

Proposed Sutherland Residence at Estuary View Heights, Waipu Cove: archaeological monitoring and excavation

**report to
The New Zealand Historic Places Trust
and
John and Erika Sutherland**

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Introduction

John and Erika Sutherland have begun works in preparation for construction of a house on their land at Estuary View Heights, Waipu Cove (Lot 4 DP 360070). This land is located immediately east of a known pa site recorded as Q08/7 in the New Zealand Archaeological Association (NZAA) site file. The north western border of the Sutherland's land is only 2 m from the edge of the pa's outer defensive ditch and the section includes part of a scarp on the slope below the ditch. The archaeological assessment regarding the proposed works (Hudson 2007) established that, although the proposed house would encroach on the base of the pa, it would not modify any of its visible features. The New Zealand Historic Places Trust granted authority number 2008/193 to the Sutherlands for the work to proceed with the provision that archaeological monitoring of earthworks and excavation and recording of any features discovered should take place. This work was carried out on 31 March and 1 April 2008 and the findings are reported here.

Background

Q08/7 is located on the high point on the south eastern end of a small ridge approximately 5.5 km south east of Waipu and 1 km inland from the coast of Bream Bay. There is no detailed record of the features of the pa in the NZAA site record but a brief visit showed that it has a squared outer ditch and steep scarp defending a level, square central platform with terraces running down its northern slope. The pa is currently planted in pine (Figure 1) and is covered in heavy vegetation. Saplings of a variety of species have recently been planted in and along the outer ditch on the south eastern side. Part of the squared outer ditch of the pa can be seen in the aerial photograph below (Figure 2) as can that of another nearby pa Q08/538. Neither pa's site record notes its name. Figure 3 gives a location map for the site and shows the Sutherlands' property and house site, on which the pa borders.



Figure 1. Q08/7, the pa planted in pine, and the Sutherlands' land below it (right side). Photo facing northwest.

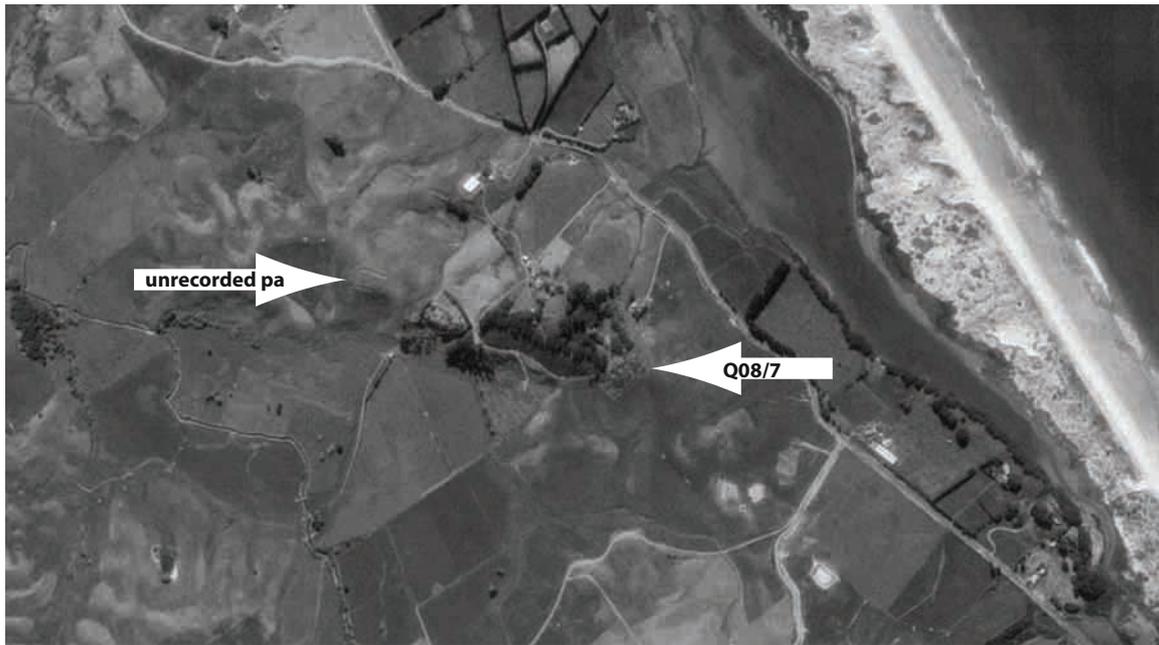


Figure 2. Aerial photograph showing Q08/7. The Sutherland's property begins just beyond the defensive ditch on the south eastern side of the pa. Nearby pa Q08/ 538 is also marked.



Figure 3. Location map showing Q08/7.

Method

Topsoil was removed using a hydraulic excavator over the whole of the area to be affected by excavation for the planned house and retaining walls. A view of this area is given below in Figure 5. Topsoil stripping was done on the 31 March 2008 and was monitored by Beatrice Hudson and Dave Carley. Midden was sampled by taking a 10 litre sample from a 1 x 1 m sample square. The area and archaeological features were then planned by setting up a baseline and taking measurements from the boundary fencelines. The site plan is given below in Figure 6. A sample of shell was taken from the midden for radiocarbon dating.



Figure 5. Composite view of the excavation area facing west.

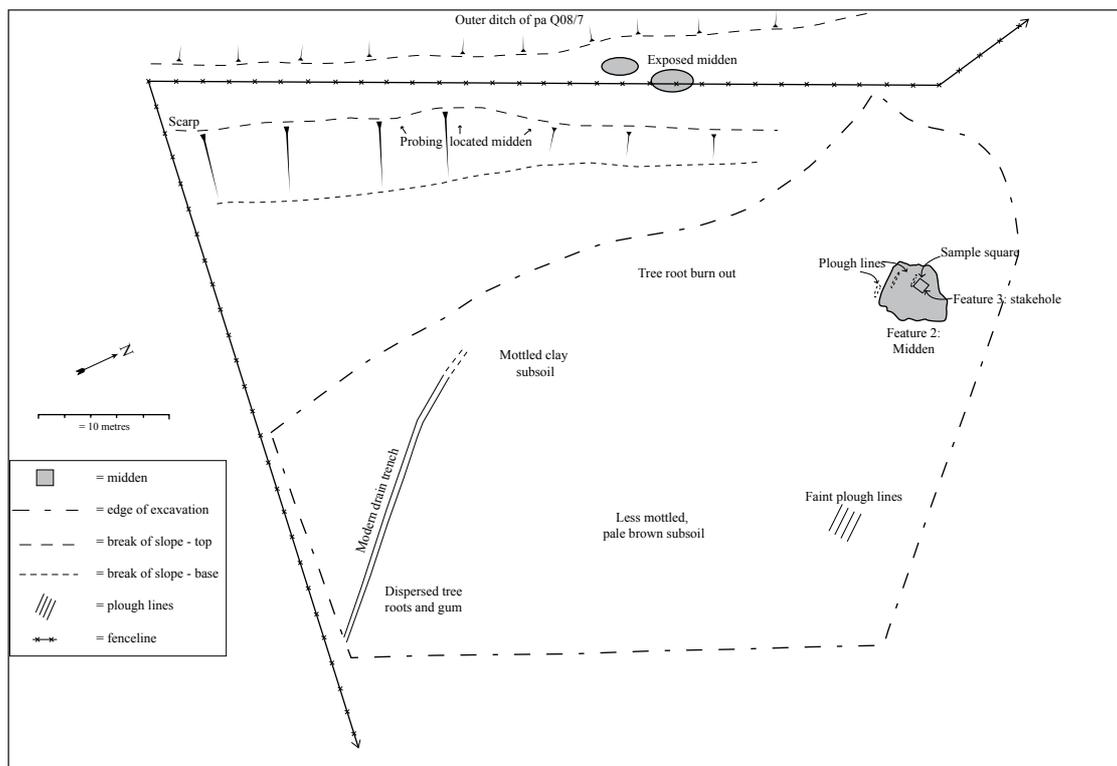


Figure 6. Plan drawing of the area investigated in preparation for the house platform.

Results

Soils

The topsoil was a mid brown homogenous fine soil up to 300 mm deep. This blended gradually into a mottled brown and yellow clay which continued for another 200 mm before blending into a clean yellow clay. The nature of the subsoil was changeable over the area stripped. Along the western, uphill area it was of heavy sticky clay. In the north eastern portion it gradually became more of a clean yellow-brown clay with a slightly finer, more silty structure. When deeper excavation for the retaining walls was begun along the western edge of the area it showed that the subsoil was of clean yellow clay down to at least 2 m whereas in the south eastern corner where a cable trench had been dug prior to works beginning, the deeper subsoil (below 500 mm) was a white clay. No distinct borders could be seen to these subsoil differences, only slowly graduated changes.

Archaeology

One small, 5 x 4 m area of midden was uncovered (Figure 7). The midden was of very crushed, and in places burnt, shell (Table 1). It had the appearance of rake-out though there were no oven scoops within or around the midden. No features could be detected in the midden but faint parallel running lines could be seen in its surface which, when excavated were found to be plough lines. One 1 x 1 m sample square was excavated (Figure 8) and found the midden to be between 50 and 100 mm deep. At the base of this was a small stakehole filled with crushed shell measuring 70 x 60 mm x 100 mm deep.

The shell of the midden was embedded in a dark clayey soil and was compacted and hard. Once the midden was recorded it was removed by careful scraping with the mechanical digger. Plough lines became clearer as the midden was scraped away and no further features were



Figure 7. View of the midden facing northwest. Scale 1m.



Figure 8. Sample square excavated from the midden. Facing northwest. Scale 1 m. The plough lines are visible above the square.



Figure 9. Plough lines on the lower slope. Photo facing south-southeast. Scale 1 m.

uncovered below it. Faint plough lines were also visible in the subsoil further to the east, down hill of this patch of midden (Figure 9).

It is unusual that this patch of midden containing burnt shell should be isolated with no indication of the cooking activities that generated the burnt shell. The area had clearly been ploughed at some stage however and it may be that such activity had removed shallow cooking features.

Tree roots, tree gum and one patch of burnt tree roots were discovered in the southern end of the area stripped, showing that trees had also covered the area at one point.

None of the midden detected during the assessment was affected by the excavation as this is located mainly on the steepest portion of the slope, the possible scarp, above the development area.

In the southern corner of the excavation area some large chunks of tree root (up to 100 mm diameter) were found preserved in the ground. One piece of wood that was pulled up by the digger here had a flat edge on it that looked as if it had been cut or split. This was probably a fencepost though its antiquity is unknown. No cut for a posthole was visible in the subsoil. Other sign of trees having covered this area was the occasional pieces of tree gum in the subsoil here and further upslope.

Midden analysis

A ten litre midden sample was taken from the sample square excavated. This midden was dried, weighed, then wet sieved through a 1/8" (3 mm) screen and then sorted. It was very fragmented and the total dry weight of the sample before being screened was 9230 g. Once screened and dried the shell weighed 4950g. Of this, 4460 g was undiagnostic, uncountable fragments. The diagnostic portions – the hinges of bivalves and the spiral tip of gastropods – were sorted by species and an the minimum number of individuals (MNI) was counted for each. MNI for bivalves was calculated by dividing the number of counted hinges by 2. The results are given in Table 1.

Cockle was by far the most common shell, accounting for nearly 90% of the sample. Other shells were identified but only in small numbers. The cockles are found in sand or mud on sheltered beaches, whelks and horn shells are both estuarine, mud-flat species, pipi can be found in harbours and estuaries while tuatua are found in sandy open beaches (Morley 2004). All these shells were probably collected at the nearby estuary clearly visible from the site and from the open beach on the other side of the sand spit that forms the estuary.

Although patches of the midden had been observed to be burnt, very little of the sample taken appeared burnt. There was no charcoal and the only other matter present was one small, unidentifiable fish vertebra.

Shell species	MNI	%	weight (g)
Cockle (<i>Austrovenus stutchburyi</i>)	887	89.7	300
Pipi (<i>Paphies australis</i>)	29	3	30
Tuatua (<i>Paphies subtriangulata</i>)	61	6.3	140
Purple mouthed whelk (<i>Cominella glandiformis</i>)	8	.8	7
Horn shell (<i>Zeacumantus lutulentus</i>)	2	.2	>1

Table 1. MNI for shell species from the midden.

Radiocarbon date

A sample of Tuatua shells was selected from the midden to be submitted for radiocarbon dating at the University of Waikato Radiocarbon Dating Laboratory. The result was a date of 561 ± 34 BP, which correlates to AD 1355–1423 at a 95% confidence interval. This is a very early date for a pa, for which the earliest acceptable dates are around AD 1500 (Schmidt 1996) and the occupation indicated by the midden may be unconnected with the pa. The radiocarbon report is appended to this report.

Conclusion

There was very little evidence for the prehistoric use of this southern side of the pa located on the Sutherland property. This was surprising given the proximity of the excavation area to the centre of the pa and to where midden spilled down the scarp below it. The one small patch of midden that was discovered (Feature 2) had been ploughed and was highly fragmented. This midden contained patches of burnt, crushed, ashy shell within it, which suggested that some of the midden had built up by being raked out of oven scoops. If this was the case then it raises the question of where the oven scoops were that this could have been raked out of. No features were visible nearby that can account for this. It may be that ploughing of the land had removed trace of such features, though it is curious that not even smears of shell could be seen elsewhere in the area. It is possible that the area has been previously earthworked though there was no clear evidence of this.

Similarly, it was surprising to find that there were no storage pits of any kind on this side of the pa. It may be that activity was concentrated on other sides of the pa, particularly the northern side where terraces could be seen.

The radiocarbon date obtained from the midden gave a much earlier date than expected for a pa. Though the midden had been ploughed, it was isolated and showed no sign of having been mixed with material from other phases and we are confident that the sample has not been contaminated. The small patch of midden therefore probably relates to earlier activity on this hill, before the construction of the pa. Being so close to the coast it is expected that this area was well used in the years prior to AD 1500 and the development of pa sites.

References

- Hudson, B. 2007. Proposed Sutherland Residence at Estuary View Heights, Waipu Cove: archaeological assessment. Unpublished report to John and Erika Sutherland.
- Morley, M.S. 2004. *A Photographic Guide to Seashells of New Zealand*. New Holland NZ Ltd, Auckland.
- Schmidt, M. 1996. The commencement of pa construction in New Zealand prehistory. *Journal of the Polynesian Society*, 105(4): 441–460.