NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER

THE RESTORATION OF N40/586, OPITO

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In January 1984, a group of archaeologists from Auckland spent three weeks restoring a damaged pa site, N40/586 (280762), Opito Bay, Coromandel Peninsula (Fig. 1). It is believed that this is the first time such a task has been attempted. The project, authorised by Historic Places Trust (Permit No. 1983/40), was carried out under contract to the New Zealand Forest Service.

The pa site, situated on a ridge end 1.2 km inland from Opito Bay, was accidentally bulldozed during forest preparation operations. The site had been recorded prior to bulldozing and a tape and compass map made of the features.

Archaeological evidence consisted of transverse ditches cutting off a ridge at both ends. Inside the pa there was a platform, twelve terraces, seven bin pits and several possible pit depressions. The eastern end was protected by a steep rock bluff, supplemented by a single transverse ditch. At the western end two transverse ditches separated by a bank were dug into the lowest, and narrowest, part of the ridge. The outer ditch was wider and deeper than the inner ditch, more than 4 m deep. The walls of all three ditches were vertical. Shell midden was noted on the northern side of the site. The total living space (level areas able to support structures) was approximately 500 m^2 while the total area enclosed by the defences was approximately 800 m^2. The site was covered in manuka scrub, hakea and several large self-seeded pine trees.

Bulldozing damaged or destroyed approximately one third of the total area of the pa, including half of the platform and one large terrace that was present on three sides of the platform. Several other terraces were obscured by earth spoil and crushed vegetation displaced by the bulldozer blade.

In December 1982 Forest Service archaeologist Ian Lawlor inspected the site after damage had occurred. It was decided to investigate and restore the site for several reasons. The site was the furthest inland site that had been recorded on the Kuaotunu Peninsula and any information that could be gained by excavation would be a valuable contribution to the archaeology of the Opito area. A number of excavations have taken place in the bay over the previous fifteen years although the focus has been on the Archaic sites. It was considered that restoration would be a good public relations exercise

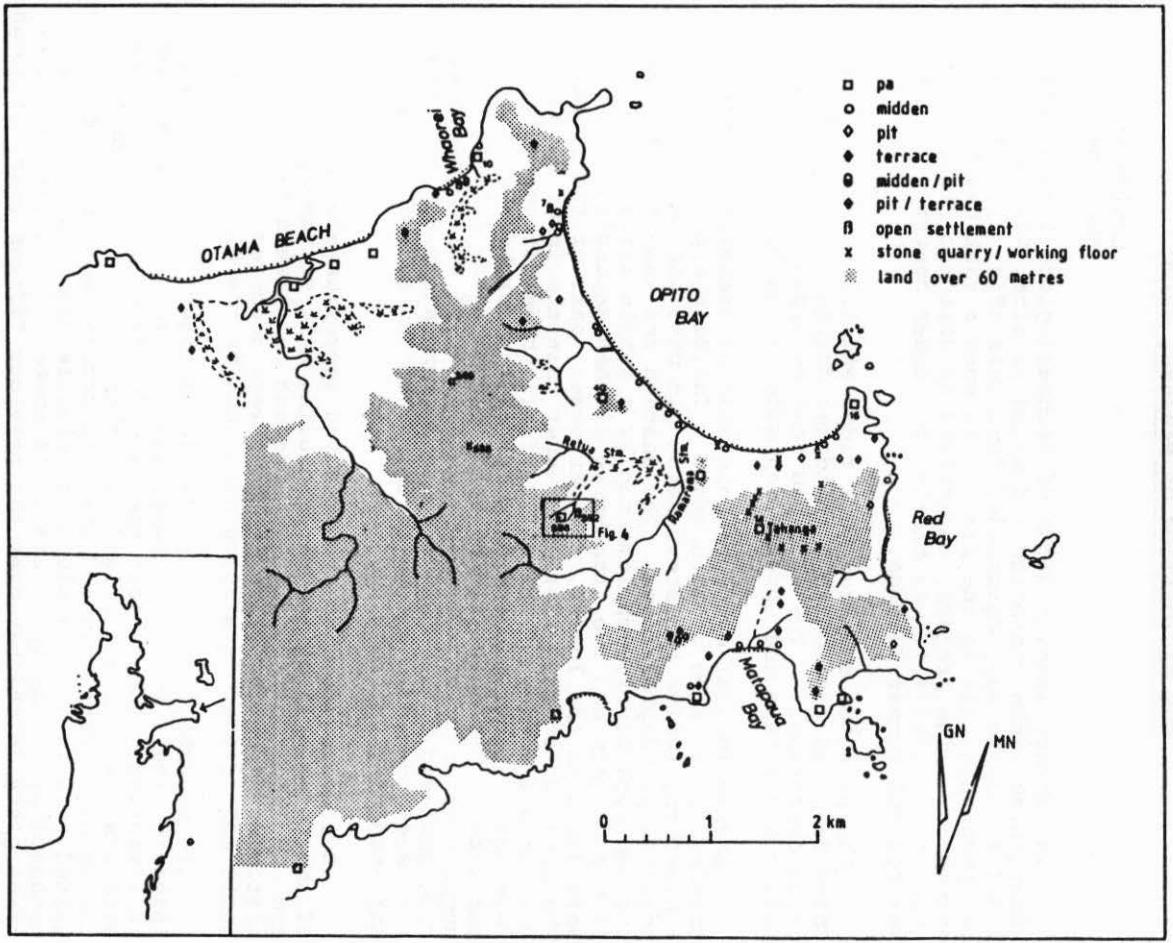

FIGURE 1. Site distribution at Opito Bay, and location of N40/586.

with Maori people and local landowners who had originally informed the Forest Service of the location of the site.

The initial aims of the salvage investigation were:
1. to excavate and record any sub-surface features and finds within the bulldozed area, and
2. to restore the pa and ditches to a reasonable condition.
Work commenced on 23 January 1984 and continued for three weeks ending on 12 February 1984. A project director, five paid excavators, two volunteers and two Forest Service archaeologists worked on the site during this time.

Excavation strategy

Historic Places Trust excavation permits require local Maori permission before investigations commence. In this particular situation the tangata whenua, Ngati Hei, refused to give the permission necessary to excavate outside the damaged portion of the site. As a result the amount of archaeological information which could be retrieved was minimal.

As excavation of intact features was not possible, the aims of the project were altered. Priority was given to restoring the site, tidying up the interior of the pa and removing all dead vegetation and earth spoil which masked otherwise intact features. As a secondary consideration, the damaged area was scraped down with trowels to ascertain if the remnants of any archaeological features were present. From the surface it appeared the bulldozer had scraped off the topsoil and subsoil to a depth of 50 cm near the ditches, while only surface scraping was evident at the eastern end of the damaged area.

Trowelling of the disturbed surface to look for features occurred predominantly at the eastern end of the damaged area where there was a concentration of siliceous sinter exposed on the surface. This proved to be a terrace which had had the western end damaged slightly by the bulldozer blade.

Most investigation time was spent excavating spoil out of the two ditches and redepositing this inside the pa to recreate the platform and terrace in their original shapes. The bank between the defensive ditches was also reconstructed (Fig. 2).

Reconstruction

The original site plan was used as a guide to the reconstruction of archaeological features. However, the exercise

was limited to some extent by the amount of spoil that was available. Approximately 50 m^3 of spoil was relocated and used in reconstructing the archaeological features. This included fill excavated from the two defensive ditches.

Approximately 32 m^3 of spoil was removed from the outer ditch and 7 m^3 from the inner ditch. The ditches were excavated out only to the pre-bulldozed surface which was defined by a dark brown humus layer. This was easily traced both on the sides, and base, of each ditch. Some damage had occurred to the western side of the outer ditch, presumably where the tracks of the bulldozer had dislodged the upper edge. The sides of the ditches had been cut into very compact weathered andesite which was similar to soft rock in appearance and texture. This held the ditch sides vertical. Minimal weathering had occurred and the original base of the ditch was almost immediately under the humus layer.

The eastern end of the reconstruction on the platform and the large terrace below it was marked by hammering 50 cm long steel rods into the deposit. The bank also had several steel rods placed into it for stability and as permanent markers.

As the restoration had no precedents, the techniques used for retaining and stabilising scarps and the bank were an experimental process. It was soon evident that the bank could not be self supporting and would require some form of retaining wall or fence if the spoil was not to immediately refill the ditches. Stakes of manuka were hammered into the sub-soil and branches were horizontally interwoven to contain the spoil. These fences were used on either side of the reconstructed bank and on the eastern side of the inner ditch. It is hoped the fences will survive long enough to allow the earth to settle in the bank and vegetation to colonise and protect it from erosion.

This raises the question of how banks were originally constructed. Erosion has always been a problem and must have been an important consideration in pa and terrace construction as extensive damage could be done to the features by just one period of heavy rainfall. (Best (1975:52-54) describes a form of bank construction where bracken fern or manuka was used as a binding material in alternate layers with earth and then tramped down to consolidate the deposit. This technique may possibly be detected archaeologically. Best makes no mention of the use of retaining fences but that does not mean they were not used in pre-European times. It is

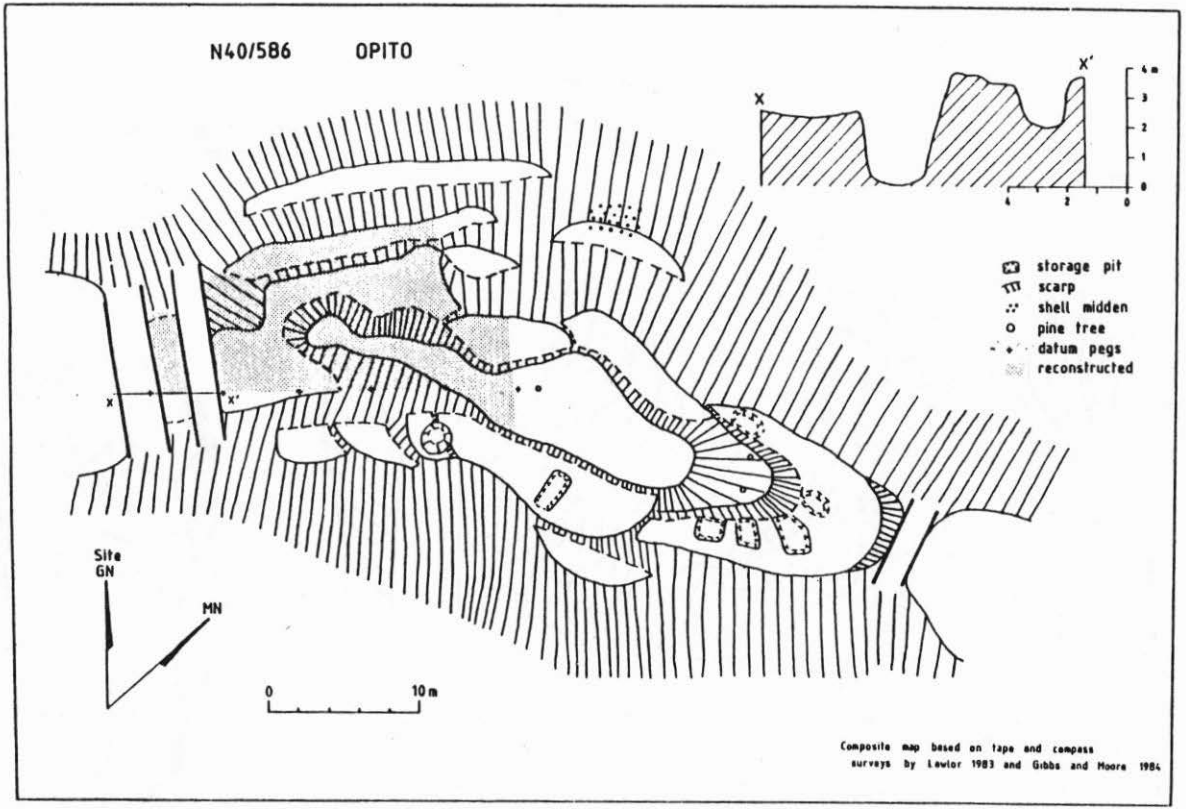

FIGURE 2. Plan of N40/586 showing reconstructed area.

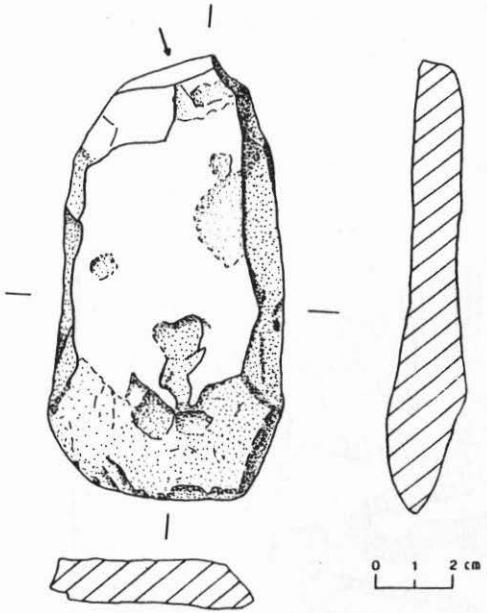

FIGURE 3. Adze from N40/586.

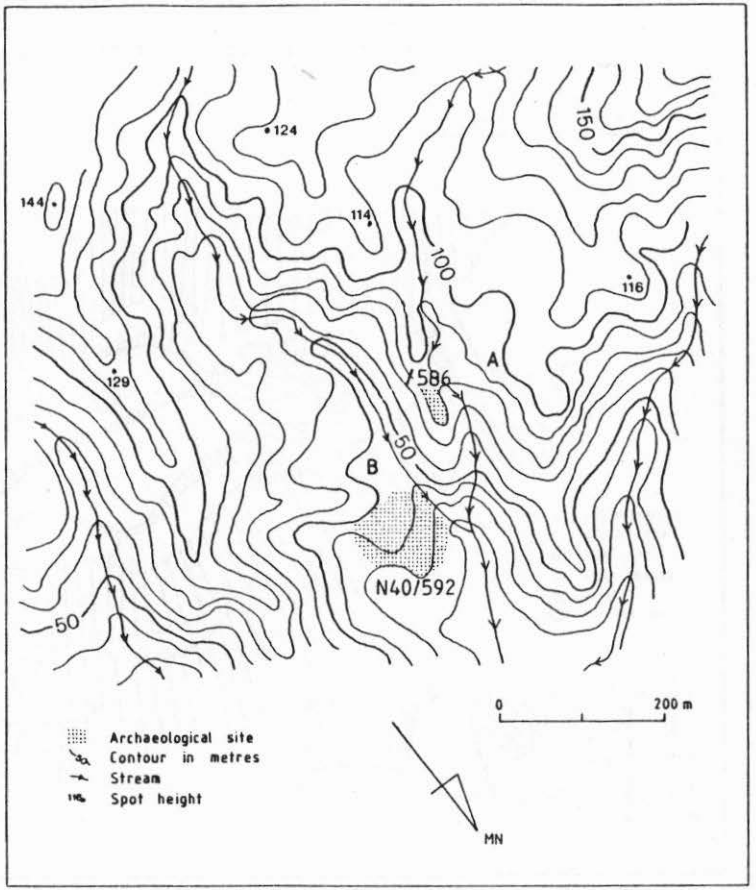

FIGURE 4. Contour map showing N40/586 and 592.

unlikely that brushwood fences, if they were ever used, would leave any evidence. From our experience they appear to be an efficient aid in bank construction.

It is the intention of the Forest Service archaeologist to monitor the condition of the site, particularly with respect to erosion and recolonisation by plants. The effect of rain on newly formed features may indicate the type of damage incurred by sites after initial construction. It was hoped cut manuka branches could have been laid across bare surfaces before the onset of winter. This has not been possible and while it is expected erosion will occur, it will be interesting to view the processes which affect banks and scarps.

Excavations

Approximately half of one terrace was investigated. The bulldozer damage was minimal in this north-east quarter compared to the remainder of the damaged area. Definite back and front scarps were evident as the terrace had largely escaped damage through the spoil pushed in front of the bulldozer blade protecting it.

The stratigraphy on the terrace was very simple. Beneath the humus layer was a compacted yellow brown clay loam. A round shallow scoop filled with small rocks and charcoal, and four stake holes on the front edge of the terrace, originated from this layer. Roots from the large pine tree on the platform above the terrace had caused considerable damage to the archaeological deposits. A concentration of nodules of siliceous sinter was found at the western end of the terrace. While the sinter does occur in the area (there is a quarry, N40/588, approximately 500 metres to the west of the site) it is not present naturally on the site.

An examination of the sinter from the terrace by Wendy Gibbs showed that most of the sinter was unmodified. A small number of cores and flakes did however indicate some of the sinter had been utilised. The cores had been heavily reduced and the large size of the flake scars did not equate with the small flakes recovered. The indication was that the larger, and better, flakes had been removed from the terrace for use elsewhere.

Very little lithic material was recovered from the site. Several basalt and obsidian flakes were found but little sinter, suggesting its position was localised.

One adze of Tahanga basalt was found while excavating the spoil (Fig. 3). A striking platform (marked by an arrow) is present indicating the adze is made from a flake. The back is completely unmodified. Some secondary flaking has removed flakes from the sides and blade on the upper surface. Weathered cortex is present on the upper side. Although it has a recognisable quadrangular cross-section, the adze is very rough in form and would be more suited to excavating ditches rather than adzing timbers.

Discussion

From the excavated evidence there is nothing to suggest that occupation of the site was lengthy or rebuilding and modification of the terraces took place. However this interpretation is based on a very small amount of evidence and excavation of a larger portion of the site would be needed to provide more definite answers. Insubstantial posthole features possibly representing a fence or windbreak on the excavated terrace, and a general lack of cultural material, points to the transience of occupation.

This fits in with the pattern known from the ethnographic literature and archaeological excavations where few excavated pa appear to have been lived on permanently. Rather, the majority seem to have functioned as refuges or places to retreat to when there was a threat of invasion or hostilities (Fox, 1976:7).

No evidence of palisade posts was found in the bank area. One method of bank construction recorded archaeologically was for the earth to be packed up against posts already placed in position (Fox, 1976:12). The reason for this method of erecting palisades was probably related to the fact that the bank would make it more difficult for attackers to demolish the structure. It is unlikely that the stability of the bank was the prime consideration for this method of construction, and would not assist in protecting the bare surfaces of the bank from erosion.

If it may be assumed there was no palisading in or on the bank there are two factors which should be considered. The first is that the height of the scarp between the ditch base and the top of the bank gave the occupants sufficient security against attackers. This would mean however that there was no barrier behind which the defenders could protect themselves against projectiles thrown by enemies. It is possible that there was a lighter structure on top of the bank

which would not require massive foundations and would therefore not be evident underneath the bank. An alternative to this would be the placing of a palisade line on the terrace edge on the inner side of the smaller ditch which would provide sufficient space for the defenders to move around behind their defence lines. The second factor worth considering is that the ditches and bank were constructed in a hurry as a response to a particular threat and therefore there was no time to prepare and erect palisading. This would be consistent with an interpretation of the pa as a place of short term occupation.

If N40/586 was a place of refuge it would be reasonable to expect more evidence of occupation in the immediate surrounding area as people would be living close by if an attack was expected. To test the hypothesis of a settlement system with pa and associated undefended sites, a site survey was carried out of adjacent ridges and valleys. This exercise proved particularly productive.

To the south-east of the site in the broad valley bottom evidence indicating a large open settlement (N40/592, 282762) was located (Fig. 4). Shell midden, hangi, flakes and cores of siliceous sinter, and flakes of obsidian and basalt were present on the surface together with several adzes. The area had however been disturbed by bulldozing and scraping during forest planting operations and very little of the evidence was intact or <u>in situ</u>.

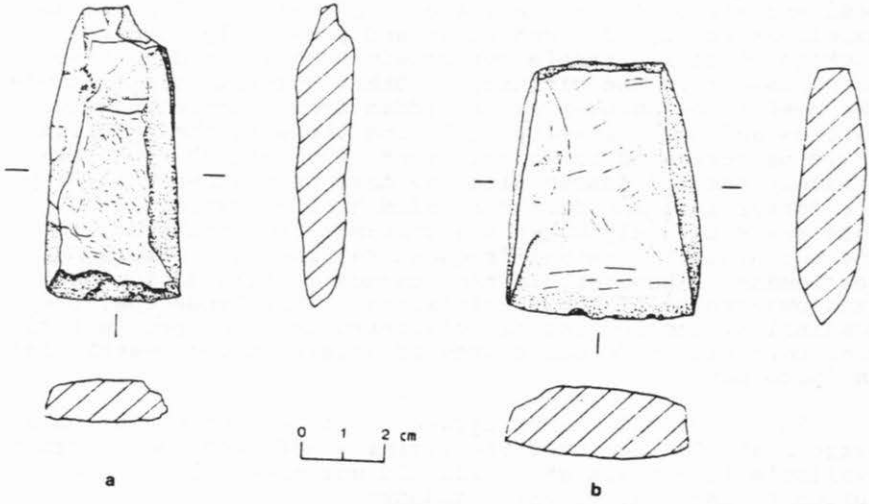

FIGURE 5. Adzes from N40/592.

Three adzes and the butt ends of two roughouts were collected from the surface. All are quadrangular in cross-section with two complete adzes having reduced fronts (Fig. 5). Adze 'a' is 70 x 30 mm and is made of a flake of Tahanga basalt. The striking platform and positive bulb of percussion are still evident. Uneven grinding is present on all sides. The straight blade (32 mm long) has had several flakes removed along the upper side. Adze 'b', 63 x 47 mm, differs from the others in having all surfaces ground. The rock material does not appear to be Tahanga basalt and may be a greywacke. Hammerdressing and subsequent grinding is evident at the butt end. The blade (47 mm long) is slightly curved. The adze may originally have been longer and the butt end represents reworking to make a new adze. There is no evidence of lashing marks or modification to the polished surface.

Settlement patterns

Indications are that Maori settlement and utilisation of the area was more extensive than previously thought. A small pa with substantial ditch and bank system and steep natural slopes, with other sites such as a sinter quarry, several patches of midden, and an open settlement site, all within 500 m, suggests a contemporary occupation within the valley.

However the major question not able to be answered from the archaeological data is the reason for siting the settlement in this valley. One major factor may have been the desirability of living in a sheltered valley, close to an excellent supply of fresh water and presumably forest. Pockets of soil suitable for growing crops may also have been present in the vicinity. Other possibilities include the need to be unobserved or hidden from hostile raiding parties and the necessity of living close to the pa which could be retreated to in the event of an attack. Alternatively the undefended site may have been a seasonal camp for forays into the forest on bird hunting expeditions. This seems unlikely given the distance from the coast is not too great to prevent frequent returns to a coastal settlement. However, in the absence of information on land ownership and social divisions of the landscape, the possibility should also be considered that the people resident here had no formal rights of access to the coastal land in Opito Bay.

It is unlikely horticulture could be carried out on a large scale in the immediate vicinity and from the evidence available it appears shellfish did not make a large contribution to the diet of the residents.

It is difficult at the present time to view the pa and nearby sites as the inland limit of occupation. The site distribution map for the Kuaotunu Peninsula reflects archaeological survey coverage rather than the true distribution of Maori occupation. Surveys have focussed on the immediate coastal strip as the dense vegetation cover of scrub and regenerating bush on the inland hills created far from ideal conditions for locating sites. It is only with New Zealand Forest Service opening up and clearing large inland areas on the Coromandel Peninsula that a more complete picture of Maori settlement patterns can be obtained.

Conclusion

The reconstruction of N40/586 was a valuable exercise. It is probably the first time in New Zealand that an archaeological site has been rebuilt. This was worthwhile from a public relations point of view, both with the tangata whenua and with the local land owners in Opito Bay.

The site, together with the evidence for an open defended settlement in the adjacent valley bottom, indicates the area was well utilised in earlier times. The amount of archaeological data recovered was minimal but all indications are that the pa was not occupied on a permanent basis. The site cannot be treated in isolation in the archaeological landscape and the close proximity of the undefended sites suggests that the sites form a contemporary occupation unit.

While the restoration project was successful, equally important was the increased awareness among archaeologists of the need to communicate with the tangata whenua. This project highlighted the negative response of the Maori community towards archaeology. Only by showing increasing sensitivity to Maori attitudes can archaeologists hope to break down the barriers that are forming. Communication with Maori communities on a personal level both before, during and after excavations can go some way towards improving relations between the two groups.

References

Best, E. 1975 The Pa Maori. Government Printer, Wellington.

Fox, A. 1976 Prehistoric Maori Fortifications in the North Island of New Zealand. Longman Paul, Auckland.