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## ARCHAEOLOGY IN NEW ZEALAND



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# ARCHAEOLOGICAL EXCAVATIONS AT WAIPIRAU PĀ, AHUAHU/GREAT MERCURY ISLAND, 1984

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## Introduction

In January 1984 there was an excavation at Waipirau Pā (site T10/323), on the north-western side of Huruhi Harbour on a small headland which sloped gently towards the sea (Figure 1). It was found that the site was first occupied as an undefended settlement but later a defensive ditch and bank was built.

By way of background, Golson had directed an early site survey and an excavation on Stingray Point Pā/Matakawau, T10/169 (Golson 1955). By 1984, attention had been drawn to the favoured environment for early settlement on the offshore islands of the east coast of the North Island (Edson 1973, Rowland 1975). Edson had made an extensive survey of sites on Great Mercury Island,



*Figure 1: Plan of surface features and excavation areas at Waipirau Pā*

described the rich Mizen Collection of artefacts and obtained a radiocarbon date for an early site Te Mataku, T10/358 in Coralie Bay. The significance of the Tahanga basalt source at Opito on the Coromandel mainland was known (Best 1975, Moore 1975, 1976), and the island offered all-weather shelter for canoes close to the exposed ocean beaches at Tahanga. With regard to wider communications, Great Mercury provided a stepping stone between the Bay of Plenty and the Hauraki Gulf, with Mayor Island obsidian only a day's sail to the south. In addition, oral traditions indicated a significant history of the island (Mizen 1997, Simmons, 1976).

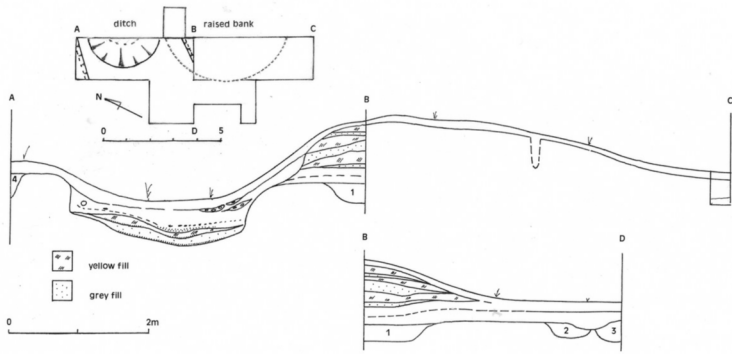
During the 1984 excavation test excavations were made in six areas (A-F). It was found that at a late period the site was fortified, and at this time there was a coherent pattern of contemporary defences, houses, and storage pits. However, in every excavated area there were earlier structures which remain undated. A distinctive feature of the site was that although it was a small and simple pā, it was one of the very few known with incomplete defences. There was also an alignment of kumara storage pits of unusual design, but apparently late age. The excavation recovered a substantial number of artefacts, predominantly stone flakes. Excavated areas are shown in Figure 1 and can be summarised as:

- Area A, a ditch and bank half-way across a natural constriction of the headland
- Area B, a terrace with a stone alignment close inside the bank
- Area C, a flat area on the line of the defences
- Area D, a curved alignment of pits across an inner constriction of the headland
- Area E, a flat sheltered area at the end of the headland
- Area F, a short trench across the upper edge of the western scarp

The distribution of surface material was patterned. Shell midden over the sides of the headland was conspicuous between the line of the defences (Area A) and the line of the pits (Area D), but did not appear to extend around the point of the headland. However, stone flakes were abundant on the shore all the way around.

### **Area A: Defences**

A 10 metre trench, widened in places to 5 metres, was dug across the western end of the unfinished defences to see whether a palisade line continued beyond the ditch and bank. Figure 2 shows two cross-sections A-B-C and B-D, and Figure 3 is a photograph of the excavation in progress. The lowest features are labelled 1-4 in Figure 2. Feature 1, directly below the raised bank, was the



*Figure 2: Area A, plan and cross-section drawings of the ditch and bank defences*



*Figure 3: Area A, a photograph of excavation in progress*

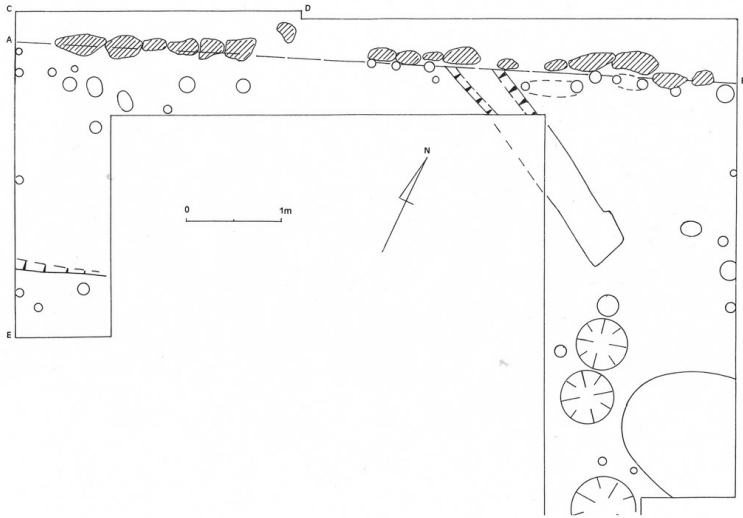


Figure 4: Area B, plan of the excavation

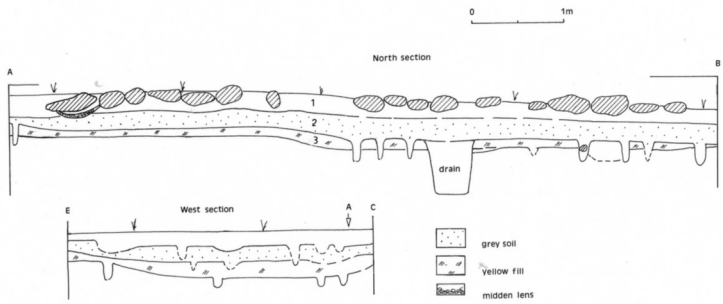


Figure 5: Area B, cross-sections associated with the terrace and stone alignment

edge of a pit dug into the natural clay and its dark fill indicated substantial burning. Features 2 and 3 were raked-out fire-scoops. Feature 4 was the side of a second kumara storage pit just outside the line of the ditch. All of these features were capped by buried topsoil.

The ditch and bank were built as a single event with spoil from the ditch built up in bands of clay, subsoil and topsoil. Three postholes formerly held posts along the front of the bank above the ditch, but the largest was only 25cm wide and 50cm deep and none reached the natural clay below the bank. There is no clear evidence that a palisade continued beyond the ditch and bank and Waipirau Pā could be one of a small number of pā sites with unfinished defences.

At the bottom of the ditch a lens of charcoal could represent the burning of bracken, etcetera, which grew during an interval in the pā occupation (Figure 2). Above this was a thin layer of clay derived from digging activity nearby. Later on, the ditch gradually filled as the bank eroded. Within the ditch fill there were lenses of cooking stones and charcoal showing intermittent activity at the site after its abandonment as a pā.

## **Area B: Houses**

Area B revealed two small adjacent houses on a levelled terrace close inside the bank, and stratigraphically contemporary with it. An alignment of stones retained the movement of soil downslope from the bank. Figure 4 is a plan of Area B and Figure 5 shows cross-sections along the stone alignment (A-B), and along the western side of the excavation (C-A-E). We considered the possibility of one building 7 metres long, but the evidence favours two smaller ones with distinct floors, the western one approximately 2.6 metres by 2.2 metres and the eastern one 4.0 metres by 2.5 metres. The structure on the western side of the terrace had postholes along the stone alignment (Figure 6), but the eastern structure had smaller stake holes set in slots. At the waterlogged sites of Mangakaware and Kohika such slots were used as bedding trenches for split wooden wall planks (Bellwood 1978, Irwin 2004). A line of stake holes along the western side of the excavation perpendicular to the stone alignment (section C-A-E) represents the western wall of a house, and a shallow scarp with stake holes could represent the southern one. There was not enough time to excavate the whole terrace and no porches were found.

The stratigraphy is shown in Figure 5. Black topsoil from Layer 1 formed around the stones and contained scatters of cooking stones from activities at the site later than the houses, and there was a 2B adze probably disturbed from below. Layer 2 was a grey friable soil with cultural material that formed above the house floors. Layer 3 was the main cultural deposit contemporary with the



*Figure 6: Area B, a photograph of excavation in progress*

floors and comprised yellow clay natural mixed with black cultural fill. An adze rough-out of Tahanga basalt was found on the floor.

There were features in Area B earlier than the house floor. Extending diagonally across the floor was a linear structure - possibly a former open drain - that had been deliberately filled (Figure 4). It was around 65cm deep, 50cm wide at the top and narrowing to 35cm at the bottom. There was also an oval-ended storage pit, and the remains of shallow fire-scoops in the south-eastern excavation.

### **Area C: An open area**

Area C was located on flat land on the line of the ditch and bank (Figure 1). There was a succession of superimposed structures (Figure 7) the earliest of which, Feature 1, was the side and floor of a pit measuring not less than 2.5 metres long but of unknown width, with one surviving posthole 10cm wide and 20cm deep. The corner of another pit (Feature 2) intruded into this floor and, after use, it was deliberately filled. A further rectangular pit, Feature 3, also intruded into Feature 1, but the relative order of pits 2 and 3 is unknown.

A large circular and shallow scoop, Feature 4, with fire-reddened soil, was cut into the fill of the earlier pits and another deeper fire-scoop, Feature 5 followed. Both of these scoops had been raked out, but the last in the sequence, Feature 6 was an intact hāngi with 50 cooking stones, in a shallow scoop 5-10cm deep. Three postholes, all labelled as Feature 7 (Figure 7) were approximately 35cm wide and dug 50cm into the natural clay. They were all of late age with similar fills and evidently held substantial posts; however, it is unlikely that they were part of a palisade which continued beyond the unfinished ditch and bank. Feature 8 was the end of an oval pit or round bin, as found elsewhere on the site (below), which intruded into the earliest pit. It was later than all three rectangular pits but its age relative to the hāngi and postholes was not clear. Like the other pits it was deliberately filled.

### **Area D: Storage pits**

Area D investigated a line of surface pits that crossed the site inside the defences (Figure 1) and an excavation was laid out to cover one whole pit and intersect with two others. In the event six pits were found (Figure 8), the earlier ones rectangular in plan but the later ones oval, and all shallow. Area D was used and re-used for storage and a likely order of pits can be established. Pits 1 and 2 were both early but Pit 3 intruded upon Pit 1. Pit 4 was the earliest of the oval pits and Pits 5 and 6 were contemporary and visible from the surface. In the fill of Pit 6 there were two fire-scoops in the topsoil, one with cooking stones in situ, which indicated subsequent use of this part of the site, following storage.



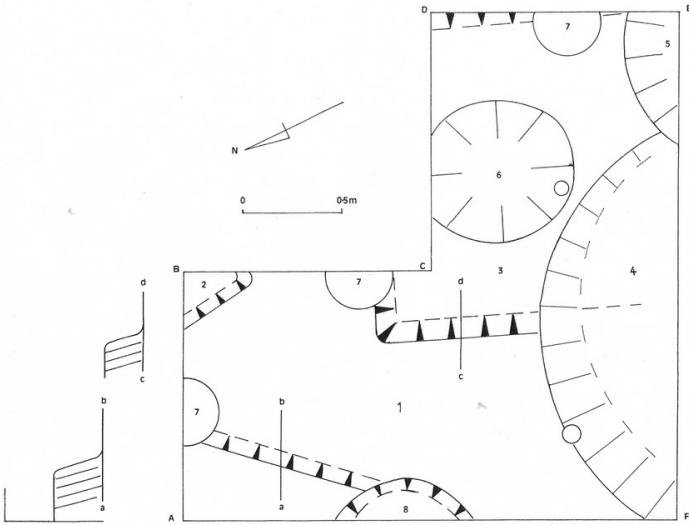


Figure 7: Area C, plan of features excavated in a flat open area

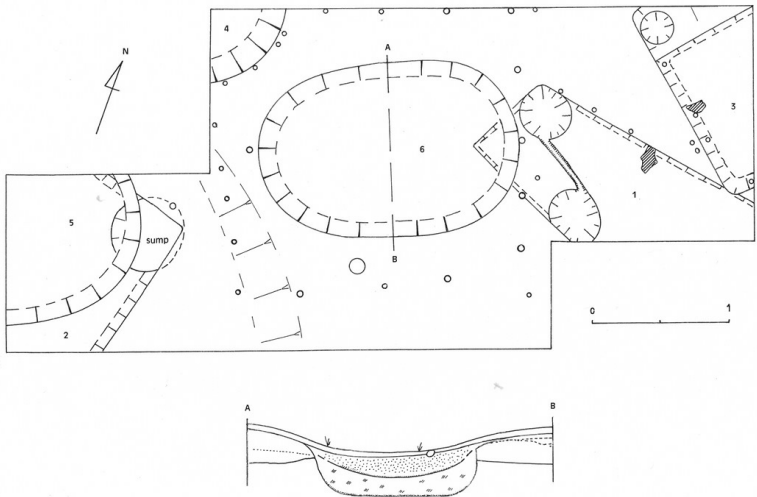


Figure 8: Area D, plan and cross-section of six storage pits of diverse forms

The details of construction are of interest. Pit 1 had two internal sumps, bowl-shaped and about 20cm deep, connected by a drain and Pit 2 had one sump. The upper walls of Pits 1 and 3 were truncated by later activity but both had small stake holes close along the sides, suggestive of light roofs. In addition, a single slab of flat stone was found in both of these pits. These slabs were not covering internal drains when found, as known in some other sites such as Hamlins Hill, but they may not have been in original position.

Pit 4 had a number of small stake holes set around the outer edge, suggesting some kind of light curved roofing. Similar patterns of light stake holes were found around bins at Kohika (Irwin 2004:49).

Pit 6 was a late shallow oval pit 1.90 metres long and 30cm deep. Unusually, it had no integral postholes, but was covered by an independent rectangular shelter revealed by a pattern of small stake holes 10-20cm deep, with central postholes at both ends. Along the western side, horizontal stake holes approximately 3cm wide and 5-7cm deep were set into the wall at intervals of around 30cm apart. They could have supported some internal rack which kept the contents of the pit from direct contact with the floor.

### **Area E: A sheltered terrace**

This area was on the sheltered flat end of the headland (Figure 1) and excavation uncovered the south-western corner of a substantial kumara storage pit very different to the shallower ones encountered elsewhere on the site. It was a metre deep with near-vertical walls. Drains 5cm deep ran along the base of the walls into a rectangular sump in the corner, 45cm deep. A posthole 50cm wide and 30cm deep was clearly not on the centreline, suggesting the pit was large enough to have a roof supported by several lines of posts.

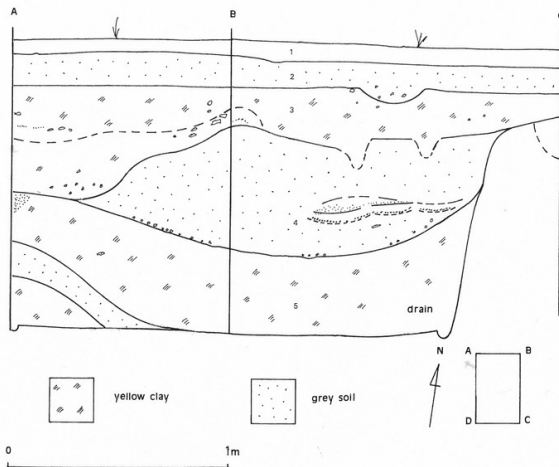
The lowest part of the fill was deliberate and rapid and contained lumps of natural yellow clay derived from the digging of some other structure nearby (Figure 9). The cultural content was more abundant where it was more gradual. There were scatters of shell midden, stone flakes, traces of ochre, oven stones and charcoal. A broken adze of Tahanga basalt of Archaic form was found 55cm below the surface in the top of Layer 3.

The pit was not the latest structure as there was an occupation surface above the pit fill represented by Layers 1 and 2. Area E was not dated and could not be related to structures elsewhere.

### **Area F: Top of the lateral scarp**

A test trench 2.7 metre long was extended from a pit visible from the surface, across the edge of the headland to the upper part of the lateral scarp (Figure 1). In Area F there was on-going dumping of midden and other occupational debris over the side of the site. No evidence of a palisade was

found, but the trench was not wide enough to be sure of its absence. In the Layer 1 topsoil there was a scatter of material, mostly derived by disturbance from below, but some could be from late visits to the site. Layer 2 was the fill of a pit probably contemporary with the late oval pits in Area D and the ditch and bank in Area A. Layer 3 was an earlier black soil of unknown age with flakes of obsidian, chert and basalt, and a basalt adze rough-out. There were also



*Figure 9: Area E, cross-section of excavation of the corner of a substantial storage pit*

fire-cracked rocks and non-concentrated midden. A 30 cm<sup>2</sup> column sample of midden was collected from the northern bank for analysis.

### **Discussion of site structure and chronology**

Stratigraphically there were three broad phases represented at the site:

1. In the youngest of these, in Areas A, B, D and possibly C, there is evidence of intermittent activity in the form of intact ovens, cooking stones, etc., plus signs of disturbance to earlier levels, which date from after the site was abandoned as a pā. However, there were no

European items so it is reasonable to date these activities to late pre-European times.

2. Previously, the site functioned for some time as a defended settlement. There was stratigraphic and spatial continuity between Areas A, B, D and possibly C, and there was a coherent layout of ditch and bank defences, small houses on a terrace, oval-ended kumara storage pits, cooking, midden dumping and industrial stone working. There was an episode of burning in the ditch in Area A, and in pit fill in Area D, which could relate to a period of intermittent use of the site and the burning of bracken and scrub that grew while it was unoccupied. Four C14 dates are thought to be associated with the phase of pā occupation, one each from Areas A (ANU 5247) and B (ANU 5248), and two from Area D from the fills of Pits 1 (ANU 5250) and Pit 6 (ANU 5249) (Figure 10). While the C14 results indicate an age in late pre-European history the dates were few in number and lacked precision, and were complicated by ambiguities in the calibration curve. In a recent report of a 1970s excavation at Station Bay Pā, Motutapu Island, Davidson noted that radiocarbon dating had not been very helpful in providing a chronology for many late period pre-European sites in New Zealand (Davidson 2013), and the 1984 excavation at Waipirau Pā provides another example.
3. In all excavated areas A-F, there was an undated phase of prior undefended settlement and activity at the site - of unknown duration. The results of charcoal analysis by Rod Wallace (2013) suggest forest

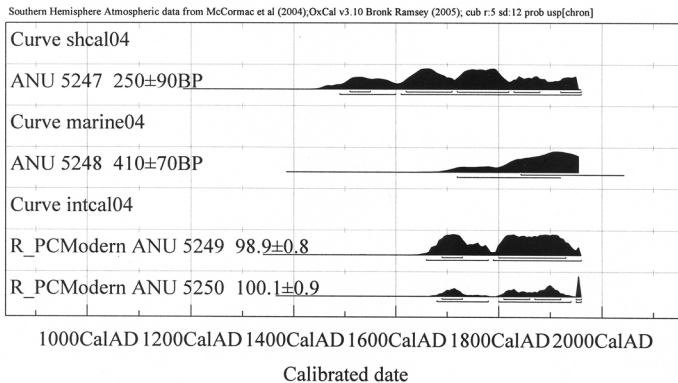


Figure 10: Calibration diagram showing the four C14 dates (ANU 5247 - ANU 5250).

was already locally absent having been replaced by shrub and scrub species typical of early stages of woody plant regeneration after clearance by fire or other means.

In summary, Waipirau Pā was a coastal site of modest size in the shelter of Huruhi Harbour with direct access to canoe transport and marine resources. Excavation in six areas indicated a long period of probably intermittent use and an apparent coherence of surface structures in late prehistory when the site was a lightly but incompletely defended settlement. Previous occupation indicated continuing use and re-use of excavated areas. There was a diversity of structures and in the small area excavated some 15 pits and bins were encountered. These were of different sizes and shapes - generally small and shallow and initially rectangular, then oval - and there was interesting evidence for different kinds of roof. One large rectangular undated pit in Area F represented more substantial storage.

The emphasis of the excavation in 1984 was on finding structures and in keeping with practice of the time, oven stones and stone flakes were not recorded individually, but by layer. However, the excavation at Waipirau Pā recovered archaeological material of interest and this is available to the Ahuahu/Great Mercury Island Archaeology Project which has been conducting high-resolution investigations on the island since 2012 (Phillips *et al.* 2014).

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