. Draper, pers comm).

Cultural The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1989). Nowhere are the aesthetic and landscape qualities better viewed than from the Maraenui site (pers obs). Historical and cultural incidence associated with Maraenui Bluff and Tokata Rock give the area considerable cultural and spiritual significance to Tangata Whenua, the Whanau Apanui iwi (White D, pers comm).

Historical 5 historic maori sites including pas, pits and terraces are recorded - of local importance. Maraenui was the lookout site for early coastal whaling operations. Blakes farm was the site of one of the earliest attempts at farming the area (White).

Site Importance: International National Regional Local Unknown
 Comment:

The recommendation for a priority one protected area in the Motu Ecological District warrants national importance. The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987). Nowhere are these values better demonstrated than at maraenui (pers obs).

Existing Threats: CDKM
 Type & Comment:

Adventive plants on coastal cliffs prevent the succession of pohutukawa forest (pers obs). Wild animals, goats and possums, threaten botanical values on the site (pers obs). Recreation fires in the driftwood threaten adjacent pohutukawa forests (Hosking G, 1989/Hogan K, pers comm). Bulk fishing methods threaten the juvenile fish habitats of the inshore reef systems (pers obs).

Modification and Human Use: AEHTJ

Early farming attempts and pine plantations have modified the marine terraces and some areas above the state highway respectively. The state highway which cuts through the sea cliff faces modifies the whole length of the site. Power transmission lines intrude on aesthetic values. Shore based activities include surf casting, surfing and beach walking. Several offshore reefs are well known boat fishing spots. Ngati Horomoana of Maraenui have mussel rocks at Maraenui point.

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme Rural A Coastal Zoning precludes inappropriate development Maori land below the state highway and some areas above it are gazetted under the Maori Affairs Act as 439 trusts - protected for conservation. MAFFish operate a commercial fishing ban and an amateur gear restriction between 1st December and 31st March in an area with 6 nautical miles radius of Tokata rock to protect an important snapper spawning area (MAFFish, 1989).

Availability of Information:

Natural	1 2 3	Little marine information	1. Well documented
Cultural	1 2 3	Dave White Opotiki Historian	2. Limited information (general)
Historic	1 2 3	Dave White Opotiki Historian	3. Little information (if any)
Threats	1 2 3	Coastal Resource Inventory Survey Site Sheet 1988 DOC Opotiki	
Human Mod. & Use	1 2 3	Coastal Resource Inventory Survey Site Sheet 1988 DOC Opotiki	

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:

1987 Opotiki District Scheme Review No. 2
 Bell BD 1986 Conservation Status of NZ Wildlife
 MAFFish 1989 Auckland Fisheries Management Plan
 Clarkson BD 1986 Motu Ecological District Protection Natural Area Survey Report Lands and Survey
 Hosking GP 1989 Conservation of Pohutukawa DSIR

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	EC86 J Heaphy 11/10/83 Rated Moderate, See Natural
3. PNA	Motu Ecological Area PNA Report, See Natural
4. Geopreservation	No
5. HPT County Inventories	Opotiki County 5 Sites Recorded, See History
6. Other	
7. None	

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Pehitairi Headland	Site No:	CRI 05 0051				
Recorders Name:	K P Hogan	Conservancy:	East Coast				
Map/Grid Ref:	X15 28047 63533	Date:	27/3/90				
Brief Description of Site: <p>A greywacke headland rising steeply to 169 metres, located between Torere and Hawai beaches. The south western flank of the headland is remnant pohutukawa (<i>Metrosideros excelsa</i>) coastal forest association. The northern seaward face is also pohutukawa forest which has been severely denuded of vegetation by grazing domestic stock (goats) very steep sea cliffs descend to a narrow rock platform in the west and a narrow gravel beach and intertidal rocks in the north. Rocks stacks and a "hole in the wall" add considerable aesthetic appeal to the headland. Offshore quite extensive marine reef habitats occur (pers obs). The headland is the seaward extent of the Torere Corridor in the Motu Ecological District Protected Natural Area Survey Report (Clarkson B, 1986). The area is Ngaitai iwi land - the western side of the headland is an important urupa, the central area is private maori land the eastern side is Maori Recreation Reserve.</p>							
<table style="width:100%; border:none;"> <tr> <td style="width:33%;"></td> <td style="width:33%; text-align:center;">CF</td> <td style="width:33%; text-align:center;">ABCD</td> <td style="width:33%; text-align:right;">AB</td> </tr> </table>					CF	ABCD	AB
	CF	ABCD	AB				
Conservation Values:	Natural:	Cultural:	Historic:				
Comment: <p>Natural The seaward extent of the Torere Corridor a priority three recommended area for protection in the Motu Ecological District Protected Natural Area survey report. The Torere corridor is sequence from coastal pohutukawa forest (<i>Metrosideros excelsa</i>) and treeland and induced scrub to moderately and highly modified steepland forest. It provides the shortest link to a proposed ecological area (Parau) and buffers the pohutukawa, puriri and broadleaved tawa forest containing the southern most known Taraire (<i>Beilschmiedia tarairi</i>) (Clarkson B, 1986). Pied Shags (<i>Phalacrocorax varius varius</i>) nest in the pohutukawa forest (pers obs). Offshore is an important juvenile fish breeding habitat especially Snapper (<i>Chrysophrys auratus</i>) which is protected by a fishing restriction during the spawning season (MAFFish, 1989). The reefs offshore are quite extensive and have a variety of marine habitats (pers obs).</p> <p>Cultural The headland is part of the Ngaitai iwi lands. Numerous historical incidents are linked with the area, several fishing reefs and rocks kohatu/toka are known offshore, and important urupa is located on the western side of the headland. The site has historical cultural and spiritual significance to Ngaitai (Maxwell B, pers comm). The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987.)</p> <p>Historical 8 historic maori sites of local importance are recorded in the inventory. They include pa sites urupa, terraces and middens. Bill Maxwell reports several historic incidents of particular significance to Ngaitai. Remains of Ngaitai early coastal whaling operations are evident on the western side of the peninsula (Maxwell B, pers comm)(White D, pers comm).</p>							
Site Importance:	International	<u>National</u>	Regional Local Unknown				
Comment: <p>The natural beauty of the coastline gives a distinctive character and appeal to the area such that it is an environmental asset of national significance. The natural values of 3rd priority RAP status, and cultural and historical values warrant regional importance.</p>							
Existing Threats:	CDIKM						
Type & Comment: <p>A wide range of adventive plants threaten botanical values in the coastal forest. Domestic animals, especially goats, have severely denuded the coastal forest on the privately owned northern face of the headland (pers obs). Recreation fires pose a significant threat to the pohutukawa forest (Hosking G, 1989). Pine plantations on the eastern face of the headland have the propensity to reduce the aesthetic and landscape qualities of the headland (pers obs). Bulk fishing methods threaten juvenile fish habitats on inshore reef systems (pers obs).</p>							

Modification and Human Use: **AHIJ**

Farming practices have modified the vegetation on the headland, land clearing fires, domestic stock grazing and pine plantations. Shore based recreation includes fishing and beach walking. Boat fishing, commercial and recreation, are important offshore as is scuba diving. The offshore inter tidal areas are an important kaimoana source for Ngaitai.

Existing Protection:

Type & Comment:

D

The Opotiki District Scheme Rural Coastal Zoning precludes inappropriate development. The western side of the headland foreshore area is a gazetted maori reservation. MAFFish operate a commercial fishing ban and an amateur gear restriction ban between 1st December and 31st March in order to protect the important snapper spawning grounds (MAFFish, 1989).

Availability of Information:

Natural	<u>1</u> <u>2</u> <u>3</u>	Little information on littoral marine ecology	1. Well documented
Cultural	<u>1</u> <u>2</u> <u>3</u>	Source Bill Maxwell Ngaitai Liaison	2. Limited information (general)
Historic	<u>1</u> <u>2</u> <u>3</u>	Source Dave White Opotiki Historian	3. Little information (if any)
Threats	<u>1</u> <u>2</u> <u>3</u>	Coastal Resource Inventory Survey Site Sheet 1988 DOC Opotiki	
Human Mod. & Use	<u>1</u> <u>2</u> <u>3</u>	Coastal Resource Inventory Survey Site Sheet 1988 DOC Opotiki	

Comment:

Marine information is based on personal observations during scuba dive trips (Hogan).

Sources of Information:

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

Comment:

1987 Opotiki District Scheme Review No. 2
 Bell BD 1986 Conservation Status of NZ Wildlife
 MAFFish 1989 Auckland Fisheries Management Plan
 Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
 Hosking GP 1989 Conservation of Pohutukawa DSIR

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	No
3. PNA	Yes Motu Ecological District See Natural Values
4. Geopreservation	No
5. HPT County Inventories	Opotiki County 1983, See History
6. Other	
7. None	

Other Considerations:

The Ngaitai iwi are giving consideration to having a Taiapure fishery in Torere Bay and having the marine area off Pehitairi Headland an "ecological area" i.e. a no take area to serve as a breeding area for fish, possibly using the Marine Reserve Act for the purpose (Hogan K, pers comm).

Accompanying Maps and Photographs:

Site Name/s: Haurere Headland	Site No: CRI 05 0052
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: X15 28005 63518	Date: 23/3/90
<p>Brief Description of Site:</p> <p>A greywacke headland located between Awaakino Bay in the west and Torere Beach in the east - some 2 kilometres of coast. Pohutukawa (<i>Metrosideros excelsa</i>) forested sea cliffs lead through a natural succession to intertidal rock platforms and offshore reef systems in Awaakino Bay. West of the headland the 120 metre cliffs are near vertical and drop to a narrow gravel beach and broken rock intertidal area out to offshore reef systems (pers obs).</p> <p>The land area is a priority three recommended area for protection (RAP) in the Motu Ecological District Protected Natural Area (PNA) survey report. Offshore extensive reef systems with a variety of marine habitats which support an abundance and variety of marine life accor (pers obs).</p> <p>The site is important historically, culturally and spiritually to the Ngaitai iwi and also an important kaimoana source (Maxwell pers comm).</p> <p>The foreshore is a maori beach and recreation reserve (439 Trust) of the Ngaitai iwi.</p>	
<p>Conservation Values: Natural: ABCEF Cultural: ABCD Historic: A</p> <p>Comment:</p> <p>Natural The greywacke headland features natural vegetation successions from pohutukawa forest (<i>Metrosideros excelsa</i>) and coastal scrub through intertidal wave cut platforms to offshore reef systems (pers obs). Several species of wildlife nest and breed on the sea cliffs. Grey faced petrel (<i>Pterodroma macroptera gouldi</i>) and Australian gannets (<i>Sula bassana serrator</i>) and pied shags (<i>Phalacrocorax varius varius</i>) (Clarkson, 1986). The headland is a priority three recommended area for protection in the Motu Ecological district PNA survey report because of the coastal forest remnant, the presence of the vulnerable plant (Beadel) (<i>Olearia pachyphylla</i>) and the Gannet colony (Clarkson, 1986). The offshore reef systems have a variety of marine habitats including sea tulip forests (<i>Pyura pachydermatina</i>) and shallow weed habitats in Awaakino Bay and boulder and sediment habitats on the torere side of the headland (pers obs). Offshore within 2 nautical miles is an important juvenile fish habitat protected by fishing method restrictions (MAFFish, 1989).</p> <p>Cultural The headland is the western extent of the Ngaitai iwi lands. The headlands and offshore area have important historical cultural and spiritual significance to Ngaitai. Several fishing reefs and rocks kohatu/toka are known offshore. The site is the "iwi food basket". An important Urupa is located at the eastern base of the headland. A smaller sandy bay at the western base marks the Ngaitai/Whakatohea fisheries boundary (Maxwell, pers comm). The natural beauty of the coastline gives a distinctive character and appeal to tis area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p> <p>History No historic sites recorded however several historic events and incidents important to Ngaitai occurred here (Maxwell).</p>	
<p>Site Importance: International <u>National</u> Regional Local Unknown</p> <p>Comment:</p> <p>The presence of a significant population of the vulnerable plant <i>Olearia pachyphylla</i> warrants national status. The natural beauty of the coastline gives a distinctive character and appeal to this area such that it is an environmental asset of national significance (Opotiki District Council.)</p>	
<p>Existing Threats:</p> <p>Type & Comment: CDK</p> <p>A variety of adventive plants on the sea cliffs hinder pohutukawa forest succession (pers obs). Wild animals, goats and possums threaten botanical values on the site (pers obs). Recreational use at the campground at Torere Bay threatens the pohutukawas growing there - recreation fires (Hoskings, 1989) and chainsaws (pers obs).</p>	

Modification and Human Use: HIJ

Much of the headland is regenerating from historical land clearing (maori) fires. Shorebased fishing and camping occur on the Torere side - access to Awakino Bay is restricted. Offshore from the headland is a popular boat fishing and scuba diving site (pers obs). The marine area is an important kaimoana site of Ngaitai iwi (Maxwell, pers comm).

Existing Protection:
Type & Comment:

D

The Opotiki District Scheme, Rural A Coastal Zone prevents inappropriate development (Opotiki District Scheme, 1987). The foreshore is a maori beach and recreation reserve (439 trust) of Ngaitai iwi. MAFFish protect the juvenile fish habitats with a gear restriction ban (trawling and danish seining) within two nautical miles of the shore (MAFFish, 1989).

Availability of Information:

Natural	1 2 3		1. Well documented
Cultural	1 2 3	Except for marine ecology	2. Limited information (general)
Historic	1 2 3	Source W Maxwell Ngaitai liaison	3. Little information (if any)
Threats	1 2 3	Source W Maxwell and Dave White Opotiki Historian	
Human Mod. & Use	1 2 3	Coastal Resource Inventory Site Survey 1988 DOC Opotiki	
		Coastal Resource Inventory Site Survey 1988 DOC Opotiki	

Comment:

Littoral marine information is based on personal observation during scuba dives.

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:

1987 Opotiki District Scheme No. 2
 Bell BD 1986 Conservation Status of NZ Wildlife, NZ Wildlife Service Occasional Publication
 MAFFish 1989 Auckland Fisheries Management Plan, MAFFish
 Beadel SM 1988 A Register of Threatened and Local Plant Taxa Eastern Region DOC
 Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
 Hosking GP 1989 Conservation of Pohutukawa DSIR

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	No
3. PNA	No
4. Geopreservation	Yes, See Natural Values
5. HPT County Inventories	No
6. Other	Opotiki County 1983 No Sites/But Urupa Noted
7. None	

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Opape	Site No:	CRI 05 0053		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	X15 28987 63500	Date:	23/3/90		
<p>Brief Description of Site:</p> <p>Located 10 kilometres east of Opotiki. The Opape headland represents the eastern end of the Bay of Plenty sandy barrier coastline. The headland is the seaward extent of a large greywacke promontory which rises to 169 metres. The headland extends 1 kilometre along the coast.</p> <p>The shore line is steep pohutukawa (<i>Metrosideros excelsa</i>) forested sea cliffs above an extensive horizontal wave cut platform which extend out to quite extensive offshore reef systems.</p> <p>The land is a mixture of tenure. The sea cliffs and adjacent land is maori land through which the old coast road, formed but now unused, passes. The area landward of the road is maori land backed by the Oroi Scenic Reserve and a Maori Historic Reserve.</p> <p>The site is a priority one recommended area for protection (RAP) in the Motu Ecological District Protected Natural Area (PNA) survey report. The beach west of Opape is a locally important boat launching facility. Legal access to the headland is via the public road.</p>					
Conservation Values:	Natural: ABCFGH	Cultural: ABCDE	Historic: AB		
<p>Comment:</p> <p><u>Natural</u> Natural maritime successions from pohutukawa (<i>Metrosideros excelsa</i>) forested sea cliffs through intertidal wave cut platforms to offshore reef systems occur (pers obs). The headland is identified as a priority one RAP in the Motu Ecological District PNA Survey Report for the Pohutukawa forest association on coastal cliffs and including probably the most substantial population of the vulnerable plant (<i>Olearia pachyphylla</i>) in New Zealand (Clarkson B, 1986). Wildlife present in the area include the threatened Reef Heron (<i>Egretta sacra sacra</i>). Pied Shags (<i>Phalacrocorax carbo novaehollandiae</i>) nest in pohutukawa trees on the sea cliffs. Grey faced petrel (<i>Pterodroma macroptera gouldi</i>) nest in burrows on the sea cliffs (CRI Survey). The intertidal and offshore reef systems have a variety of marine habitats rich in marine life - the subtidal area remains relatively rich because of the poor underwater visibility that is the norm (pers obs). The submarine habitats are varied they include sea tulip forests (<i>Pyura pachydermatina</i>) and extensive beds of green lipped mussels (<i>Perna canaliculus</i>). The area has a reputation for large crayfish (<i>Jasus edwardsi</i>) (pers obs). Offshore within 2 nautical miles is an important juvenile fish habitat protected by fishing method restrictions (MAFFish, 1989).</p> <p><u>Cultural</u> The natural beauty of the coastline gives a distinctive character and appeal to this area such that it is an environmental asset of national significance (Opotiki Scheme, 1987). The marae of the Ngaitama Hapu of Whakatohea is located next to the site. The area retains important historical, cultural and spiritual significance to Tangata whenua. The reef systems are a major source of kaimoana to Whakatohea. A Tauranga waka is located at Opape beach being a Nukutere canoe landing place. The seaward extent of the Opape headland is the land boundary between Ngaitai and Whakatohea iwis (mako mako). Local schools use the intertidal area for marine education experience (pers obs).</p> <p><u>Historic</u> One historic site recorded Nukutere canoe landing site (White D, pers comm).</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
<p>Comment:</p> <p>This site is a priority one recommended area for protection in the Motu Ecological District protected natural area survey report, the presence of the most substantial population of the vulnerable plant <i>Olearia pachyphylla</i> warrants national significance.</p>					
Existing Threats:	CDKM				
Type & Comment:	<p>Adventive species on sea cliffs - gorse (<i>Ulex europaeus</i>) effect pohutukawa forest succession (pers obs). Wild animals (possums) and domestic stock (goats) threaten botanical values of site (pers obs). Recreation fires represent the major threat to pohutukawa forest (Hosking G, 1989). The traditional laking of grey faced petrel for food by Tangata Whenua represents a threat if it remains unmonitored (pers obs).</p>				

Modification and Human Use: ADHIJ

The land has been modified by a long history of use. Much of the vegetation is regenerating from historical land clearing by early maori. The old coast road has modified the land above the sea cliffs now vegetation is rapidly reverting. The Opape beach is a locally important access and boat launching area sometimes 30 or more trailers are parked here. A camping area is located within .5 kilometres of the boat access. An important recreation beach boating, swimming, surf casting, kaimoana collection from inter tidal reefs, important scuba diving area (pers obs). Very important Kaimoana site for Whakatohea their only inter tidal and offshore reefs (Makomako).

Existing Protection:
Type & Comment:

AD

The district scheme Rural A Coastal Zoning prevents inappropriate development. Road reserves occur on the foreshore and the old coast road site. The maori land is zoned Marae Papakainga. Most of the promontory behind the headland is Oroi Scenic Reserve and a maori historic reserve. MAFFish protect juvenile fish habitats with a gear restriction ban (trawling and Danish seining within 2 nautical miles of shore (MAFFish, 1989).

Availability of Information:

Natural	<u>1 2 3</u>	Except marine information	1. Well documented
Cultural	<u>1 2 3</u>	Source M Makomako Whakatohea Liaison	2. Limited information (general)
Historic	<u>1 2 3</u>	Source D White Opotiki Historian	3. Little information (if any)
Threats	<u>1 2 3</u>	Coastal Resource Inventory Site Survey Form 1988 DOC Opotiki	
Human Mod. & Use	<u>1 2 3</u>	Coastal Resource Inventory Site Survey Form 1988 DOC Opotiki	

Comment:

Littoral marine information is based on personal observations other than MAFFish recognition of importance of site as juvenile fish habitat.

Sources of Information:

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

Comment:

Bell BD 1986 Conservation Status of NZ Wildlife
 MAFFish 1989 Auckland Fishery Management Plan
 1987 Opotiki District Scheme Review No. 2
 Beadel SM 1988 A Register of Threatened and Local Plan Taxa Eastern Region DOC
 Clarkson BD 1986 Motu Ecological District Protected Natural Area Survey Report Lands and Survey
 Hosking GP 1989 Conservation of Pohutukawa, DSIR.

Recorded on Existing Database:

Comment:

1. WERI	No
2. SSWI	No
3. PNA	Yes, See Natural Values
4. Geopreservation	No
5. HPT County Inventories	Opotiki County 1983, See Historic Values
6. Other	
7. None	

Other Considerations:

Commercial cray potting is banned off the Opape Headlands by local agreement (Hogan K, pers comm).

Accompanying Maps and Photographs:

Site Name/s: Waiaua Estuary	Site No: CRI 05 0054						
Recorders Name: K P Hogan	Conservancy: East Coast						
Map/Grid Ref: X15 28955 63483	Date: 23/3/90						
<p>Brief Description of Site:</p> <p>Located 8 kilometres east of Opotiki between the State Highway bridge and the sea. The site comprises a 40 hectare estuarine area of open water, raupo and saltmarsh with a small .5 hectare mangrove area (<i>Avicennia</i> marine var. <i>resinifera</i>) the most eastern in New Zealand (Daniel, 1984). The estuary is formed by a sand spit and dune systems either side of the river mouth. The mouth has a history of migrating eastwards.</p> <p>The site has a moderate/high Site of Special Wildlife Interest rating for its good wildlife species list and moderate size (Carlin, 1983).</p> <p>The site has spiritual and cultural significance to Whakatohea, especially the Waiaweri Lagoon burial site (Makomako, pers comm).</p> <p>The natural values are threatened by rubbish dumping, domestic stock and farming practices on the estuarine margins (pers obs).</p>							
<p>Conservation Values:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Natural:</td> <td style="width: 33%;">Cultural:</td> <td style="width: 33%;">Historic:</td> </tr> <tr> <td>BCDEFGH</td> <td>ABCD</td> <td>AB</td> </tr> </table> <p>Comment:</p> <p><u>Natural</u> The only significant wetland of its type in the Opotiki Ecological District can be readily viewed from the adjacent State Highway (pers obs). A 40 hectare raupo - rush of .5ha (1984) being the only example of this plant community in the Opotiki Ecological Area (Daniel, 1984). The site has a moderate/high SSSI rating for its good bird species list and size (Rasch, 1989). Species present include - threatened species and N.Z. Dotterel (<i>Charadrius obscurus</i>), 6-7 breeding pairs (Owen, 1989) Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>), Caspian Tern (<i>Hydroprogne caspia</i>), Australian Bittern (<i>Botaurus stellaris poitotoputalis</i>), Reef Heron (<i>Egretta sacra sacra</i>), N.Z. Falcon (<i>Falco Novae Zelandiae</i>) and rare species - variable Oyster Catcher (<i>Haematopus unicolor</i>) (Carlin, 1983) of note is the annual arrival for the winter of a lone endangered, White Heron (<i>Egretta alba modesta</i>) and the breeding site of White Fronted Terns (<i>Sterna striata</i>) 100 and Pied Stilts (<i>Himantopus himantopus leucocephalus</i>) (pers obs). The sand spits and dune systems at the estuary mouth have a (9) rating in the N.I. Dune and Beach Vegetation Inventory (Partridge, 1989/90). The locally rare plant pingao (<i>Desmoschoenus spiralis</i>) occurs on the dunes (pers obs). The estuary is a regionally important whitebait fishery. Spawning areas for (<i>Galaxias maculatus</i>) are located 150 metres either side of the State Highway bridge (pers obs)</p> <p><u>Cultural</u> The estuary is culturally and historically and spiritually important to Whaktohea. A pa site overlooks the estuary, and a urupa is located on the margins. Waiaweri lagoon is a tapu site adjacent to the estuary (M Makomako pers comm). The estuary is a locally important whitebait fishery (Mitchell, pers comm). The estuary is readily viewed from the State Highway and dominates the landscape and affords some aesthetic quality (pers obs).</p> <p><u>Historical</u> One site recorded in Opotiki Inventory - Ngati Rua pa site of regional importance (White, pers comm).</p>		Natural:	Cultural:	Historic:	BCDEFGH	ABCD	AB
Natural:	Cultural:	Historic:					
BCDEFGH	ABCD	AB					
<p>Site Importance:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>International</u></td> <td style="text-align: center;">National</td> <td style="text-align: center;">Regional</td> <td style="text-align: center;">Local</td> <td style="text-align: center;">Unknown</td> </tr> </table> <p>Comment:</p> <p>The presence of several species of threatened wildlife warrant a national rating. The occurrence of the most eastern mangroves and the only mangroves in the Opotiki Ecological District warrants national rating. This site has been awarded. International significance under the RAMSAR convention because of a significant breeding population of the threatened species, N.Z. Dotterel.</p>		<u>International</u>	National	Regional	Local	Unknown	
<u>International</u>	National	Regional	Local	Unknown			
<p>Existing Threats:</p> <p>Type & Comment: CDJK</p> <p>Adventive plants, notably gorse (<i>Ulex europaeus</i>), Boxthorn (<i>Lycium ferocissimum</i>), Lupins (<i>Lupinus aroreus</i>) are modifying the estuarine margins (Carlin, 1983). Domestic stock, cattle, threaten natural values, especially mangroves and pingao (pers obs). Dumping of domestic rubbish on the eastern margin threatens natural values (Carlin, 1983). Recreation use of the estuary conflicts with the breeding activities of threatened and rare species on the sand spit and dune areas (pers obs).</p>							

Modification and Human Use: ABHJ

Pastoral farming occurs on the estuarine margins. Domestic stock often trespass onto the estuary. Reclamation of the estuary margins by drainage is occurring on the eastern flank (Daniel, 1984). A roadway has also been constructed towards the estuary on the eastern side to facilitate farming operations. Shore based recreational use includes white baiting, netting for flounder and maritime enjoyment - swimming, duck shooting and beach walking (pers obs). White bait and flounder are taken traditionally as kaimoana by Tangata Whenua (Makomako, pers comm).

Existing Protection:
Type & Comment:

D

A Rural A Coastal Zone in the Opotiki County Scheme affords some protection from inappropriate development (Opotiki District Scheme, 1987). The white bait spawning areas adjacent to the state highway bridge are located on road reserve. Offshore a MAFFish ban on bulk fishing methods (trawling and Danish seining) applies out to 2 nautical miles (MAFFish, 1989).

Availability of Information:

Natural	1 2 3	Little marine information located
Cultural	1 2 3	Source M Makomako Whakatohea liaison
Historic	1 2 3	Source D White Opotiki Historian
Threats	1 2 3	
Human Mod. & Use	1 2 3	

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

Personal Communication: Makomako M, Whakatohea Liaison
: White D, Historian, Opotiki
: Mitchell C, MAFFish, Rotorua

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:

Bell BD 1986 Conservation Status of NZ Wildlife, Wildlife Service, Occasional publication.
 Healy TR 1977 Bay of Plenty Coastal Erosion Survey - University of Waikato No. 3
 MAFFish 1989 Auckland Fishery Management Plan, MAFFish
 1987 Opotiki District Scheme Review No. 2
 Crisp P 1990 Mangroves in NZ Trees in the Tide, GP Books Nature Conservation Council
 Daniel L 1984 Mangroves and Saltmarshes of Ohiva Harbour, Lands and Survey
 Owen K 1989 NZ Dotterel Survey Bay of Plenty DOC File SPE019 (Rotorua)
 Partridge T 1989/90 The Sand Dune and Beach Vegetation Inventory of NZ North Island DSIR

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--|
| 1. WERI | No |
| 2. SSWI | Moderate/High (G Carlin) 15/10/83 (See Natural Section) |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | Opotiki County 1983 (See Historical Section) |
| 6. Other | Forest and Bird Society Biannual Census of Waders 1985-1990, DOC Opotiki |
| 7. None | |

Other Considerations:

Maori owners of the estuarine margins are interested in negotiating some protection measures for the estuary and its margins - primarily aimed at protecting the tapu site at Waiweri Lagoon (Makomako).

Accompanying Maps and Photographs:

Site Name/s: Waioueka Estuary	Site No: CRI 05 0055
Recorders Name: K P Hogan	Conservancy: East Coast
Map/Grid Ref: W15 28855 63475	Date: 23/3/90
Brief Description of Site: This site comprises the Waioueka/Otara estuarine area which extends from the State Highway 35 river bridges to the river mouth. The river systems join just north of Opotiki town and enter the sea by a common mouth. The site comprises an extensive open water tidal area flanked by salt marsh/rush wetlands and pastoral land. There is a prominent offshore bar. The area supports a wide variety of native birdlife and water fowl. Shellfish occur at two places in the estuary. The estuary is an important local fishery - wet fish and whitebait and a locally important recreation resource (pers obs). The site is culturally significant to Tangata Whenua - Whakatohea and also a strong association to Ngati Rangi of Tauranga through Kukmoa Pa. A significant early european settlement and important coastal shipping port (White D, pers comm). The river system is modified by flood control works. The estuary is currently polluted by the towns sewage system (pers obs).	
Conservation Values: Natural: ABCD Cultural: ABC Historic: ABD Comment: Natural Sand spits and dune systems occur either side of the river mouth. The estuary comprises an extensive open water tidal area with saltmarsh and rush wetlands. Birdlife includes many common species of waders, migrating birds and waterfowl. Several threatened species of wildlife occur, Fernbirds (<i>Bowdleria punctata</i>), BANDED Rail (<i>Reillia Phillipensis</i>), Caspian Tern (<i>Hydroprogne caspia</i>), Australian Bittern (<i>Botaurus stellaris poecilopterus</i>) and rare species Variable Oyster Catcher (<i>Haematopus unicolor</i>) (CRI Survey). The rivermouth is a breeding site for the threatened N.Z. Dotterel (<i>Charadrius obscurus</i>), 2 pairs and White Fronted Terns (<i>Sterna striata</i>) 200+ pairs (Dotterel Survey 1989). The estuary is a regionally important whitebait fishery/spawning areas for (<i>Galaxias maculatus</i>) are actively managed (Saxton B, 1987). The estuary holds three shellfish beds of pipis (<i>Paphies australis</i>), Pacific Oysters (<i>Crassostera gigas</i>) and greenlipped mussels (<i>Perna canaliculus</i>). These are all currently polluted by sewage (Williams B, 1987). Offshore within 2 nautical miles is considered by MAFFish to be important juvenile fish habitat protected by fishing restrictions (MAFFish, 1989). Cultural The site has important cultural links with Whakatohea and remains an important kaimoana site makomako. The Ngati Rangi iwi of Tauranga also retains cultural and spiritual links with the Kukmoa Pa site at Huntress Creek (White D, pers comm). Views over the estuary from several vantage points afford land scape and aesthetic values (pers obs). Several sacred rocks kohatu/toka are known at the rivermouth and off the bar (Makomako). Historical 2 historic sites recorded in the Opotiki Historic Places inventory. Most important is Kukmoa Pa. Many sites of early local importance now under the town site (White D, pers comm). In early european times an important coastal port. 6 shipwrecks reported on Opotiki bar 1958-1967 (Ingram). Huntress Creek named after Steamer Huntress part of Volkner Affair (White D, pers comm).	
Site Importance: International <u>National</u> Regional Local Unknown Comment: The presence of several species of threatened wildlife including breedings pairs of NZ Dotterel warrant a national rating.	
Existing Threats: Type & Comment: ABCDEIK The mouth of the river is subject to cycles of erosion and accretion (Healy T, 1977). The estuary is subject to periodic flooding causing erosion of banks, accretion of berm heights and heavy detritus deposition (ECCB, 1989). Exposed reefs known by early inhabitants have been inundated by silt mud and sand from the river (Makomako). Several adventive plants threaten estuarine margins especially species of willow (pers obs). Domestic stock threaten whitebait spawning areas saltmarsh and rushlands (pers obs). Sewage discharge threatens estuarine values - shellfish are pollution (Williams B, 1987). Extensive flood control measures threaten natural values aesthetic values and spawning areas as do duck mai mais (pers obs).	

Modification and Human Use: ADHIJ

The river and estuary berms and margins are modified by farming practices, major flood protection works and gravel extraction operations. A wharf and boat ramp is located near the river confluence. The bar remains an important local boating access to the sea for commercial and recreation fishing. Shore based recreation includes fishing, whitbaiting, duck shooting and swimming. Water based includes boating, fishing (nets and lines) and jet boating. Important kaimoana site. Shellfish, wetfish, whitebait (pers obs).

Existing Protection:

Type & Comment: CD

The Local Government Rural A Coastal Zoning affords some protection. Several areas are managed by local government for specific purposes including esplanade reserves, catchment protection reserves and recreation reserves. The tidal margins of estuaries are crown land. Offshore a MAFFish bulk fishing method restriction (trawling and danish seining) applies within 2 nautical miles off the shore.

Availability of Information:

Natural	1 2 3		1. Well documented
Cultural	1 2 3	Source M Makomako Whakatohea Liaison	2. Limited information (general)
Historic	1 2 3	Source D White Opotiki Historian	3. Little information (if any)
Threats	1 2 3	Coastal Resource Inventory Site from 1988 Opotiki	
Human Mod. & Use	1 2 3	Coastal Resource Inventory Site from 1988 Opotiki	

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:

Williams BL 1987 Assessment of the impact on the Waioeka/Otara Estuary system (Water Quality Control of Waste Disposal Options for Opotiki Borough).
 Bell BD 1986 Conservation Status of NZ Wildlife
 Healy TR 1977 Bay of Plenty Coastal Erosion Survey University of Waikato No. 3
 MAFFish 1989 Auckland Fishery Management Plan
 Ingram CW ? NZ Shipwrecks 1795-1975
 ECCB 1987 Opotiki District Scheme Review No. 2
 ECCB 1989 The Waioeka/Otara Catchment Management Study

Recorded on Existing Database:

1. WERI	No	Comment: Opotiki County 1983, 2 Sites Recorded Kukumoa Pa of Regional Importance (See History Section)
2. SSWI	No	
3. PNA	No	
4. Geopreservation	No	
5. HPT County Inventories		
6. Other		
7. None		

Other Considerations:

Sources Continued: B A Saxton 1987 Species Composition of Relative Importance of Whitebait Fisheries in 13 Bay of Plenty Rivers.

Accompanying Maps and Photographs:

Site Name/s:	Waiotahi Beach	Site No:	CRI 05 0056		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	W15 28817 63480	Date:	21/3/90		
Brief Description of Site:					
<p>This site extends for 3 kilometres of coast from the Waiotahi rivermouth in the west to Opotiki Surf Lifesaving Club in the east. The site comprises a low profile medium-fine brown sand beach which has a 100 metre wide low tide terrace and a prominent offshore bar backed by a low narrow modified dune system backed by sandstone sea cliffs interspersed by small river valley systems. Pohutukawa forest remnants occur on the sea cliffs and small coves on the river valley sides. Above the cliffs and up the valleys is a pastoral farming regime. The river valley systems are modified by farming and several small subdivisions at the mouths of the valleys. State Highway 35 modifies the back beach area. This is the most important recreation beach in the area. The avenue of Pohutukawa forest through which the State highway passes is of prime aesthetic importance. The area has strong Maori association and several important historic sites.</p>					
Conservation Values:	Natural: ACDF	Cultural: ABCD	Historic: AB		
Comment:					
<p>Natural The pohutukawa/forest remnants on the coastal slips are important for their scarcity value within the Opotiki Ecological District (McEwen).</p> <p>Several rare and threatened species of wildlife frequent the foreshore area. Threatened species are Caspian Terns (<i>Hydroprogne caspia</i>), Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>) and rare species Variable Oyster Catcher (<i>Haenoptus unicolor</i>) feed on the beach at low tide (CRI inventory). Offshore is an important Juvenile Fish Habitat which is protected from bulk fishing methods by method restrictions (MAFFish, 1989).</p> <p>Cultural The natural beauty of the coastline gives a distinctive character and appeal to this area such that it is an environmental asset of national significance. The pohutukawa forest avenue on State Highway 35 at the gateway to the east coast is an important landscape and aesthetic amenity (Opotiki District Scheme, 1987). The Waiotahi beach is of cultural and spiritual significance to Whakatohea. Numerous pa sites remain, it is the site of "Opotiki" spring after which the town and original settlement was named. Also a Tauranga Waka site of the Nukutere canoe landing (Makomako M, pers comm). Waiotahi beach is the most important recreational beach in the Opotiki area (pers obs).</p> <p>History The Opotiki County Historic Place inventory records 8 pa sites, 2 of which are considered as important in the Opotiki District Scheme. Historic sites include Opotiki Spring, and the Nukutere landing site (White D, pers comm).</p>					
Site Importance:	International	<u>National</u>	Regional	Local	Unknown
Comment:					
<p>The natural beauty of the coastline gives a distinctive character and appeal to this area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987).</p>					
Existing Threats:	ACDJK				
Type & Comment:					
<p>Periodic cycles of erosion and accretion occur. The Waiotahi dune systems once extended more than 20 metres seaward of their present extent (Healy).</p> <p>Aventive plants especially gorse (<i>Ulex europaeus</i>), Boxthorn (<i>Lycium ferocissimum</i>) and Pampas intrude on aesthetic values (pers obs). Adventive plants prevent pohutukawa succession (Hosking G, 1989).</p> <p>Possums and domestic stock threaten pohutukawa forest (pers obs).</p> <p>Spoil dumping by M.O.W. and Opotiki District Council on the foreshore requires continual monitoring (pers obs). Recreation fires are the major threat the pohutukawa trees in this area (Hosking G, 1989).</p>					

Modification and Human Use: ABHIJ

The State Highway construction has significantly modified the back beach area by filling major cuts, bridging and culverts (pers obs). Farming and residential subdivision have modified the lower river valleys. Shorebased recreation is the major use includes maritime enjoyment, swimming, surf casting. A holiday park is located near the surf club. A long history of maori use - seasonal kaimoana i.e. fishing and shellfish Tua Tua Paphies australie.

Existing Protection: CD
Type & Comment:

Several small local government reserves protect portions of the site. A plantation reserve protects part of the SH35 pohutukawa forest avenue. The majority of the site between the road and the foreshore is NZ Transit Road Reserve. The District Scheme Rural A Coastal Zoning affords some protection. Local bylaws prevent overnight camping and lighting of fires on the foreshore. Offshore a MAF bulkfishing method (trawling and Danish seining) applied to 2 nautical miles out.

Availability of Information:

Natural	1 2 3	No information on marine ecosystems	1. Well documented
Cultural	1 2 3	Source M Makomako Whakatohea Liaison	2. Limited information (general)
Historic	1 2 3	Source D White Opotiki Historian	3. Little information (if any)
Threats	1 2 3	Coastal Resource Inventory Site Survey 1988 DOC Opotiki	
Human Mod. & Use	1 2 3	Coastal Resource Inventory Site Survey 1988 DOC Opotiki	

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:

1987 Opotiki District Scheme No. 2
 McEwen ? Ecological Regions and Districts of NZ
 Healy TR 1977 Bay of Plenty Coastal Erosion Survey University of Waikato No. 3
 Hosking GP 1989 Conservation of Pohutukawa DSIR
 Bell BD 1986 Conservation Status of NZ Wildlife
 MAFFish 1989 Auckland Fishery Management Plan

Recorded on Existing Database:

1. WERI	No	Comment: Opotiki County 1983, 8 Pa Sites Recorded (See History)
2. SSWI	No	
3. PNA	No	
4. Geopreservation	No	
5. HPT County Inventories		
6. Other		
7. None		

Other Considerations:

Accompanying Maps and Photographs:

Site Name/s:	Waiotahi	Site No:	CRI 05 0057		
Recorders Name:	K P Hogan	Conservancy:	East Coast		
Map/Grid Ref:	W15 28783 63475	Date:	21/3/90		
<p>Brief Description of Site:</p> <p>This site comprises the Waiotahi River estuary and margins. It extends 2 kilometres east to west and is bounded by sandstone cliffs which confine the river valley. The southern extent is the Waiotahi valley road bridge.</p> <p>The estuary is 100 hectares in area comprising open water, mud flat, saltmarsh as rush estuarine area. A major sand spit and dune system which is a Scenic and Historic Reserve bound the estuary in the north.</p> <p>A recreation reserve is located between the adjacent state highway and the estuary. It is an important local amenity for recreation and kaimoana.</p> <p>Farming practices and roading causeways have modified estuarine margins. The State Highway returns to coast at this point it is considered "the gateway to the East Coast".</p> <p>(All pers obs)</p>					
Conservation Values:	Natural: ABCDEFH	Cultural: ABCD	Historic: AB		
<p>Comment:</p> <p>Natural The most intact sandspit and dune landform in the Opotiki area. A gazetted historic and scenic reserve (Clarkson B, 1989). Pohutukawa (<i>Metrosideros excelsa</i>) forest remnants occur on the sandstone promontaries these are scarce remnants in the Opotiki Ecological District (McEwen). The 100 hectare estuary comprises areas of open water, mud flat, saltmarsh and rush communities. It has a moderate/high site of special wildlife interest rating because of diminishing habitat status and wildlife values (Rašch G, 1989). Updated information indicate that the site of special wildlife interest rating should be higher (V. Froude, DOC files). Bird species recorded in Forest and Bird society bi-annual census include: threatened N.Z. Dotterel (<i>Charadrius obscurus</i>), 6 pairs breeding on sand spit. Other threatened species include Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>), Fernbirds (<i>Bowdleria punctata</i>), Caspian Tern (<i>Hydroprogne caspia</i>), Banded Rail (<i>Reithus philipensis</i>), regionally threatened Reef Heron (<i>Egretta sacrasacra</i>) and Rare variable Oyster Catcher (<i>Haematopus unicolor</i>) also other common birds including migratory Bartailed Godwits (<i>limosa lapponica baurei</i>) and common wildfowl. The locally rare plant pingao (<i>Desmoschoenus spiralis</i>) occurs on the spit (Beadel M, 1988). Whitebait spawning areas (<i>Brevipinus maculatus</i>) are located near the Waiotahi Valley road bridge (Mitchell C, pers comm), Whitebait, Mullet, Kahawai, Flounder, frequent the estuary. A locally important pipe (<i>Paphies australis</i>) bed is located in the estuary (pers obs).</p> <p>Cultural The site has a long maori history and retains cultural significance to Whakatohea. It is an important historical site and kaimoana site for Whakatohea. A Urupa is located on the Spit (Makomako M, pers comm). The estuary is a locally important recreation and kaimoana site, Pipis and Whitebait especially. (Mitchell C, pers comm and Waiotahi Pipi Protection Society). Waiotahi Estuary is the gateway to the East Coast important landscape and aesthetic values (Clarkson/Opotiki Scheme, 1987).</p> <p>Historical 2 prominent pa sites recorded in Opotiki Historic Places Trust inventory. Historical reserve on spit protects the pa site and urupa. Historical incidents include "Karehi Potae" and Mariman incident (D. White, pers comm).</p>					
Site Importance:	<u>International</u>	National	Regional	Local	Unknown
<p>Comment:</p> <p>Waiotahi Spit is a gazetted national protected area and the presence of several threatened wildlife species and the significance of the natural coastal amenities warrants national significance. The site has been awarded international significance under the Ramsar convention because of the presence of a significance breeding population of the threatened species i.e. N.Z. Dotterel.</p>					
Existing Threats:	ACDGK				
Type & Comment:	<p>The spit is subject to cyclic periods of erosion and accretion caused by the sea (Healy T, 1977). Wild animals (possums) and other pests (rabbits) are threatening botanical values (Clarkson B, 1987). Domestic stock especially droners mobs invade the mudflats at regular intervals (personal observation). Stopbanking of drainage operations on adjacent farmland threaten the estuarine margins. Whitebait spawning areas and aesthetic values (pers obs). Recreation use conflicts with wildlife especially Dotterel breeding areas (pers obs). Vehicles and horses affect sensitive sand dune and mudflat ecologies.</p>				

Modification and Human Use: ABHQ

Historical use and farming developments on the estuarine margins have significantly altered the ecology of the site (pers obs). Roadways and causeways occur on several of the estuarine margins. Recreational use is periodically intensive associated particularly with collection of kaimoana - pipis, also fishing surf casting, white baiting and net fishing (personal observation). The site is locally important to Whakatohea for kaimoana (Makomako, pers comm).

Existing Protection:

Type & Comment: ACD

The Waiotahi Spit Historic and Scenic Reserve is a national protected area. The local government has several protected zonings also, a recreation reserve at the Waiotahi Domain. An esplanade reserve and a Urupa Reserve. The District Scheme Rural A Coastal Zoning also offers some protection. A "No overnight camping" bylaw in Recreation Reserve is significant. A MAF bulk fishing method ban occurs offshore.

Availability of Information:

Natural	1 2 3		1. Well documented
Cultural	1 2 3	Source M Makomako Whakatohea Liaison	2. Limited information (general)
Historic	1 2 3	Source Dave White Opotiki Historian	3. Little information (if any)
Threats	1 2 3		
Human Mod. & Use	1 2 3	Coastal Resource Inventory Survey 1988 DOC Opotiki	

Comment:

Subtidal information is limited to personal observations.

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

1987 Opotiki District Scheme No. 2
 Clark/Regnier 1989 Biological Survey of Reserve of West Gisborne, DOC
 Owen K 1989 NZ Dotterel Survey Bay of Plenty DOC File SPRO19 (Rotorua)
 McEwen ? Ecological Regions and Districts of NZ
 Healy TR 1977 Bay of Plenty Coastal Erosion Survey University of Waikato No. 3
 Hosking GP 1989 Conservation of Pohutukawa DSIR
 Bell BD 1986 Conservation Status of NZ Wildlife
 Beadel MS 1988 A Register of Threatened and Local Plant Taxa Eastern Region DOC
 Rasch G 1989 Wildlife and Wildlife Habitats of Eastern Region DOC
 MAFfish 1989 Auckland Fishery Management Plan

Recorded on Existing Database:

1. WERI		Comment:
2. SSWI	Rated Moderate/High (G Carlin)	Presence of Threatened Species Banded Rail and
3. PNA	No	Ferrinbird and Reducing of Habitat pp 6/10/83 (See Natural Section)
4. Geopreservation	No	
5. HPT County Inventories	Opotiki County 1983 Inventory 2 Pa Sites and Urupa Recorded	
6. Other	Forest and Bird Society Biannual Census of Waders BOP (DOC Opotiki)	See Natural
7. None		

Other Considerations:

A proposal to locate a 500 birth camping area adjacent to the estuarine area is before a planning tribunal hearing after drawing considerable local opposition. An objective assessment of the impact of the proposal on conservation values needs to be urgently undertaken (pers obs).

Accompanying Maps and Photographs:

Site Name/s:	Onekawa	Site No:	CRI 05 0058
Recorders Name:	K P Hogan	Conservancy:	East Coast
Map/Grid Ref:	W15 28764 63485	Date:	21/03/90
Brief Description of Site: <p>Onekawa is located immediately east of the base of the Ohiwa Spit at the eastern side of the Ohiwa Harbour entrance. The site extends for .5 kilometres eastwards from the Onekawa trig almost to the Bryants beach subdivision. The site comprises a remnant Pohutukawa (<i>Metrosideros excelsa</i>) forest on 60 metre coastal cliffs. Maori and European historic sites are located on and around Onekawa trig and a wide, brown sand flat profile beach occurs at the base of the sea cliff.</p> <p>The sea cliffs are designated Esplanade Reserve (Opotiki District Scheme, 1987) the land above the cliffs on which the historic sites occur is privately owned pastoral farmland.</p> <p>A motor camp is located at the base of the Ohiwa Spit, immediately below the Onekawa trig station.</p>			
Conservation Values:	Natural: ABC	Cultural: ABCD	Historic: ABC
Comment: <p>Natural The pohutukawa forest (<i>Metrosideros excelsa</i>) on the sea cliffs, although modified, is a comparatively natural landscape as only remnants remain in the Opotiki ecological district. These are important for their scarcity value (McEwen, 1987). Threatened bird species feed on the beach area: Caspian terns (<i>Hydropeogne caspia</i>), Banded Dotterel (<i>Charadrius bicinctus bicinctus</i>) and N.Z. Dotterel (<i>Charadrius obscurus</i>) and also the rare variable Oyster Catcher <i>Haematopus unicolor</i> (CRI survey 1988). The stratified sediments on the sea cliffs are geologically interesting (C. Ward personal comment).</p> <p>Cultural The natural beauty of this coastline including Ohiwa Harbour, gives distinctive character and appeal to this area such that it is an environmental asset of national significance (Opotiki Scheme, 1987). This site has a long history of maori occupation. Although much of the pa site for the cliff face has been eroded away the site remains culturally and spiritually significant to Whakatohea (Makomako pers comm). Local schools use the site for historical and geological interpretation (M. Draper personal comment).</p> <p>Historic 7 historic sites recorded in Opotiki County Historic Places inventory. Onekawa pa site is regionally important (D. White pers comm). Onekawa redoubt was used by the armed constabulary 1869 - 70 campaign - earthworks are still evident and dominate the site. Regionally important (D White pers comm).</p>			
Site Importance:	International	<u>National</u>	Regional Local Unknown
Comment: <p>Natural beauty of the coastline gives a distinctive character and appeal to this area such that it is an environmental asset of national significance (Opotiki District Scheme, 1987). Also the presence of several threatened species of wildlife warrants a national rating.</p>			
Existing Threats:	ACDJK		
Type & Comment: <p>The foreshore is subject to periods of cyclic erosion and accretion - 20 metres wide dune systems have been eroded away from the base of the cliffs in recent years (Healy, 1977). A variety of adventive plants, possums and domestic stock threaten the pohutukawa forest also recreation fires are seen as a major threat (Hosking, 1989).</p> <p>Local residents dump organic rubbish at the base of the cliff as an erosion protection measure (pers obs).</p>			

Modification and Human Use: AHI

Historical use and pastoral farming have significantly modified the site especially above the sea cliffs. The residential subdivision of Bryants Beach is located east of the site and a motor camp is located at the base of the Oniwa Spit immediately below the site. A significant shore based recreation area occurs on the foreshore below the site - little recreational use of the trig site other than historical interest tours. Fishing and general foreshore enjoyment are the main recreational use.

Existing Protection: Type & Comment:

D

The majority of the sea cliff is Esplanade Reserve. The Opotiki District Scheme Rural A Coastal Zone offers some protection and recognition of aesthetic and landscape values of the coast (Opotiki District Scheme, 1987). The Auckland area fisheries management plan excludes trawling and Danish seining within 2 nautical miles of the shore (MAFFish, 1989).

Availability of Information:

Natural	1	2	3
Cultural	1	2	3
Historic	1	2	3
Threats	1	2	3
Human Mod. & Use	1	2	3

1. Well documented
2. Limited information (general)
3. Little information (if any)

Comment:

No documentation on marine ecosystem discovered. Cultural information of a general nature.

Personal Communication: White D, Historian, Opotiki.
: Makomako M, Whakatōhea Liaison

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:

Hogan K 1988 Coastal Resource Inventory Oopotiki DOC
 1987 Opotiki District Scheme Review No. 2
 Healy TR 1977 Bay of Plenty Coastal Erosion Survey, University of Waikato, Report No. 3
 McEwen WM 1987 Ecological Regions and Districts of NZ
 Hosking GP 1989 Conservation of Pōhutukawa DSIR
 Bell BD 1986 Conservation Status of NZ Wildlife, NZ Wildlife Service, Occasional Publication

Recorded on Existing Database:

Comment:

- | | |
|---------------------------|--------------------------------------|
| 1. WERI | |
| 2. SSWI | No |
| 3. PNA | No |
| 4. Geopreservation | No |
| 5. HPT County Inventories | No |
| 6. Other | Opotiki County 1983 7 Sites Recorded |
| 7. None | |

Other Considerations:

Accompanying Maps and Photographs: