

Wai 55/201 H9

TE WHANGANUI A OROTU

**Summary of recorded
Archaeological
Information**

A Report To The Waitangi Tribunal

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Department of Conservation
Napier
October 1992

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BACKGROUND AND EXPERIENCE

My name is Pamela Joy Bain. I hold the degrees of Bachelor of Arts (Honours) and Master of Arts in Anthropology from the University of Otago. I am employed by the Department of Conservation (East Coast and Hawke's Bay Conservancies) as Conservancy Archaeologist. I am responsible for the protection, conservation and management of historic resources within these conservancies. I have previous experience in archaeology on the East Coast and have been involved in research and fieldwork in New Zealand and overseas. I am a committee member of the Gisborne branch of the Historic Places Trust, a council member of the New Zealand Archaeological Association and filekeeper for the New Zealand Archaeological Association's East Coast Site Record File.

INTRODUCTION

The objective of this report is to summarise recorded archaeological information relating to Te Whanganui a Orotu. This involved researching recorded sites in the New Zealand Archaeological Association (NZAA) Site Record File, excavation reports and radiocarbon dates. No new research has been undertaken.

This report has been compiled in association with Toro Waaka, Kaupapa Atawhai Manager, Department of Conservation, Elizabeth Pishief, NZAA Filekeeper, Hawke's Bay, and members of Te Whanganui a Orotu Claimants Committee.

The Historic Places Act 1993, describes an archaeological site as:

"any place in New Zealand" that -

- (a) either
 - (i) was associated with human activity that occurred before 1900; or
 - (ii) is the site of the wreck of any vessel where that wreck occurred before 1900; and
- (b) is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand.

Little systematic archaeological survey work has been undertaken in the area surrounding Te Whanganui a Orotu. However, sites recorded indicate a clear pattern of large permanent settlement, such as at Otatara Pa. Further survey work would greatly increase both our knowledge of the settlement pattern associated with the harbour, and also our ability to protect these sites from further damage. This need is clear when considering the number of sites which have undergone severe damage, with some disappearing totally.

The study area analysed is from the Esk River in the north to the Tutaekuri River in the south. Sites discussed are associated with the low foothills directly surrounding the area of Te Whanganui a Orotu harbour. It must also be acknowledged that many sites further inland would also have had links to this major food source.

This report aims to present a summary of the archaeological evidence so far recorded but does not attempt to document in detail the associated history and oral traditions of the people of Te Whanganui a Orotu.

ARCHAEOLOGICAL SITES RECORDED IN NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION (NZAA) SITE RECORD FILE

The NZAA file contains archaeological sites recorded over the past few decades mainly by volunteers interested in the protection of archaeological sites. It is not a complete record of archaeological sites, but rather an inventory of recorded sites. There are still many areas of Hawke's Bay which do not have sites recorded in the file. It is available on request for research purposes but access is carefully monitored in order to ensure the protection of recorded sites. The Hawke's Bay filekeeper is Elizabeth Pishief.

In early 1990 a project was undertaken by Te Runanga o Ngati Kahungunu in association with Mark Allen, an archaeologist from the University of California. The objectives of Te Runanganui o Ngati Kahungunu Pa Research Project, a MACCESS course, were to locate as many fortified pa as possible, to ensure that there was an accurate map of each pa whenever possible, to gather as much history as possible to be presented with the maps and to train young people in this type of research (Allen 1991).

The work of this research project, along with other archaeological surveys forms the basis of this report.

Sites recorded in the NZAA file cluster in groups along the edge of Te Whanganui Orotu (Figure 1).

Petane/Bay View Area

Before the 1931 earthquake, the Esk or Petane River used to run along beside the foothills to empty into Te Whanganui a Orotu. This would have been a very rich area with fertile soils on the slopes of the hills, freshwater resources from the river, and easy access to the coast and harbour, particularly famous for its flounder (Allen 1991).

Kaimata pa (V20/8, in NZAA File) is a small well defended pa situated directly above the Taupo turn off. The pa was strongly defended by ditches. It was built about 400 years ago by Chief Hikawera (Allen 1991). Today this site consists of defensive ditches, and is associated with clusters of terraces, pits and midden (V20/15 - 17, 31).

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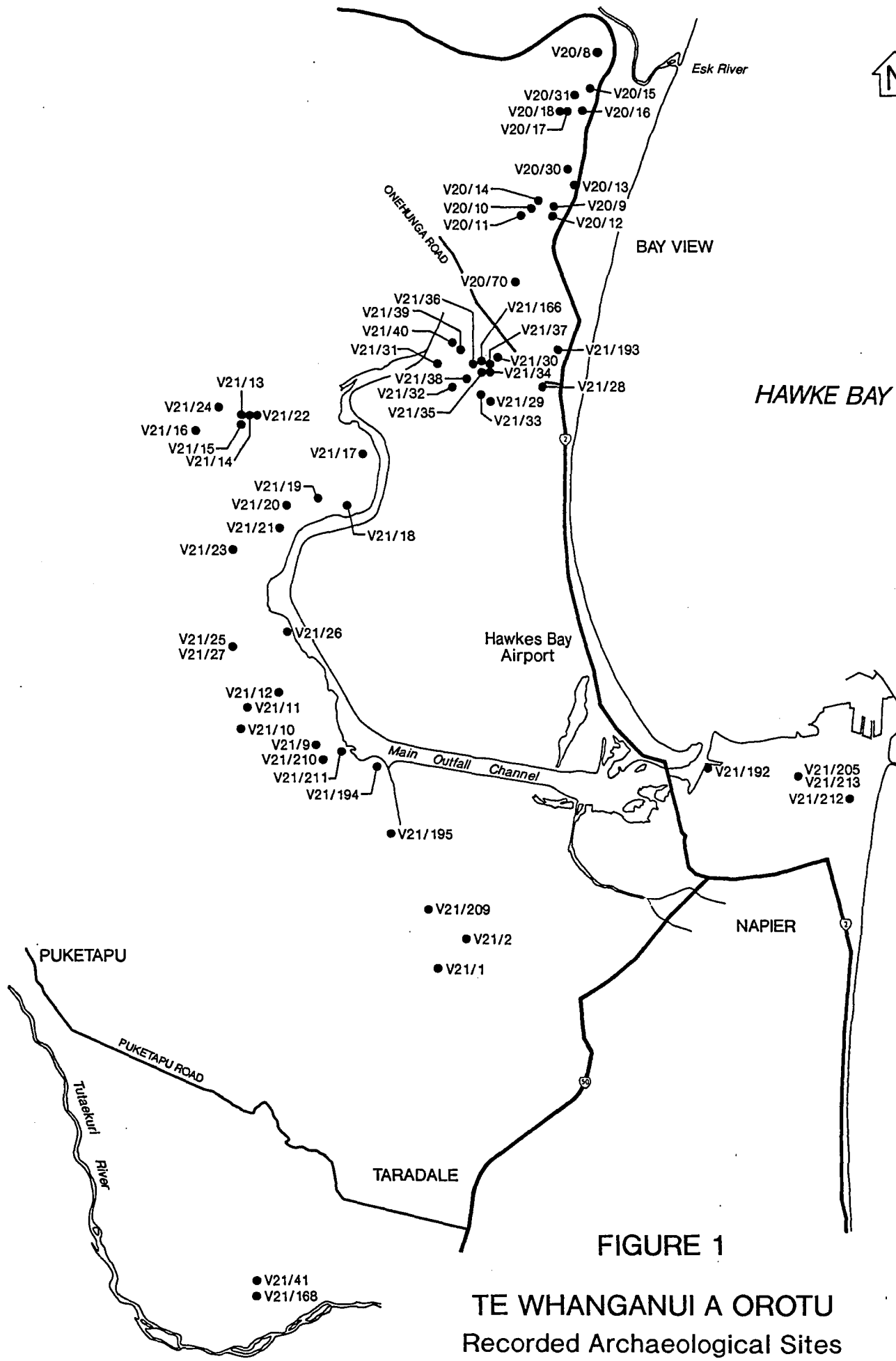


FIGURE 1

TE WHANGANUI A OROTU
Recorded Archaeological Sites



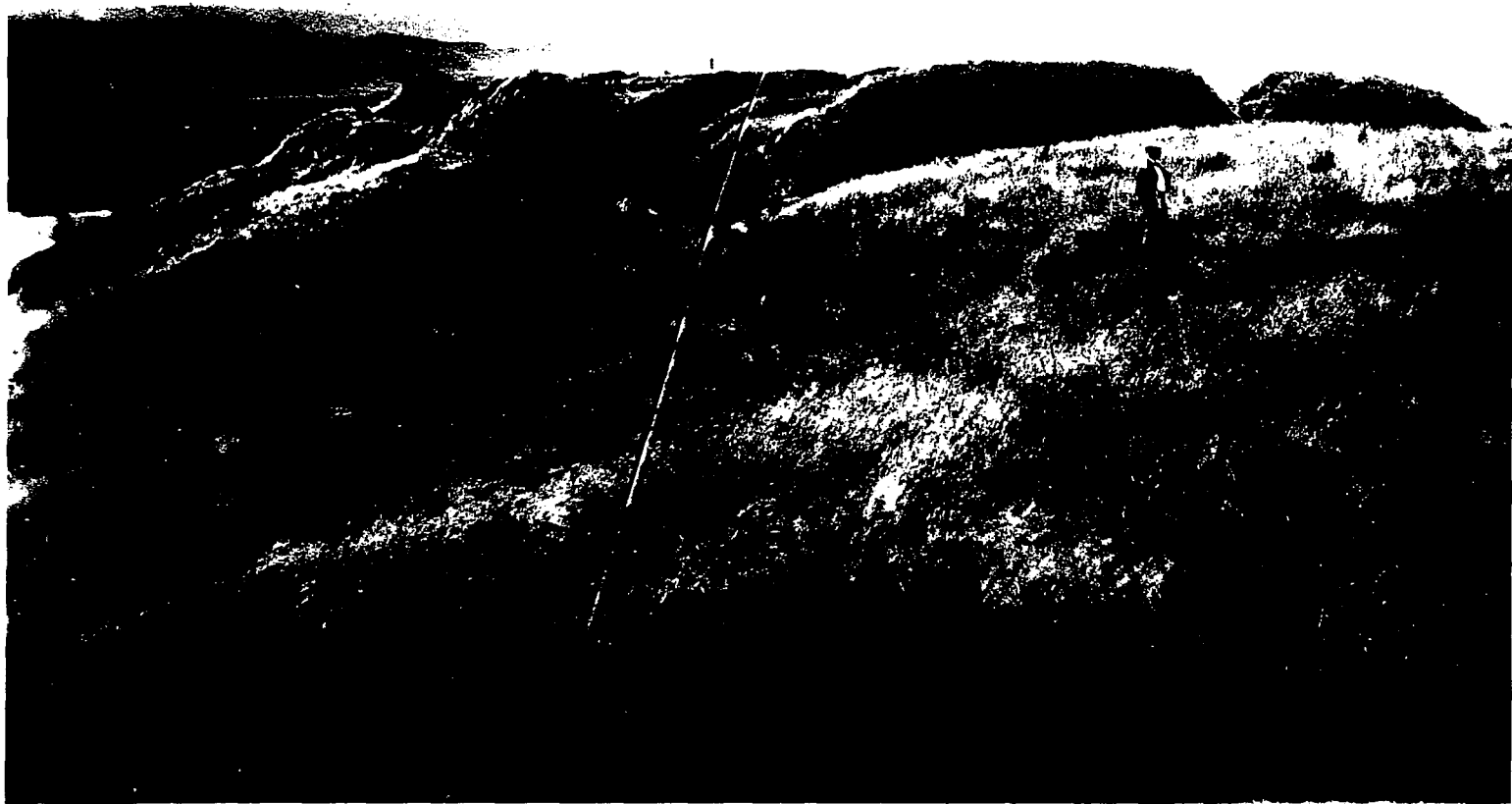


Figure 2 : Kaimata Pa (V24/8) at the turn of the century. (Photo by Augustus Hamilton, courtesy of the Museum of New Zealand, Te Papa Tongarewa).

Heipipi pa and Titi o Hawea pa (V20/9 - 14, 30) occupied the same area on the southern edge of the hills directly above Bay View. Heipipi is traditionally older, being one of the first pa of Hawke's Bay and contemporary with Otatara (Allen 1991).

Heipipi was a very large pa, nearly a mile in length which ran along the top of the ridge. Elsdon Best notes that "On the northern slope were seen many rua tahuhu or pits of semi-subterranean food stores ... The flattened hut sites of the former inhabitants are seen in numbers, and shell middens are also in evidence" (Best 1975 : 291).

Buchanan (1973) notes that Ngati Awa built Heipipi. Traditional history relates that Heipipi was attacked by Taraia and his followers around the 15th century (Prentice, 1976).

Further to the south a midden was recently located on the hill known as Maporiki (V20/70).

Ahuriri/Wharerangi Area

This name refers to the inner area of the harbour. This was clearly a most desirable place to live. "It was a haven for fish, shellfish and birds. It was located near fertile slopes with northern aspect which were well suited to gardening, as well as the coast and sea. Finally, it was very convenient to the major river systems of central Hawke's Bay which had their own resources and served as transportation routes" (Allen 1991).

At the northern end of Te Whanganui a Orotu is a cluster of hills which were once islands situated near the northern entrance to the harbour, Keteketerau.

These islands were fortified and were strong fighting pa due to their inaccessibility, except by canoe. The island Parapara (V21/193) has disappeared due to quarrying for road metal. The pa which stood on it was last attacked by the Waikato and Taupo tribes about 1824 (Buchanan 1973, Prentice 1976).

Te Ihu o Te Rei, (V21/28) was another island near the channel which was also a strong pa. It too was attacked in the early 1820's by tribes led by Te Heuheu II (Buchanan 1973, Prentice 1976). The island was later used by the Pakeha as a quarantine station. This ancestral burial ground has suffered ongoing desecration. Over the years it has been quarried for road metal despite the location of burials. In 1991 the site was extensively damaged by bulldozer work. This work uncovered a large midden containing pipi, mussel, cockle and cats eye.

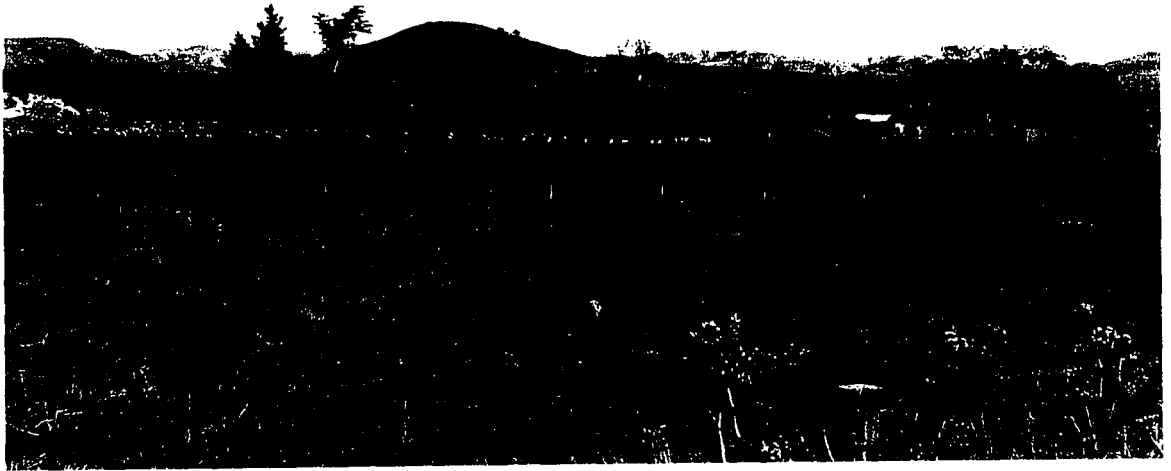


Figure 3 : Te Ihu o Te Rei (1991).



Figure 4 : Damaged midden - Te Ihu o Te Rei (1991).

In 1978 an archaeological survey of the island Roro-o Kuri was carried out (Jeal and Walton 1979). This survey was undertaken as a result of damage caused by quarrying. A range of sites were recorded on this island including midden, pits and terraces (V21/32 - 40, 166, 29). The midden remains have been identified as cats eye, pipi, cockle, tuatua and in one case included fishbone.

A sandstone rubbing stone artefact (V21/30) has also been located on this island and was deposited in the Napier Museum.

Otiere Pa (V21/31) was a strongly defended pa on the western most spur of Roro-o-Kuri. It was defended by two ditches and banks and contains many terraces and middens. This pa is still in excellent condition. It also was attacked by Te Heuheu II in 1820's (Buchanan 1973, Prentice 1976).



Figure 5 : 1931 - Otiere and Otaia pa the day after the earthquake. (Courtesy of Hawke's Bay Museum).

To the south, terraces and groups of pits (V21/10 - 12, 181) are further evidence of settlement on the foothills.

Archaeological evidence of gardening practices is recorded in a cluster of sites (V21/13 - 16) which each contain a number of large pits. Without excavation, it is difficult to ascertain their specific use, but it is proposed that these pits were for the storage of kumara.

This is also the case on Maraetara Point (V21/17 - 24) where a number of pits and terraces have been recorded - further evidence of settlement along the edges of Te Whanganui a Orotu.

Immediately west of the airport is Kouturoa pa (V21/26), an elaborately defended headland pa. It was protected by several ditches and utilised high steep slopes for defense. The defended area was small with few features such as house sites (Allen 1991). This pa was one of the residences of Ngati Hinepare and Ngati Mahu (Parsons 1991b)

Associated with this pa are terraces and middens (V21/25, 27) containing cockle and pipi.

South of this group of sites is Pa Poto or Te Poraiti pa (V21/9), a small headland pa, close to the former shore of the lagoon. It is defended by two ditches and banks and contains storage pits and midden (Allen 1992). Te Poraiti pa was a landing place and pa site belonging to Ngati Hinepare. In Colenso's day it was occupied by the Ngati Hinepare Chief Porokoru Mapu and his father Tareahi (Parsons 1992a).

Also associated with Te Poraiti pa is the urupa Te Rere a Tawhaki (V21/211) just inside Wharerangi Native Reserve where Tareahi was buried (Parsons 1992a).

A midden (V21/210) recorded associated with Te Poraiti pa contains mainly cockle.

Evidence of the continued pressure on these sites is the fact that so many have been damaged or destroyed.

Ohuarau (V21/194) was a pa on the edge of Te Whanganui a Orotu at Poraiti. It was originally defended by a ditch and bank across the headland (Allen 1991) which was bulldozed in the 1980's. In the early 1800's this site was occupied by the Ngati Hinepare Chiefs Haemania Pakapaka and Tareahi (Parsons 1992a).

Te Ikatuwhenua pa (V21/195) also had a defensive ditch and shell midden before it was destroyed. This site was a pa of Ngati Hinepare and the birthplace of Te Wahapango's mother Maku (Parsons 1992a).

In July 1982 skeletal material was uncovered during drainage work near Poraiti (V21/213) and is reported in Hull (1986).



Figure 6 : Te Poraiti pa 1992.

Pakeke pa (V21/192) was formerly an island located near the port of Napier at Westshore. This pa protected the Ahuriri outfall channel to the sea. This island was the fortress of the local hapu in times of war. It was attacked and overrun by a confederation of tribes about 1824.

Recently recorded near Park Island is Te Umuroimata Pa (V21/209). This site has been damaged by bulldozing but the remains of ditch and bank, terraces and midden are still visible.

Also in the Park Island vicinity middens containing cockle, tuatua and pipi have been recorded (V21/1, 2).

Middens have also been recorded on Napier Hill (V21/212, 205).

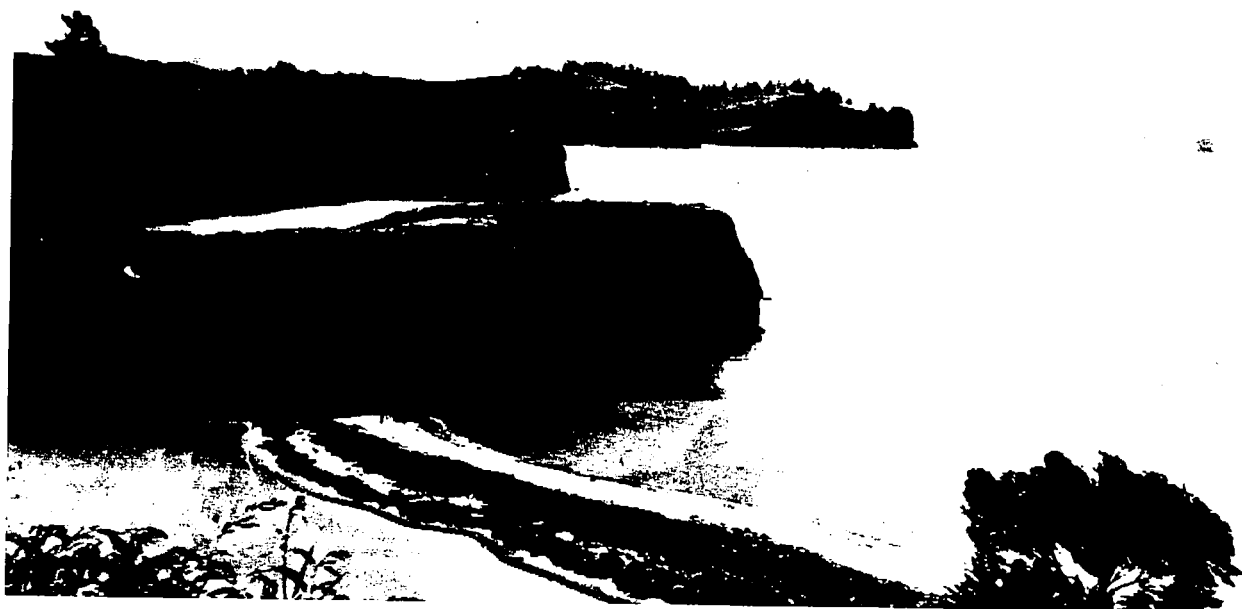


Figure 7 : Te Umuroimata pa on left in 1926. (Photo courtesy of Hawke's Bay Museum).

Tutaekuri Area

The Tutaekuri was one of the most important rivers in Hawke's Bay, flowing into the southern end of Te Whanganui a Orotu.

Otatara and Hikurangi pa (V21/41, 168) are on the banks of this river. This pa is the largest in Hawke's Bay covering approximately 40 hectares. It commanded a great position which allowed access to Te Whanganui a Orotu, excellent garden areas on the lower slopes, fishing grounds, shellfish and eels. The river served as a transportation route to the coast as well as the interior. Freshwater was not a problem due to the numerous springs within the pa itself (Allen 1991).

This pa is heavily terraced with many whare sites and storage pits. The defences consist of a long length of low bank, a small ditch and bank at the top and a double line of ditches which have since been quarried away.

Otatara was originally two separate pa - Hikurangi at the top and Otatara below. Otatara has been extensively quarried for road metal.

Otatara Pa was occupied in very early times. According to tradition Otatara Pa was built by Koaupari of Ngati Awa. Already occupying the area were the Ngati Whatumamoa. Several generations later Ngati Kahungunu, under Taraia attacked the two pa and although Hikurangi was captured by subterfuge Taraia was unable to take Otatara.



Figure 8 : Otatara Pa (V21/41, 168) in 1899 (photo by Augustus Hamilton, courtesy of the Museum of New Zealand, Te Papa Tongarewa).

RADIOCARBON DATES

Radiocarbon dating is a scientific method of dating material such as shells, wood and bone. This method clearly establishes a settlement date associated with the material dated. It does not preclude the possibility of earlier or later settlement.

Radiocarbon dates have been obtained for a number of sites around Te Whanganui a Orotu, some as part of Te Rununganui o Ngati Kahungunu Pa Project.

Kouturoa (V21/26)

Shell collected in November 1990 from this site was subjected to radiocarbon dating. Three areas were sampled, returning dates of 750 ± 50 BP, 840 ± 45 BP and 710 ± 45 BP.

These radiocarbon dates clearly show that Kouturoa Pa was occupied around the 15th and 16th centuries.

Heipipi/Titi o Hawea (V20/9 - 14)

Shell from this site was also radiocarbon dated. The sample was collected in November 1990 from exposed midden. No excavations were carried out.

Dates received are 730 ± 45 BP, 680 ± 45 BP and 700 ± 45 BP.

These radiocarbon dates indicate that Heipipi was occupied during the 16th century.

Te Ihu o Te Rei (V21/28)

After an extensive midden was uncovered on Te Ihu o Te Rei in 1991, shell samples from the top layer of this midden were collected for radiocarbon dates. These dates are recorded as 660 ± 45 BP and 720 ± 45 BP.

These dates indicate that Te Ihu O Te Rei was occupied around the late 16th and early 17th centuries.

Te Poraiti (V21/9)

Two shell samples were collected in November 1990 for radiocarbon dating. These dates are 660 ± 45 BP and 790 ± 50 BP.

These radiocarbon dates indicate settlement periods during the late 15th century and early 17th century.

Otatara Pa (V21/41)

In September 1990, during an excavation of a terrace at Otatara pa, charcoal was collected and dated at 414 ± 63 BP.

In 1991 two shell samples were collected from middens on the pa and dated at 810 ± 45 BP and 750 ± 45 BP.

Radiocarbon dating evidence suggests that Otatara pa was occupied during the late 15th century and early 16th century.

These radiocarbon dates are clear evidence of settlement on major pa sites around Te Whanganui a Orotu, from the 15th to 17th centuries.

EXCAVATION

Archaeological excavation today is usually only undertaken when a site is at risk of destruction or for some specific research project.

Excavation can only be initiated with the permission of the tangata whenua and the Historic Places Trust. Information gained from excavation can further knowledge into settlement patterns, and environment for example.

Two people have carried out excavations of sites associated with Te Whanganui a Orotu.

During the mid 1960's Dante Bonica undertook a number of excavations and surface collections on various archaeological sites around Te Whanganui a Orotu (Bonica 1967, 1968). He mentions several important sites which have not been recorded in the NZAA File. These include:

1. A site situated on a cliff off Scinde Island which revealed small huts, bush bird bone, sea bird bone, small fish bone, shellfish, and obsidian and flint flakes.
2. The westshore midden site where a greywacke adze was located.
3. Islet camping site no. 1 which was mainly composed of pipi shells with some greywacke flakes, cores and hammerstones.
4. Islet camping site no. 2 which was (pre earthquake) surrounded by deep water and possessed an excellent canoe harbour. The economy was based on shellfish gathering with supplementary fishing. The artefacts recovered were greywacke knives, a sandstone grinding stone and an ignimbrite hangi stone (imported from Taupo).

Roro-o-kuri Island

On Roro-o-kuri island he carried out a number of excavations associated with a pa and midden site. Further research into his maps needs to be undertaken to ascertain the exact locations of these sites and whether they are recorded in the NZAA File.

1. Pa site: A defended pa site.

Artefactual materials included greywacke woodworking tools, greenstone carving chisels, human bone needles and spearheads, a fragment of an ornamented whalebone comb, a pestle and mortar for grinding red ochre.

Economy: The excavation revealed evidence of pipi and cockle gathering, large and small fishbones, forest bird bone, kiore and kuri bones suggesting a wide range of available resources.

2. Midden

This seemingly unimportant area revealed evidence of very early settlement. It is thought the site was first inhabited somewhere between 12th and 13th centuries.

Economy: The economy was based on fishing and to a lesser extent shellfish gathering.

Artefactual material: Fish hooks were manufactured on the beach using the leg bones from small moa with tools of imported flint, obsidian and jaspers. Three bone needles were found in the excavated area, and fragments of adzes made from Nelson/Marlborough argillite. The most interesting artefact was an imitation sperm whale's tooth made from seal tooth. It is a personal ornament which is associated with the period of settlement before 15th century.

Immediately above this early deposit was a more recent settlement layer containing mainly shellfish and much less bird bone and fish bone than in the earlier layer.

Artefacts included a barb for a composite bait hook made of human bone and a bone barracouta lure point.

Te Ihu o Te Rei

Excavations were also undertaken at two locations on Te Ihu O Te Rei - the north end, and a shellfish midden below the island to the north.

Economy: Shellfish gathering was the most important aspect of the economy on this site. Excavation indicated that fishing was less common than on other sites of northern Te Whanganui a Orotu. Other food remains included: small bush bird bones, seabird bones, dog and sea mammal bones. Tuangi (cockle) was the most abundant shellfish, but middens also included pipi, mussel (kuku), paua and kakahi. Bonica recorded that the shellfish middens were 3 feet deep. Evidence of fishing was less well represented but included snapper, kahawai, NZ herring, flounder, sole, and stingray. A large quantity of bone from a small whale species was also found.

Artefactual Material: Bone artefacts located included two needles, a necklace toggle and point of a composite fish hook.

The excavation revealed evidence of adze manufacture using local greywacke and sandstone for grindstones. A surface collection yielded 20 complete or portions of hoanga, four complete or unfinished adzes and three hammerstones. Excavation located another grindstone, two more hammerstones, an adze and flake tools of obsidian, chert and greywacke.

A pumice tattoo pigment pot with remnants of the original solid black pigment inside, was also located.

Shell artefacts excavated included a pipi shell cutter and a kaka poria of paua shell, a leg ring for a tame parrot.

Bonica's excavations on sites around Te Whanganui a Orotu help to establish a pattern of settlement. Evidence of settlement prior to 15th century is indicated by artefactual material such as a seal tooth pendant and moa bone fish hooks. The economy of this site was based on fishing with less shellfish gathering.

The excavations of middens indicated an economy based on fish, forest birds, kiore, kuri and shellfish. The artefactual material is extensive and varied. The location of a range of imported stone resources indicates the value of trade.

Otatara

In January 1990, Mary Jeal (Jeal 1990) carried out an excavation of a terrace on Otatara Pa (V21/168). The terrace was 20m x 3m facing north and the main feature was a raised rim pit. Three fireplaces were located and one post hole. Two shells were located and one piece of obsidian.

PROTECTION

During 1991 Te Ihu o Te Rei pa (V21/28) was badly damaged. Discussions between Te Whanganui a Orotu kaumatua and Napier City Council identified a number of protection measures for the damaged site. One of these was the protection of the large exposed midden.

In November 1991 this midden was carefully covered with chicken mesh to hold it in place and then covered over with soil and grass. Protection of sites in this way is unusual and this will be monitored to ensure it retains the soil cover.



Fig.9 Protection of midden at Te Ihu o Te Rei (V21/28)

ARTEFACTUAL MATERIAL

A range of artefactual material from archaeological sites associated with Te Whanganui a Orotu is held in the Hawke's Bay Museum. A study of these artefacts could greatly increase our knowledge of the settlement of these archaeological sites. This analysis has not been completed for this report.

Drawings of artefacts recovered during Dante Bonica's excavations are incorporated in his reports (Bonica 1967, 1968).

FUTURE ARCHAEOLOGICAL RESEARCH

This report summarises the archaeological research undertaken to date. The overriding message is the amount of destruction which has occurred to the sites surrounding Te Whanganui a Orotu.

Of the pa sites, Pakeke pa, Parapara pa, Ohuarau pa, Te Ikatuwhenua pa have all been totally destroyed. Other sites such as Heipipi pa, Otatara pa, Otiere pa and Te Umuroimata pa have undergone significant damage due to a range of factors from quarrying to farming. Te Ihu o Te Rei has recently been damaged by bulldozer work.

This destruction indicates a clear need for a proactive assessment of the sites associated with Te Whanganui a Orotu in order to develop and implement specific protection recommendations for each area.

The rate of development around the edges of the lagoon is putting these sites at greater risk. It seems essential that a systematic recording programme is undertaken. This will include attempting to relocate sites discussed by Dante Bonica in his excavation report, some of which possibly date to before the 15th century.

It should also attempt to locate the physical remains of sites which are associated with the traditions of Te Whanganui a Orotu, bringing together the traditional and archaeological information.

A greater knowledge of the sites which remain around the harbour will enable a more planned approach to their protection.

SUMMARY

The area surrounding Te Whanganui a Orotu was clearly an important place to live. The harbour offered enormous food resources and access to major river systems. The surrounding north facing slopes were well suited to gardening and the views from these foothills are expansive.

Archaeological evidence supports this conclusion. Surrounding the harbour are eleven recorded pa. Some, like Otatara, are of spectacular size. Recorded evidence of terraced undefended settlements is also extensive and supports the premise that this area was clearly an important place to live.

The availability of enormous food resources is reflected in both the number and size of recorded middens containing a range of shell remains. From my experience, middens the size of that uncovered on Te Ihu o Te Rei (V21/28) are rare. Information from excavations undertaken by Bonica indicate available food resources included fish, forest birds, kiore and kuri as well as shellfish.

And further evidence of settlement can be established from the variety of storage pits recorded. Although it is difficult to ascertain the exact use of these pits without excavation, research elsewhere in the country indicates they were for the storage of kumara. This therefore indicates that settlement in the area surrounding Te Whanganui a Orotu was permanent rather than seasonal.

Radiocarbon dates from five pa surrounding Te Whanganui a Orotu establish settlement clearly between the late 15th and early 17th centuries. These dates do not preclude other periods of settlement also and Bonica excavated a site which can be associated, through its economic remains and artefactual material, to a period prior to the 15th century.

So, to summarise, from the recorded archaeological evidence, it can be established that the area surrounding Te Whanganui a Orotu was a desirable place to live. Settlement sites are both defended and undefended, and settlement was large and permanent. Gardening was carried out on the surrounding slopes and there was access to a variety of valuable food resources. Radiocarbon dates place this settlement between the late 15th and early 17th centuries and artefactual material indicates some settlement may have been even earlier.

REFERENCES

- Allan, M (1991) Te Runanganui o Ngati Kahungunu Pa Research Project. Unpublished report.
- (n.d.) Report to NZ Historic Places Trust on Excavating and Archaeological Sample Collection conducted in Hawke's Bay. Department of Anthropology, UCLA.
- Best, E (1975) The Pa Maori, Dominion Museum Bulletin No. 6, Wellington.
- Bonica, D (1967) Excursion to Beacon's Area, Napier Inner Harbour. December 5, 1967.
- (1968) History Field Trip. End of year - 1968. Held in NZAA Hawkes Bay File.
- Buchanan, J D H (1973) The Maori History and Place Names of Hawkes Bay, Ed D R Simmons, A H and A W Reed, Wellington.
- Hull, A G (1986) Pre-A.D. 1931 tectonic subsidence of Ahuriri Lagoon Napier. NZ Journal of Geology and Geophysics. 29 : 75-82.
- Jeal, M (1990) Otatara Pa Excavation Report. Held in NZAA Hawkes Bay File.
- Jeal M and A Walton (1979) Ahuriri Farm Settlement : An Archaeological Site Survey, Unpublished report.
- Parsons, P (1992a) Te Whanganui a Orotu. Claimants report to the Waitangi Tribunal.
- (1992b) Te Whanganui a Orotu. Traditional Use and Environmental Change. A report to the Waitangi Tribunal.

Appendix 1

ARCHAEOLOGICAL SITES RECORDED IN NZAA FILE

<u>V20</u>		<u>Grid Reference</u>	
8	Kaimata pa	2843500	6193700
9	Midden/pits/terraces - Heipipi	2842900	6191600
10	Midden/pits/terraces - Heipipi	2842600	6191600
11	Midden/pits/terraces - Heipipi	2842500	6191500
12	Pits/terraces - Heipipi	2842900	6191500
13	Midden/pits - Heipipi	2843200	6191900
14	Pits - Heipipi	2842700	6191700
15	Pits, ditch and bank	2843400	6193200
16	Pits, midden, house floor	2843300	6192900
17	Pits, midden, oven	2843100	6192900
18	Pits	2843000	6192900
30	Midden, pits, terraces - Heipipi	2843100	6192100
31	Pits	2843200	6193100
70	Midden	2842400	6190600
<u>V21</u>			
1	Midden	2841400	6181400
2	Midden	2841800	6181800
9'	Te Poraiti/Pa Poto	2839800	6184400
10	Pits	283880	6184600
11	Terraced Settlement	2838900	6184900
12	Terraces	2839300	6185100
13	Pits	2838800	6188800
14	Pits	2838900	6188800
15	Pits/midden	2838800	6188700
16	Pits	2838200	6188600
17	Settlement	2840400	6188300
18	Settlement	2840200	6187600
19	Terraces/pits	2839800	6187700
20	Terraces/pits	2839400	6187600
21	Terraces/pits	2839300	6187300

22	Terraces	2839000	6188800
23	Pits	2838700	6187000
24	Pits	2838500	6188900
25	Terraces/midden	2838700	6185700
26	Kouturoa Pa	2839400	6185900
27	Terraces	2838700	6185700
28	Te Ihu o Te Rei Pa	2842800	6189200
29	Middens	2842100	6189000
30	Artefact	2842200	6189600
31	Otiere Pa	2841400	6189500
32	Terraces/midden	2841600	6189200
33	Terraces/midden/pits	2842000	6189100
34	Terraces	2842100	6189400
35	Midden	2842000	6189400
36	Midden/terraces	2841900	6189500
37	Midden	2842100	6189500
38	Midden	2841800	6189300
39	Midden	2841700	6189700
40	Midden/pits/terraces	2841600	6189800
41	Otatara pa	2839000	6177200
168	Otatara pa	2839000	6177000
166	Midden/terraces	2842000	6189540
192	Pakeke pa	2845000	6184100
193	Parapara pa	2843000	6189700
194	Ohuarau pa	2840600	6184100
195	Te Ikatuwhenua pa	2840800	6183200
205	Midden	2846200	6184000
209	Te Umuroimata pa	2841300	6182200
210	Midden	2839900	6184200
211	Urupa Te Rere a Tawhaki	2840100	6184300
212	Midden	2846900	6183700
213	Burials	2846200	6184000