

DRAFT
ONLY

WAIKANA E ESTUARY PROPOSED SCIENTIFIC RESERVE

MANAGEMENT PLAN

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2. INTRODUCTION

2.1 Legal Description

Lot 1 DP 50376 and Lot 5 DP 52796. Both situated in Block III Kapiti Survey District. Area 27.3014 hectares.

2.2 Status

The area is currently Crown land subject to the Land Act 1948. The approval of the Minister of Transport must be obtained before the area below mean high water mark can be reserved as a scientific reserve under the Reserves Act 1977. The area is designated in the Kapiti Borough and Horowhenua County District Schemes as a proposed recreation and wildlife reserve.

3 Location

On the south side of Waikanae River estuary and adjoining Manly Street, Paraparaumu.

4 Description

The area consists of a freshwater lakelet and saltwater lagoon network surrounded by sand dunes and sandy beach.

5 Access

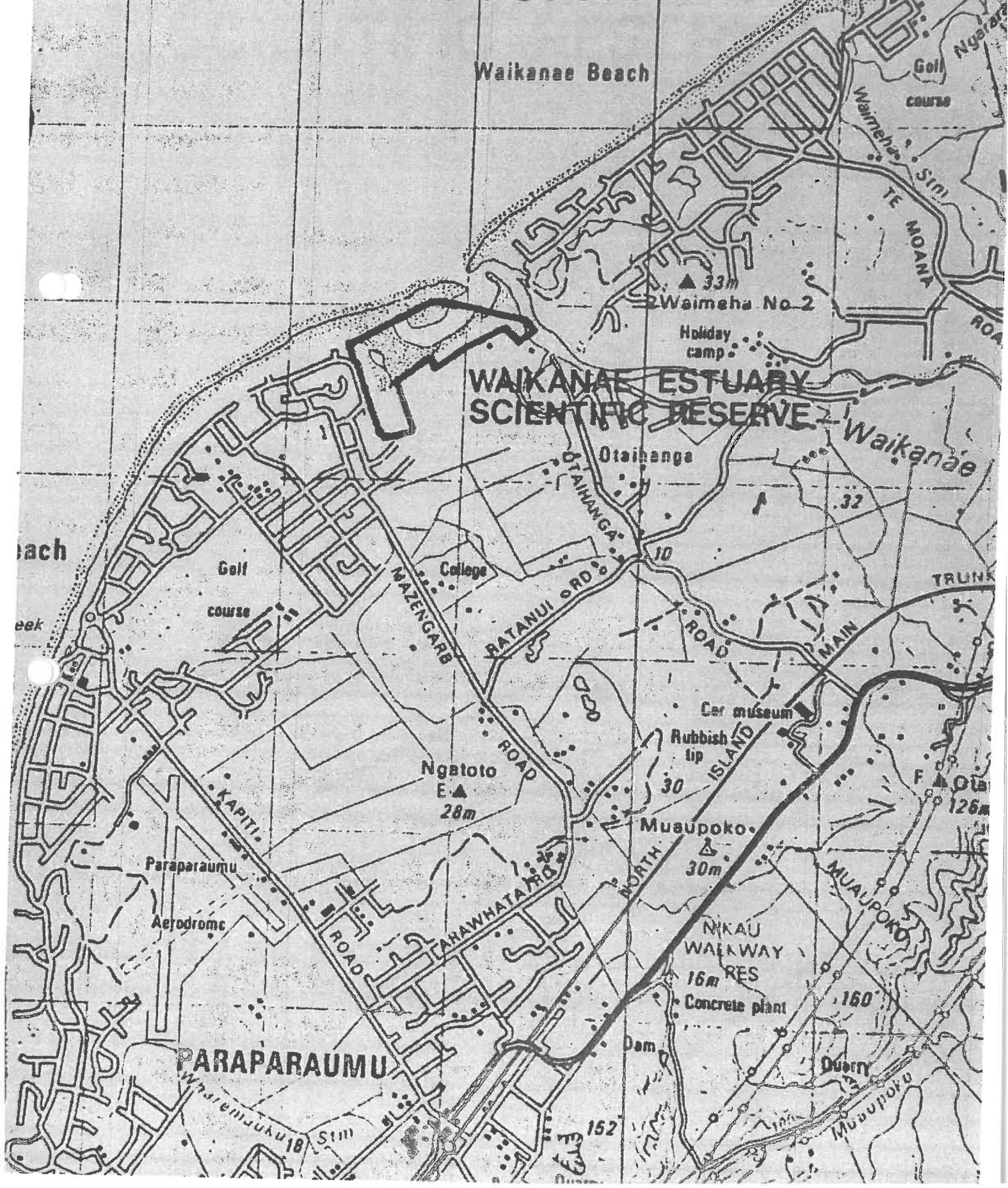
Pedestrian access into the reserve area is from Waikanae Beach and Manly Street on the west side of the reserve.

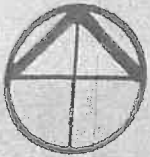
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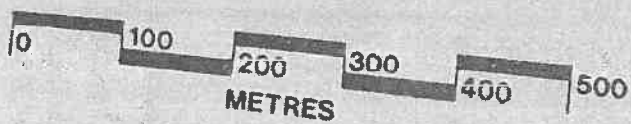
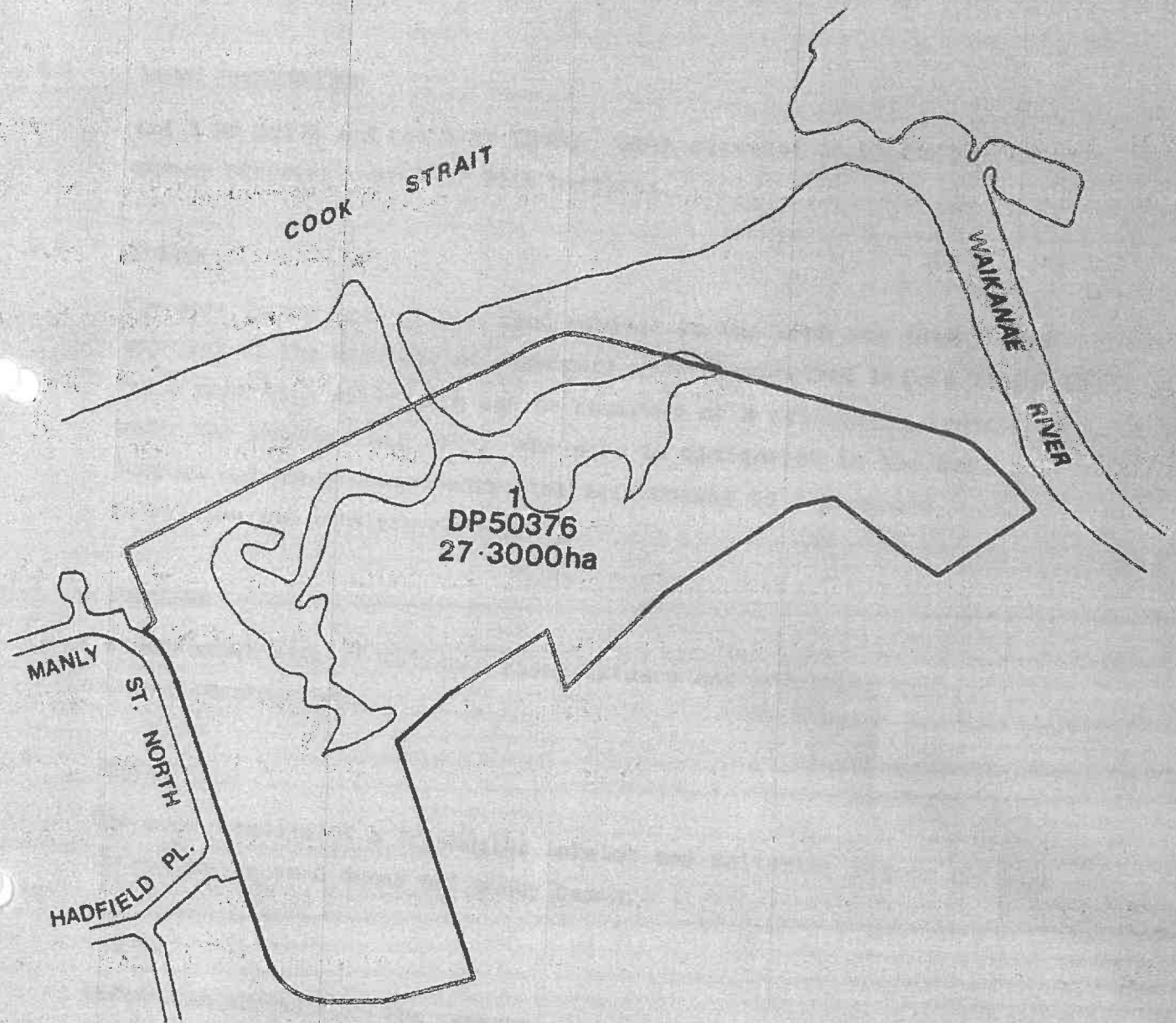
LOCATION MAP

Scale 1:50 000



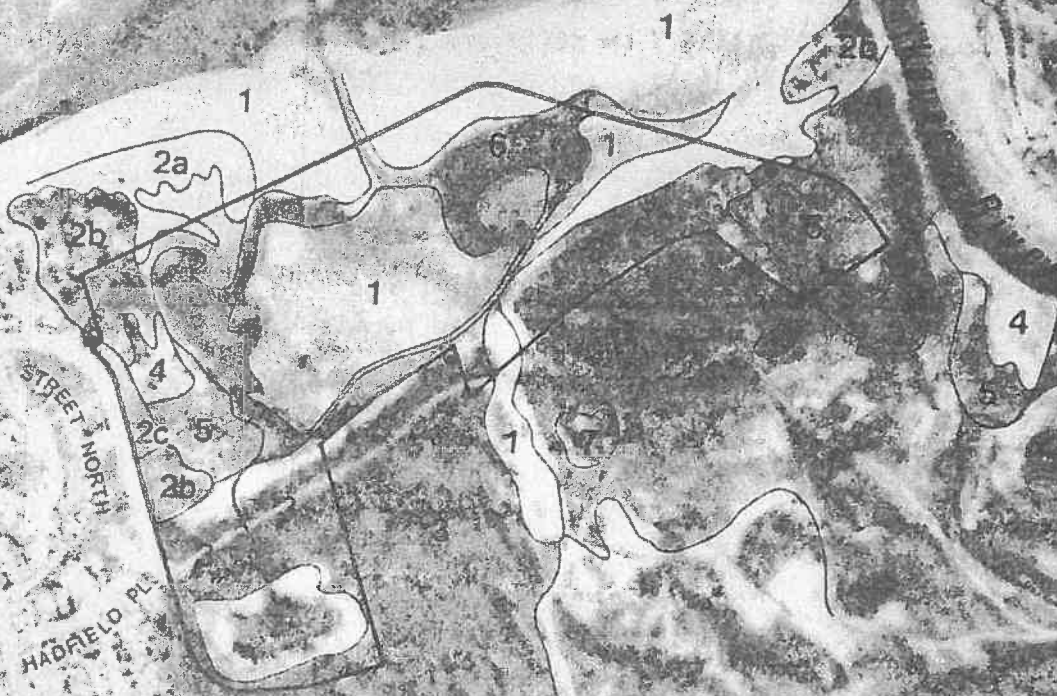


WAIKANAE ESTUARY SCIENTIFIC RESERVE



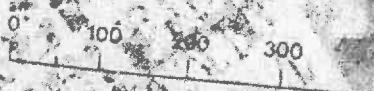
Cook Strait

WAIKANAE ESTUARY SCIENTIFIC RESERVE VEGETATION MAP



KEY

- 1 Rare sand flats
- 2a Marram-Spinifex grassland
- 2b Marram-Lignum grass-shrubland
- 2c Lignum grassland
- 3 Lignum-Stockberry/Grasses shrubland
- 4 Low salt marsh
- 5 High salt marsh
- 6 Lagoon
- 7 Swamp
- Unfilled sand dunes



River

4

5

2b

6

7

1

6

7

7

2a

2b

4

5

2c

2b

FEET NORTH

10 PL

KEY

Bare sand flats

2a

Marram-Spinifex grassland

2b

Marram-Luain grass-shrubland

2c

Luain shrubland

3

Luain-Hawthorn-Blackberry/grass

4

Lower salt marsh

5

Higher salt marsh

6

Lagoon

SWANS

RESOURCE INFORMATION

Climate

The estuary has similar climatic conditions to Wellington although it is generally warmer with an average rainfall of 1050 mm recorded at nearby Paraparaumu aerodrome. A mean annual temperature of 12.9°C with an average of 2053 sunshine hours per year have been recorded. Ground frosts are frequent in winter with prevailing winds from the north-west and south. On average, winds of more than 96 km/h occur on eight days per year and of more than 63 km/h on 75 days.

Geomorphology

The Waikanae River rises in the south-western foothills of the Tararua Range and flows westward across the tapering southern end of the Manawatu Plain, entering the sea on the northern side of the Paraparaumu foreland. The river is tidal for 2-3 km upstream from the mouth and the position of the river mouth has been subject to constant change as a result of southward longshore movement of sediments on the coast. Abandoned river channels, salt marshes, tidal sand flats and lagoons occupy the bulk of the reserve and result from man rechanneling the river to a more direct course to the sea. Low sand dunes enclosing a series of small lakelets, e.g., Lake Puketewhaino marking an earlier course of the river.

Geology

Four kilometres upstream from the estuary, the Waikanae River flows through a belt of shallow sand dunes, peat and alluvium of late Holocene age. These dunes overlies thick beach sands deposited during the last 6000 years as the coastline built seaward. The estuary is geologically very young and consists of unconsolidated sand, shells, driftwood and pumice. Gravel in the river upstream barely reaches the estuary and only after exception floods are layers of muddy silts deposited on the sandflats. The beach has continued to grow outwards with the young Waitarere dune sands accumulating during the last one thousand years.

3.4 Vegetation and Flora

The vegetation and flora of the area has been documented in several scientific papers (Wodzicki et al 1978) and distribution patterns drawn up on major vegetation types (see map):

- A. Extensive areas of bare sand between the beach, river mouth and sand dunes with few plants present.
- B. Semi-fixed sand dune areas dominated by marram and lupin.
 - (i) Open sand dunes behind the sea frontage are dominated by marram grass and spinifex.
 - (ii) Marram - lupin grass shrubland.
 - (iii) Lupin dominates on the sand dunes around the lagoon and in front of the freshwater lakelets; marram, tauhinu and tall fescue are common in the shrubland.
- C. Fixed dune covered in low shrubland dominated by lupin, blackberry, tall fescue, boxthorn and marram.
 - (i) Gorse - fescue shrubland.
- D. Submergent salt meadow covered in a low turf of sea primrose, creeping selliera and batchelor's buttons. These areas are inundated at every spring tide.
 - (ii) Emergent marsh covered during spring tides is dominated by sea rush and *Leptocarpus similis* plus lesser amounts of *Scirpus nodosus*. Marsh ribbonwood is common in the northern area of salt marsh near the oxbow. Areas of emergent marsh which are flushed with freshwater support the large *Scirpus* species: *S. americanus*, *S. fluviatilis* and *S. lacustris*.
- E. The lagoon in the sandflats contains horse's manure weed and supports a flora of algae including *Enteromorpha intestinalis* and *Ulva lactuca*. Some plants of the introduced cord grass have established in the lagoon.

- F. Lake Puketewhainoa at the southern end of the reserve is the largest fresh water lake in the Waikane estuary. It contains areas of open water but most of the lake is occupied by raupo. Tall sedge, spike rush and *Carex virgata* are common around the lake edge. The floating pond weeds *Azolla rubra*, *Lemna minor* and *Spirodela oligorrhiza* are also found in abundance.

3.5 Fauna

The mouth of the Waikanae River with its shallow lakelets, abandoned river channels, salt marshes and dune shrubland has long been a favoured locality for birds as it is one of the few estuary/wetland areas of any size in the south-western part of the North Island. The area remains an attractive habitat for up to seventy-nine species of resident and migratory waterfowl, waders and shore birds including:- New Zealand dabchick, five species of shags, three species of herons, spotless crane, pukeko, South Island pied oystercatcher, variable oystercatcher, banded dotterel, wrybill, eastern bar-tailed godwit and several species of terns and gulls. Puketewhainoa Lake is one of the few localities in the region where the spotless crane is known to breed.

Other fauna within the proposed reserve include many types of estuarine and marine invertebrates particularly worms, molluscs and crabs.

4. HISTORY

4.1 Maori History

The Waikanae rivermouth was the major scene of the last tribal battle fought in the southern North Island. A major pa Arapawaiti was constructed by the Ati-Awa tribe in 1833 (Carkeek 1966) on the southern bank of the river not far from Kenakena Point. The Ati-Awa came under attack from a neighbouring tribe the Ngati Raukawa who wanted to avenge past battles. Both tribes were friendly with Te Rauparaha of the Ngatitoa tribe on Kapiti Island (related to the Ngati Raukawa) who is said to have observed the battle from a boat offshore. At one stage he tried to land and intervene but retreated when threatened by the Ati-Awa. The Ati-Awa tribe eventually defeated the Ngati Raukawa (who retreated back to the north side of the river) and hence won the battle. Two other Maori pas had been constructed in the vicinity of the estuary but after a mass migration in 1848, all three pas fell into disrepair and by 1850 the main pa at Kenakena was reported to have been almost buried by sand. Because of the continual meander and migration of the river course, the exact location of many historic landmarks are uncertain.

4.2 Early European History

In a scientific paper on Waikanae Estuary presented in 1891, H C Field describes the area as he remembered it in 1851:

"There was a constabulary station (commanded by Major D Durie) a short distance from the river mouth on the south side. A nice grassy flat served as a parade ground and the men lived in whares on both sides of it.

When I passed the spot again in 1868 the place seemed entirely changed. The river had changed its course for a considerable distance inland and the new channel had cut right through the old parade ground. On my last visit in 1890 I found the remains of the largest moa I have ever met about a quarter of a mile south of the river."

5. BACKGROUND TO PROPOSED RESERVATION

A local government boundary that is based on the middle line of the Waikanae river as surveyed in 1898 results in the estuary falling within two local authority areas - Kapiti Borough and Horowhenua County. The river mouth over the years has tended to shift quite considerably, leading to confused boundaries, the original position of the middle line of the river bearing little resemblance to the present one. The Manawatu Catchment Board and Wellington Regional Water Boards have taken steps to divert and stabilise the river mouth (which has a tendency to naturally migrate south, causing build up of a sandbar on the north side).

A channel was dug through the sandbar enabling the river to flow more directly to the sea which has caused large areas of the estuary to dry out leaving lakelets and lagoons to the south of the river within the reserve area (see map). A ministerial requirement for a proposed wildlife and recreational reserve was served on the two local authorities in 1973. This had the effect of freezing subdivisional development encroachment on the south side of the estuary and the proposed reserve area was purchased by the Crown. It has yet to be gazetted and classified as a reserve.

6. ADJOINING LAND USE

Land along the western boundary of the proposed reserve is zoned "Residential A" in the Kapiti District Scheme (Operative 1981) and has been extensively subdivided into residential housing. Along the southern boundary, rolling shrub covered dunes overlook the estuary. This area is zoned "Residential G" in the district scheme but is currently undeveloped. Land to the north-east between the reserve area and river mouth is used for recreation activities, predominantly whitebaiting with some birdwatching and beach walking.

It is zoned "proposed wildlife and recreation reserve" in the Horowhenua County District Scheme (Operative 1980) and would be a valuable addition to the reserve area as it is presently a popular feeding and resting area for waders, terns and gulls. To the south-east, land containing an ox-bow of Waikanae River is zoned "proposed recreation reserve" in the county's district scheme. It would also be a welcome addition to the proposed reserve as it is predominantly salt marsh and contains the rare plant *Cotula dioica subsp. monroi* plus swamp birds uncommon to the Wellington region, e.g. spotless crakes.

7.4

Summary

It is clear from the above resource information that a scientific classification applicable to the reserve and that recreational values should be compatible with and subordinate to the scientific values

8. **MANAGEMENT OBJECTIVES**

The management objectives provide the basic long term aims for the future management of Waikanae proposed scientific reserve.

A. **Primary Objective**

To protect and preserve in perpetuity for scientific study, research, education and the benefit of the country, ecological associations, plant or animal communities, types of soil, geomorphological phenomena and like matters of special interest.

B. **Secondary Objectives**

1. To allow and facilitate informal public use of the proposed reserve in keeping with the primary objective.
2. To reach a greater understanding of the natural processes that are effecting changes within the reserve.

9. MANAGEMENT POLICIES

The management policies form a framework of constraints which regulate individual management decisions so they are compatible with the aims of the management objectives.

9.1 Administration

Policy: To retain administration and management of the reserve under the control of the Commissioner of Crown Lands, Wellington.

Explanation: Management will be in accordance with the Reserves Act 1977 and other relevant Acts such as the Wildlife Act 1953, Historic Places Act 1981 and Town and Country Planning Act 1977. The Commissioner liaises with the Wellington National Parks and Reserves Board on matters of policy in the management of the reserve and in the preparation and review of management plans.

9.2 Liaison

Policy: To maintain liaison with all persons and bodies whose activities in any way affect management of the reserve or the achievement of the management objectives.

Explanation: Cooperation and liaison with interested parties will help in the effective management of the proposed reserve. These include Kapiti Borough Council, Horowhenua County Council, Wellington Regional Water Board, Ministry of Works and Development, Royal New Zealand Forest and Bird Society and the Wildlife Service.

9.3 Public Access

- Policy:**
- A. To prohibit unauthorised vehicle access within the proposed reserve.
 - B. To provide and maintain pedestrian tracks within the proposed reserve.

Explanation: Vehicle use within the proposed reserve will detrimentally affect the natural fauna and flora communities present and is not compatible with the primary management objective. At present, there is no requirement for walking tracks to be constructed.

9.4 Research

Policy: To encourage and coordinate research programmes that are directed towards understanding the changes within the reserve.

Explanation: The estuarine system is continuously changing and positive management will be needed to protect the values for which the reserve was established.

9.5 Recreation

Policy: To permit informal recreational use of the reserve area in line with the management objectives. Dogs, horses, motorbikes and other vehicles are not permitted in the reserve.

9.6 Fencing and Grazing

Policy: To ensure fences are maintained in a vehicle and stock proof condition and to prohibit grazing on the proposed reserve.

Explanation: Adequate fencing and barriers particularly along the western boundary should assist in preventing unauthorised entry of vehicles from indiscriminately damaging plants and disturbing animals. Grazing is not a compatible use of the proposed reserve.

9.7 Exotic Plants and Animals

Policy: To as far as possible remove exotic plants and animals not considered to have special value or utility on the proposed reserve.

Explanation: *Spartina townsendii* has the potential to modify lagoon areas, drying them out to the detriment of other vegetation and wildlife. *Spartina* is a very effective coloniser of saline mud

flats, if it covers those flats, then the available feeding area for wading birds is adversely affected.

9.8 Noxious Plants and Animals

Policy: To as far as is practicable, eradicate noxious plants and animals from the reserve.

Explanation: Plants such as boxthorn, blackberry and gorse present on some parts of the proposed reserve, e.g. north of Lake Puketewhainoa inhibit access to vantage points and detract from the visual impact of the reserve.

9.9 Fires

Policy: A. To prohibit the lighting of fires within the proposed reserve.
B. To maintain fire protection under the New Zealand Forest Service fire plan.

Explanation: The presence of smoke from fires may disturb wildlife and burning would destroy wildlife and cause severe damage to vegetation as well as encouraging erosion of dunes by wind.

9.10 Litter

Policy: To foster a 'take home' policy with regard to litter.

Explanation: The problem of rubbish disposal will be minimised if visitors remove their own rubbish.

9.11 Interpretation

Policy: To provide adequate and sensitive interpretation of the reserve through the use of informative signs and brochures.

9.12 Signs

Policy: To provide and maintain signs for the public to locate and identify the reserve and to indicate that dogs, horses, motorbikes and other vehicles are not permitted.

Explanation: Strategic and economic use of signs will foster public protection and preservation of the reserve.

9.13 Boundaries

Policy: To negotiate for inclusion within the reserve adjoining land containing scientific values worthy of reserve status.

Explanation: Areas in the Waikanae Estuary forming a natural extension to the proposed reserve would be valuable additions, especially the sandy flats between the proposed reserve and the river mouth and the area of salt marsh to the south-east.

9.14 Foreshore

Policy: To seek a grant of control under the Harbours Act 1950 over the foreshore bounded by the reserve.

Explanation: A grant of control over this area will enable compatible management with the reserve.

9.15 Historical Artefacts

Policy: To preserve any historic artefacts found on the reserve.

Explanation: The preservation of any archaeological or historic material will be carried out in conjunction with the New Zealand Historic Places Trust.