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THE ARCHAEOLOGY OF TAPUTIKETIKE PĀ, WAIUKU, SOUTHWEST AUCKLAND – AN INTERIM REPORT

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Introduction

Taputiketike Pā is strategically located near the estuarine headwaters of the Waiuku River in the vicinity of the Awaroa portage (Figure 1). The Waiuku River drains into the Manukau Harbour some 10 km to the north and, via a small land bridge and the Awaroa River to the south, provides access to the Waikato River. This was an important trade and communication route for Māori in early historic times and this was probably also the case in prehistory (Clarke 1983). Despite thorough archaeological site surveying along the Waiuku River and surrounds (Bulmer 1983, Clarke 1983), Taputiketike Pā, originally recorded in 1960 from aerial photographs and old survey maps, was not identified in the field until 2003 (Tanner 2003). It is from an old survey map that the name was derived. No other traditional information about Taputiketike is known.

As shown in the 2001 aerial photograph (Figure 2), the pā is located on a small flat promontory on the east side of the river. Cliffs c.10 m high provide natural defence on the south and west sides. A stream runs along the base of the promontory on the northern side. Surface archaeological features comprise a scarp and terrace along the north and northeast sides. Shell midden exposures can be seen along the top and down the face of the scarp as well as in eroded sections of the cliff. The flat top of the pā slopes downwards slightly to the south and undulates due to in-filled kūmara pits (as confirmed by excavation). The pā is small by average standards, the top measuring c.80 x 50 m, and the terrace 50 x 4 m when recorded in 2003. Immediately outside the pā, other surface archaeological evidence is meagre, comprising several shell midden exposures along the stream and above it to the east. That much of the landscape surrounding the pā is now in kiwifruit orchards may explain the paucity of archaeological features in the surrounding area.

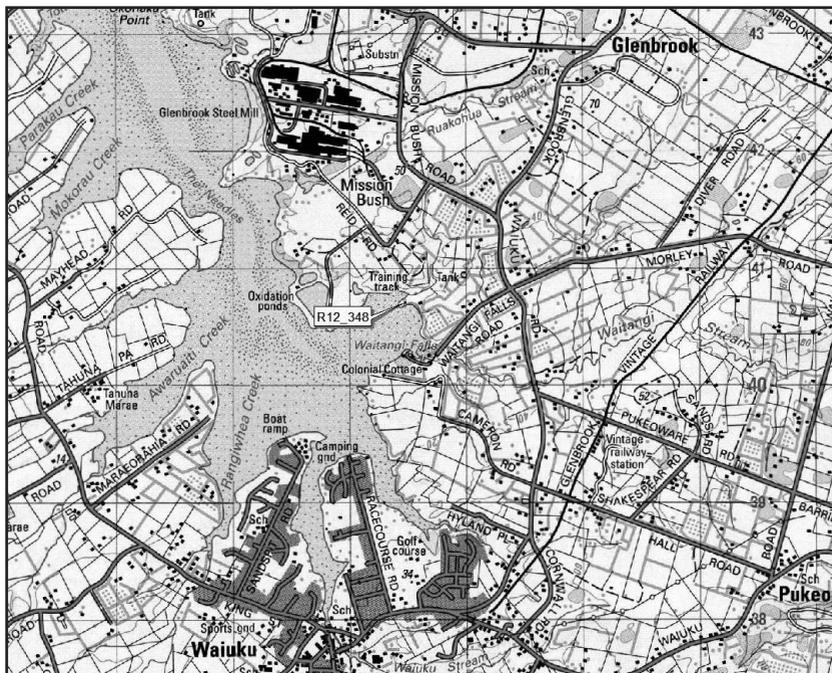


Figure 1. Location of Taputiketike.

Excavation of the pā began in February 2010 as part of the University of Auckland archaeology field school, and was completed at the end of May 2011. These investigations were undertaken as part of a rescue programme. The pine trees around the periphery of the pā (seen in Figure 2) have begun eroding off the cliff face, taking considerable chunks of the pā with them as they fall. Invasive tree roots are also spreading across the pā's surface. Because tree removal is likely to cause some modification to archaeological features, prior archaeological investigations were required.

Excavation of such a small pā also provided a rare research opportunity to investigate the range of activities that were occurring over the whole site from the first cultural footprint to the last. The sheer size and complexity of archaeological features on many pā usually make this research objective unfeasible (Sutton et al 2003:10-11). Local iwi Ngāti te Ata were supportive of this research objective, thus excavation was later extended to areas not immediately under threat from tree damage.



Figure 2. Aerial view of Taputiketike, 2001.

At the time of writing analysis of cultural materials and the preparation of materials for radiocarbon dating has not been completed. Plan and profile drawings are still in rough form. Approximately 1800 features were recorded, 300-400 soil, midden and charcoal samples collected, c.400 artefacts recovered and over 100 plans and profiles drawn. It may be some time before a comprehensive report on these excavations is available thus this paper provides some preliminary results in the interim.

Archaeological investigations

Figure 3 shows the areas that were excavated. Because of the care required to remove roots without causing further damage to archaeological features, all excavation was done by hand, employing a 1-2 m grid. While this made excavation painstakingly slow at times, root disturbance was not as severe as expected. Runners tracked over the surface, sending tap roots into deep features like kūmara pits, drains and palisade postholes that had nutritious fills more penetrable than the resistant clay subsoil. Outside the bad root zones, the

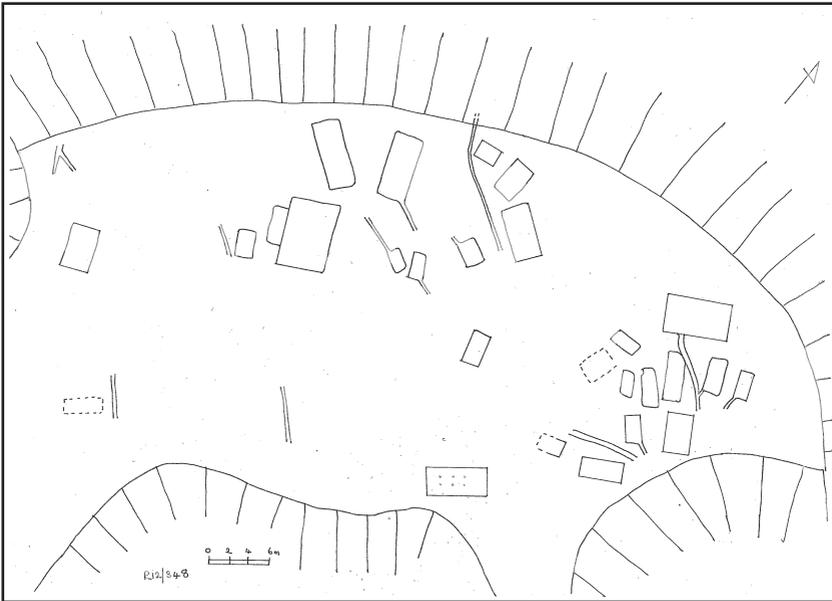


Figure 4. Plan of Layer 4 kumara pits and drains.

Episode 1: Undefended kumara pit storage

Probing, test-pitting and excavation confirmed that the surface undulations on the flat top of the pā were in-filled storage pits and that they covered almost the entire top surface. Twenty five pits were completely or partially excavated. Figure 4 shows their distribution within excavation areas. Some variation in the way the pits were clustered and orientated can be observed. There is also variation in pit size and depth. The largest pits were 4-5 m wide and 6 m long with depths of 60-90 cm, while the smallest were 1.5-2 m wide by 3 m long and quite shallow, no more than 20-30 cm deep.

A notable associated feature is a system of major arterial drains running mainly north to south, draining down the original northern slope and over the cliff face to the south (Figure 4). Sometimes these drains (square cut, c.20 cm wide and 20-50 cm deep) connected one pit to another (Figure 5). Some sections were tunnelled or capped (Figures 5 and 6). All pits had interior drains and these were observed to join the major exterior drains on occasion. Additionally, pits commonly had deep sumps (30-60 cm).



Figure 5. Kūmara pits and drains, Area A.

This extensive drainage system and the shallow nature of the pits speak to the nature of the clay subsoil. It is difficult to dig and absorbs water poorly in a region where rainfall can be torrential. The main drains would have been valuable in collecting the run off during heavy downpours before they could flow into the pits.

Some pits, such as the one shown in Figure 5, had such extensive drainage over the floor that there appears to be hardly any space for tuber storage. The method employed was supplied by another form of evidence. At some point in time the kūmara pit structures and materials within were burnt down. This appears to have happened quite quickly after the pits fell into disuse, possibly just before this cultural episode came to a close, as charcoal concentrations and charred timbers were found directly on the pit floors or against the walls. Among this debris, on the floors and in the drains of five pits, dense patches of charred fibres were found and later identified as ‘mangemange’, more commonly known by the self-explanatory colloquial term ‘bushman’s mattress’ (Wallace, n.d.). This material would have been ideal for laying over the pit floors and drains (without blocking them) and using as a bed to keep tubers dry. This practice has been recorded ethnographically (Graham 1922 cited in

Davidson et al. 2007: 11). Importantly the mangemange samples provided the only datable material for the Layer 4 cultural episode.



Figure 6. Kūmara pits and features, Area B.

Most pits had a single row of centre posts, though the largest ones had double rows. One unusual square pit may have had four rows, as seen also for one pit at Maioro Pā further south on the west coast (Fox and Green 1982). The Taputiketike kūmara pits also had postholes and board slots around them, some of which were over 20-40 cm deep (Figure 6). These were set back from the top of the walls by some 20-60 cm. This may indicate that pit roofs did not rest directly on the ground as was normally the case but had an external structure. Two of the pits in Area B (Figure 6) and two of those in Area A appear to have been enclosed by the same structure. Others had additional ‘alcoves’ cut into the top of the pit wall or ‘add-on’ structures to those over the pit. Small bin pits were recorded but were not common. Not surprisingly in these soil and climatic conditions, they were never found in the floors of pits but around the top of them, both outside and within external structures.

All pits and related features (e.g. drains and sumps) were dug into the clay subsoil. Inter-cutting pits were not observed. This evidence, together with

the interconnectedness of exterior drains to pits, suggests that all these storage pit features were in use over a similar period.

Apart from the need to install a complex drainage system, Taputiketike was well suited for kūmara storage. The position is a sheltered one and is relatively elevated in an area that is referred to as the ‘Manukau lowlands’, which are often damp and water logged during winter (Clarke 1983: 249). It is also orientated to receive maximum sunlight hours during this critical storage time.

No artefacts or evidence of cooking was recovered from Layer 4 in any of the excavated areas. The scarp and terrace were not constructed at this time and there was no evidence to suggest any kind of defence apart from that provided naturally by the south and west cliff faces. There is little evidence to suggest people were actually living on the site during this time either, though they likely lived nearby. The ‘add-on’ or ‘lean-to’ structures, however, may have been temporary shelters.

This episode may have lasted for as long as the kūmara pits were viable for storage, after which a decision was made to abandon the site rather than fill in and rebuild.

Episode 2: Defence

The development of a top soil over Layer 4 after the kūmara pits were abandoned suggests some time lapse before the site was once more the focus of cultural activity. When people returned it was for very different reasons. The defensive features might be considered the most significant aspect of this episode but, of the three episodes, the activities undertaken by the Layer 3 people were the most diverse. A range of artefacts was also found, including adzes, fish hooks, sinkers, grinding stones and several working floors with obsidian and adze flakes.

It was probably at this time that the kūmara pits were filled in. The pā surface was probably a pock-marked mess. Thus, it is not surprising that Layer 3 activities initially involved, in addition to infilling old kūmara pits, both the levelling and building up of various surfaces across the top.

The kūmara pits, however, were not simply filled in, they were reused, as were some of the drains and postholes, for purposes very unlike the original. Almost all the pits excavated in Areas A and B had been reused as cooking sheds and possibly makeshift shelters. Alignments of small but deep postholes commonly followed the pit walls, both inside and out. Pits reused for this purpose had a compacted clay cap placed over the pit fill, probably to counteract subsidence and to provide a firm, level occupation surface. Postholes and fire scoops were cut into this surface. Some of these pits had seen successive re-use

episodes with several clay caps laid down within the fill and fire scoops and postholes cut into each. Both small shallow pits and larger deeper ones were utilised for this purpose.

Another function may have been for gardening. The two largest kūmara pits (Areas L and S), while having evidence of Layer 3 posthole alignments around their periphery, had a very homogenous well mixed fill but no clay cap or features dug into it. Judging by the vegetation flourishing on adjacent spoil heaps, they may have functioned as small enclosed gardens. Soil samples were retained for analysis in order to investigate this possibility further.

Along the northern edge, kūmara pits, drain sections and sumps were used to bench in palisade posts.

Layer 3 was generally characterised by a profusion of postholes of all shapes, sizes and depths. This pattern was consistent across the site. Posthole alignments were common, suggesting the top of the site was quite compartmentalised. The most distinctive alignments, however, were those related to defence.

Defensive features

Three trenches (Figure 3), one at the western periphery (Area G), one in the middle (Area J) and one to the east (Area A), revealed that the north and east sides of the top were artificially steepened during the Layer 3 episode. The terrace, however, was not constructed at this time.

Over 130 palisade post holes were excavated in Areas G, J, L, P and particularly A. These palisade alignments likely extended from the west cliff face along the northern rim then around to the east to exit at the southern cliff face. Both ends of these defences have been damaged by tree fall, so the actual length can not be known exactly but from what exists today, the palisades were at least 100 m long. Evidence from Areas A, B and C suggests that the palisade did not extend to the south and west sides, which were naturally defended by the cliff face. Sections in these eroded cliff faces show only the occasional seam of midden.

In Areas G and J, the outer palisade was placed along the edge of the excavated scarp which extends 1 m beyond, and is 1 m below, the present-day scarp edge (Figure 7). Along the northern edge, deep depressions in the form of kūmara pits and drains were available to reduce the effort otherwise required to dig large deep holes. Figure 8 shows a Layer 4 drain section that has been enlarged and deepened for a large post.



Figure 7. Trench, Area J. The top ranging pole is the present-day scarp edge, and the bottom pole the top and edge of the original Layer 3 scarp, the base of which is by the spade handle.

The soil from digging the back scarp and the postholes was used to pack palisade posts into drains and pits. Clay was a dominant component in this packing material (mixed in with a small amount of the buried topsoil of Layer 3), and would have been ideal for the purpose. Then a huge amount of shell was packed around the top of the posts which, at the same time, built up the scarp. This process created a slightly raised rim or shallow bank along the northern edge. Much of this midden may have been taken from cooking areas but not all. A favoured packing material, mainly for palisade posts but also seen with smaller ones, were tiny articulated cockles not exceeding 2 cm. Large shells (scallop, oyster and large cockles), lumps of clay and rocks were also used, commonly between posts if they were positioned close to one another in the same fill. Clay was also used around the top of the post to tamp down the packing below.

In Area A kūmara pits and drains did not extend to the edge, thus other methods of installing posts had to be employed. An 8 m segment of the palisades were excavated along this eastern rim. At the northeast corner of Area A on an

east-west axis, a likely post ramp was identified (Figure 9). The size and design of this feature matches an illustration and description in Best (1927: 82) where a post would be slid down a slanting hollow and levered up into position by means of pulleys. At the base of this ramp was one of the largest and deepest posts recorded (1.8 m deep and 30 cm diameter). Figure 9 shows the charred remnants of this post as well as the holes of others. The water-filled V-shaped feature just above the post indicates the juncture at which the post was lifted upright. Only at the base of this ramp was the northern method of packing replicated, with the base half of posts benched in with compacted clay and packed at the top with shell midden. Beyond the ramp to the east, the pattern was to dig large round and square holes or short trenches in to which multiple posts could be placed (Figures 10 and 11). These had ledges or ‘steps’ at varying depths that enabled the digging of holes within the depression for individual posts. The subsoil excavated out of these depressions was later packed around the top (as seen also along the northern rim) while shell and rock were commonly used to pack the sides.



Figure 8. Layer 3 palisade posts in drain and kumara pit fill, Area J. The row of post holes on the right run along the wall of an in-filled kumara pit.



Figure 9. Possible palisade post ramp, Area A.



Figure 10. Palisade post alignments, Area A.

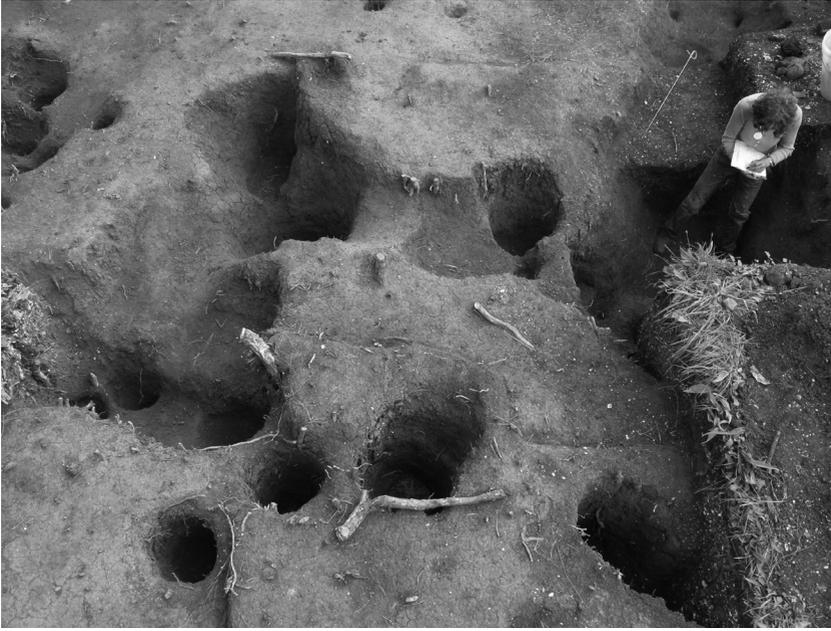


Figure 11. Palisade post alignments with post ramp excavation in progress, Area A.

In all palisade post areas, the posts were positioned close together (Figures 8,10 and 11), which deviates from some ethnographic accounts (Best 1927: 63). The palisade segment in Area A shows that there was an inner and an outer palisade with the former having a double line of posts (Figures 10 and 11). A narrow passage c.60 cm wide separates them. It is likely that some of the larger posts represent a fighting platform, particularly given that this side was a weak spot. The palisade defences in Area A were more robust than seen along the northern face, probably for the same reason. To the north, post depths rarely exceeded 1 m and were mostly 60-80 cm deep. In Area A, post depths usually exceeded 1 m, with several probed or excavated to 1.8 m below the Layer 3 surface. Early historic accounts state that about one quarter or third of the post's length was buried in the ground (Best 1927: 62-63). For the northern section, this might suggest posts 2-4 m high. For Area A, post heights may have reached 3-6 m. Another distinction is that in Area A the outer palisade was placed 4 m back from the scarp with a gentle natural slope separating them.

The space between the excavated scarp edge and the innermost palisade in Areas A, G and J was 5-7 m. In Area L, however, rows of large posts

were found extending 10 m back from the scarp. Of note is that north-south alignments appear to extend from the main east-west palisade. This was also observed in Area J (the post holes along the right side of Figure 8, for example, run north-south), though within 5 m of the scarp. While the posts in the north-south alignments were generally not as large as some of the main palisade posts they still suggest major fences c.1.5-2 m high leading into the interior of the pā. Along the eastern edge in Area A, there do not appear to be any similar fences leading from the main palisade. It is possible that Area L was the entrance to the pā. The entrance was unlikely to be on the south or west sides and there was no spare space between the palisades along the eastern margin. Friendly access was probably via the stream where canoes could be tied up safely, and Area L is well placed in this respect. Entrances into pā, however, were sometimes concealed, narrow and maze-like, as a further foil to attackers (Best 1927: 117-126).

Some of the larger posts were still intact near the base, providing evidence of actual post diameters and shape. These ranged from 20-30 cm in diameter, were round and had flat bases. Their symmetry suggests they were adzed to shape. In the packing of one section of the outer palisade, blade chips from five different adzes were found, indicating that at least some adzing of the palisade posts took place in situ. Mataī and kauri have been identified from the analysis of the charred wood from these posts (Wallace n.d.).

Evidence of burnt posts was common in both the north and east palisade sections. The palisades were therefore never dismantled but how they came to be burnt is less clear. It is possible that the pā may have been sacked, though little other evidence corroborates this. For example, there is no suggestion that the pā was abandoned suddenly and only one fire scoop had fragments of human bone in it. The Layer 2 midden generally in-filled the Layer 3 postholes, including at least the top fill of the palisade posts, indicating that the posts were burnt prior to the Layer 2 episode, an episode that suggests continued occupation (see below). It should be noted that while it was on historic record that Waitete Pā (located at the mouth of the Waiuku River) was sacked and burnt in 1835, excavations showed little trace of this, and the pā was rebuilt shortly after (Bulmer 1983).

Episode 3: Food processing

The Layer 2 episode is characterised mainly by extensive cooking and food processing activities. People at this time generated large quantities of midden that were spread over most of the top surface of the pā. Shellfish dominated and bone was rare. As seen also in Layer 3, steaming in shallow fire scoops was the main cooking method. These fire scoops were a regular

occurrence across the site but notable concentrations of these in association with particularly deep and extensive midden deposits were found in Areas E and F and parts of Areas A and L. Many of the formal artefacts from the site, such as adzes and sinkers (Figure 12), were found in this midden, often around the edge of fire scoops.



Figure 12. Sinkers in Layer 2 midden, Area B.

While there appears to have been a pause between the Layer 4 and Layer 3 episodes, this does not seem to be the case between the Layer 3 and Layer 2 episodes. The Layer 2 midden directly overlays the Layer 3 surface and some of the Layer 2 cooking features and stake holes are cut into this surface and over Layer 3 features. Small areas devoid of midden and cooking evidence were maintained for both episodes, as was the use of these as working floors.

While this evidence suggests that the site was not abandoned after the Layer 3 episode, or at least not for very long, there was one major change in how the site was used: it was no longer defended. While the Layer 2 occupants may not have burnt the defences, they did backfill the Layer 3 scarp and create the terrace. They may have created two terraces, with a smaller one above the larger, wider one (Figure 7). This was most clearly articulated in the Area J

trench. Similar evidence was found in the Area G trench at the western end but this was disturbed by erosion and tree root damage. The large terrace was not extended to the east side but the scarp below Area A had also been backfilled and a small terrace like that in Area J possibly created.

From surface exposures of midden on, and just below, the northern edge, it was expected that much of the accumulation of materials on the slopes below would be the result of erosion. Evidence in Area J suggested otherwise. It was mainly the modern topsoil that has eroded onto the lower slopes and terrace. Here it reached depths of 20-30 cm, but was very thin on the upper slope and edge. Apart from some midden eroding from the scarp edge, the cultural layers in the Area J trench were well preserved.

In terms of cultural activities, both terraces stood in marked contrast to the intensive use and re-use of space on the top. The small 1 m square in Area G (Figure 3) revealed nothing but a compacted surface. Larger excavation areas were opened up in Areas J and U on the terraces. Area U, on the large terrace, was a deep deposit of ash with charcoal concentrations, a large quantity of shell, several fire scoops and a number of small post holes that did not form any pattern. Area J (on the large terrace) also had a random scatter of small post holes and a thin deposit of shell midden, probably generated from the one fire scoop, was recorded. No cultural features or materials were found on the small terrace above. The matrix of both terraces was the same, however, the upper being the result of back-filling, the lower the result of infilling. These were deep (60-70 cm in places), well mixed homogenous soils, not dissimilar to the fill found in the largest kūmara pits on the top. The same interpretation may apply: that these terraces were mainly used for gardening. They are north-facing, close to the stream and provide a sheltered aspect, more so than the top. It is difficult otherwise to explain why the Layer 2 people went to so much effort to create these terraces if they were not going to use them. Not surprisingly, there was no sign of any palisade posts on the terraces, or a scarp below the bottom terrace.

The cultural materials from the Layer 2 and Layer 3 episodes were similar. From preliminary analyses, shellfish species and size remain constant, with cockle by far the most dominant species. Bone material is more common in Layer 3, though still rare. A similar array of artefacts was found. During both the Layer 2 and 3 episodes, some of the intensive burning seen in the middens is likely related to kōkōwai processing from the local sandstone rocks. These were also the main source of oven stones. Lenses and patches of red powder were a common feature in all areas excavated. Sometimes these were in fire scoops, sometimes not. Often they were associated with dense patches of white to grey-pink ash. Replication experiments have shown that when exposed to

intense sustained heat, these sandstone rocks disintegrate into a red powder that is a suitable pigment for painting (McNutt 2009). Similar evidence was found at Waitete Pā (Bulmer 1983).

Summary

The location of Taputiketike had a number of advantages that made it suitable for a variety of uses. It was north-facing, elevated, sheltered and warm. A stream on the north side provided fresh water and a further transportation route to the eastern hinterland. The stream drained into the headwaters of the Waiuku River, an estuarine environment that was the likely source of the dominant shellfish species at the site, cockle. The site was situated on an important trade and communication route via the Mānukau Harbour and the Awaroa portage. Natural defences were provided by both elevation and cliff faces to the south and west sides.

All these advantages are reflected in the range of activities that took place at Taputiketike: kūmara storage, defence, gardening (possibly), cooking and food processing. Most of these activities did not take place simultaneously, however. Like many other excavated pā (Sutton et al. 2003: 232-234), the first use of the site was for kūmara storage and it was undefended at this time. Similarly, its use as a fortification was but one episode in its history, one that appears to have been relatively brief. Indeed, the sequence overall suggests brief bursts of fairly intensive activity rather than prolonged episodes of steady occupation. This is also consistent with evidence from other excavated pā, as summarised by Sutton et al. (2003: 232-234). Like many of those pā, structures that could be confidently interpreted as houses were uncommon at Taputiketike. We cannot therefore define Taputiketike as a settlement, defended or otherwise, but nor was it a place used purely for defence.

This excavation, like others before it, revives questions about how we define pā when many of the archaeological features on their surfaces are likely to be functionally and chronologically unrelated, and many not associated with defence. Excavated prehistoric examples do not often match historically recorded descriptions either. For Taputiketike, the functional importance of this place seems straightforward. It was a useful and thus valuable spot in a wider important land and seascape. It did not, however, serve as a highly visible and symbolic display of power, as suggested by Sutton et al. (2003: 234) for the central pā at Pouerua. Even with high palisades, Taputiketike would have been almost invisible from any direction, as it is today.

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