

**Ohauti 11 kV feeder cable, Kaitemako Substation,
Welcome Bay: archaeological monitoring
and investigation**

**report to
The New Zealand Historic Places Trust
and
Edison Consulting Group**

Matthew Campbell and Stuart Hawkins

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Powerco Transmission Services (PTS) are currently installing an 11 kV feeder cable at the Transpower Kaitemako substation sites, Kaitemako Road, Welcome Bay (Lot 1 DPS 63722). An archaeological assessment of the Transpower property was carried out in 2006 (Campbell 2006) and noted that, while no archaeological surface evidence was visible within the footprint of substation and associated infrastructure, middens were recorded close by and “Native Cultivations” were also recorded in historic documents. During installation of the substation in 2007 CFG Heritage undertook monitoring and investigation of archaeological features (shell midden scatters and gardened soils) under authorities 2006/301 and 2007/150 issued by the New Zealand Historic Places Trust (HPT) under section 12 of the Historic Places Act 1993 (Campbell and Farley 2008).

The 11 kV feeder cable installation was work undertaken subsequently by PTS and not part of the substation project. Accordingly, an archaeological authority was applied for and granted by HPT to cover this work (authority 2009/173). Work began without the designated archaeologist (Matthew Campbell of CFG Heritage Ltd) being informed, and a subsequent site visit on 3 May 2010 in company of Mark Lewis (Edison Consulting), Murray Lipinski (Powerco), Des

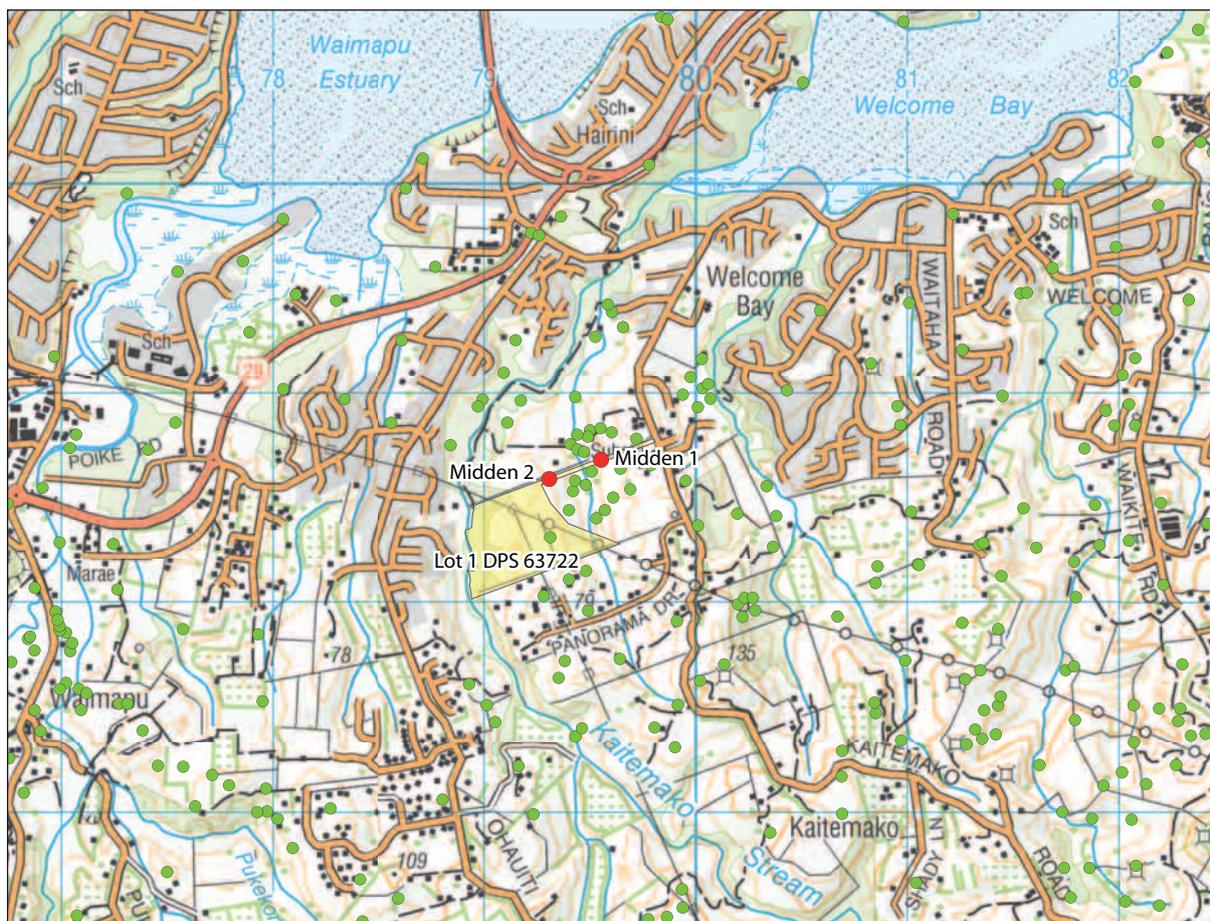


Figure 1. Location of Lot 1 DPS 63722, archaeological sites recorded in the general vicinity (green) and the two midden deposits.

Heke (Ngati He) and Rachel Darmody (HPT) indicated some damage to archaeological material but “the features observed [were] either not archaeological or are too disturbed to provide any meaningful evidence relating to the history of New Zealand” (Matthew Campbell, letter to Rachel Darmody, HPT, 6 May 2010, on file). This was for works at the western end of the cable, near the Kaitemako Stream. Following a review of authority conditions to ensure that the remainder of the lot, a 20 m wide easement leading to Kaitemako Road, was included in the authority, topsoil stripping for the remainder of the cable was monitored by Stuart Hawkins on behalf of CFG Heritage on 4 June 2010.

Monitoring

Two areas of midden were found, one a very small patch and one consisting of three patches spread over roughly 12 m (Figure 1).

Midden 1

The deposit was found on the east side of the gully towards Kaitemako Road (E 1879550 N 5818687 NZTM) (Figure 1). This consisted of one small circular patch of shell 100 mm in diameter and 50 mm deep, which appeared to be mostly pipi (Figure 2). It was uncertain if this was a prehistoric feature or disturbed, redeposit shell. A sample was taken from this midden.

Midden 2

The trench was located on the lip of the ridge, 5 to 10 m from the ridge top, with the 210728 pole 5 m to the northwest (E 1879305 N 5818594 NZTM). Three patches of midden were exposed within the trench. The eastern patch of midden was approximately 1200 x 1000 mm (Figure 3 and Figure 4) with another small patch about 1 m further to the east. The other patch of midden



Figure 2. Locations of the two midden deposits found during monitoring.



Figure 3 (left). Midden 1.

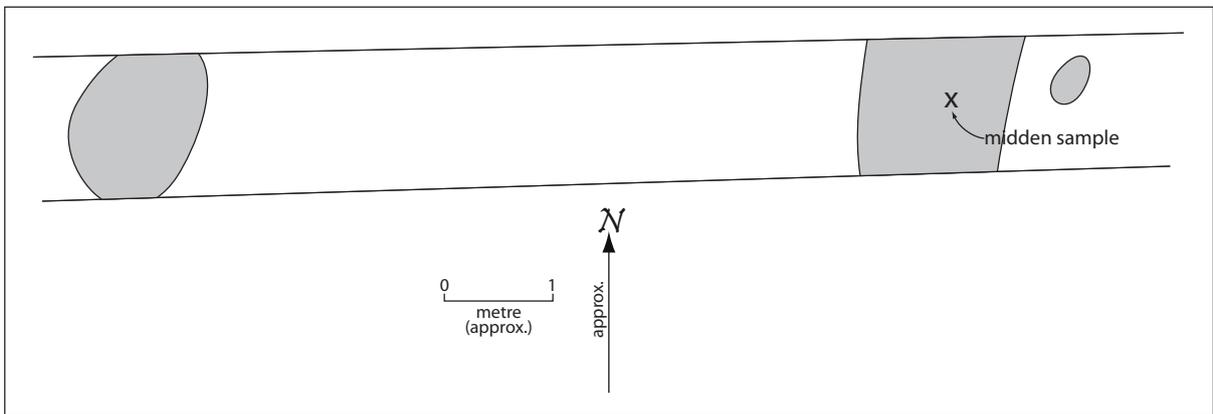


Figure 4 (above). Sketch plan of Midden 2.



Figure 5 (left). Eastern patch of Midden 2.

was 6 m to the west of this one and was approximately the same size. Both patches of midden would have extended north and south of the trench.

The midden consisted mostly of whole and fragmented pipi with some cockle and was a thin layer (50 mm) sitting on top of yellow weathered tephra and under dark brown topsoil. A midden sample was taken from eastern patch of midden. Once the midden was recorded, the digger was used to scrape it away to check for any features below it, but none were found.

Midden analysis

One sample was taken from each midden: Midden 1 (860 g) and midden 2 (2400 g). The midden samples were weighed, wet-sieved, and sorted by species. Diagnostic parts of each species were counted to give a minimum number of individuals (MNI) and number of identified specimens (NISP) and were also weighed. Results are shown in Table 1.

In contrast to the observation in the field, Midden 1 had more cockles than pipi, by both MNI and weight. This is probably due to the small size of the cockles and fact that they were highly fragmented. Midden 2 had both diagnostic cockle and pipi in near equal numbers, and also had a greater variety of species, including tuatua, wedge shell and ostrich foot. The pipi in Midden 2 were large and made up the bulk by weight.

Chronology

A sample of pipi from Midden 2 was submitted to the University of Waikato Radiocarbon Dating Lab (Wk 28538). This returned a date 748 ± 35 BP, which gave a calibrated date of cal AD 1450–1670 at a 95% confidence interval.

sample	taxon	common name	NISP	MNI	weight (g)	notes
Midden 1	<i>Austrovenus stutchburyi</i>	cockle	151	76	56	
	<i>Paphies australis</i>	pipi	24	12	14	
		other bivalve	1	1	1	
	<i>Zeacumantus sp.</i>	whelk	1	1	1	
	<i>Cominella glandiformis</i>	whelk	1	1	1	
		non-diagnostic			92	
	subtotal		178	91	165	
Midden 2	<i>Austrovenus stutchburyi</i>	cockle	68	34	21	one burnt
	<i>Paphies australis</i>	pipi	71	33	117	many large pipi
	<i>Paphies subtriangulata</i>	tuatua	3	2	5	
	<i>Macomona liliana</i>	large wedge shell	4	2	2	
	<i>Strutholaria papulosa</i>	ostrich foot	1	1	13	
	<i>Zeacumantus sp.</i>	whelk sp.	2	2	1	
		non-diagnostic			212	
	subtotal		149	74	371	

Table 1 Results of midden analysis.

Conclusion

These two small middens are not, by themselves, particularly significant. In the Western Bay of Plenty/Tauranga Harbour area a gradual movement is evident in later prehistory away from the harbour to inland valleys such as the Kaitemako. These middens are further evidence of this process. The date obtained for Midden 2 is very similar to that for the midden dated from the substation investigation (Campbell and Farley 2008) (cal AD 1490–1690) and to dates from the Ohauti and Oropi valleys (summarised in Campbell 2005: 45; see also Campbell and Hudson 2008). The two middens, then, help fill out the picture of this inland movement.

References

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