

ARCHAEOLOGICAL INVESTIGATION AT Q07/751, 4 OCEAN BEACH ROAD, URQUHARTS BAY



REPORT TO
THE NEW ZEALAND HISTORIC PLACES TRUST
AND
DON GRIMWOOD AND ANNI VEART-SMITH

HPA AUTHORITY 2008/145

JADEN HARRIS

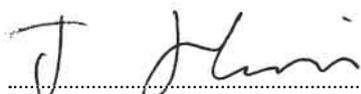
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JADEN HARRIS

Don Grimwood and Anni Veart-Smith are extending their house at 4 Ocean Beach Road, Urquharts Bay (Lot 2 DP 193279). Midden deposits extend across parts of the property and have been recorded as part of a larger occupation site Q07/751. Parts of this site on adjacent properties on the north side of Ocean Beach Road have been damaged in the past by unauthorised works and the portion on the property at 4 Ocean Beach Road has also been partly modified with a house having been on the site from around the 1920s. As part of the proposed development the part of the site to be affected was investigated under authority 2008/145 issued by the New Zealand Historic Places Trust under section 14 of the Historic Places Act 1993 from 9–11 January 2012.

Background

The Whangarei Harbour and Heads is an area with a rich Maori prehistory represented by numerous recorded archaeological sites. Much of the area in Urquharts Bay itself has already been modified by the construction of a road and houses along the beachfront but the evidence of past Maori occupation is still clearly evident in the form of shell middens and sites with extensive earthworks such as the pa on the hill at the northern end of the bay (Q07/86). The house at 4 Ocean Beach Road was probably moved or constructed on the site around the 1920s or 1930s. By comparison the landscape of the nearby Department of Conservation reserve at Bream Head is relatively unmodified, apart from some farming activity and military occupation during World War II. The density of archaeological sites and features present in this area gives an indication of what Urquharts Bay would have once looked like (Campbell et al. 2007).

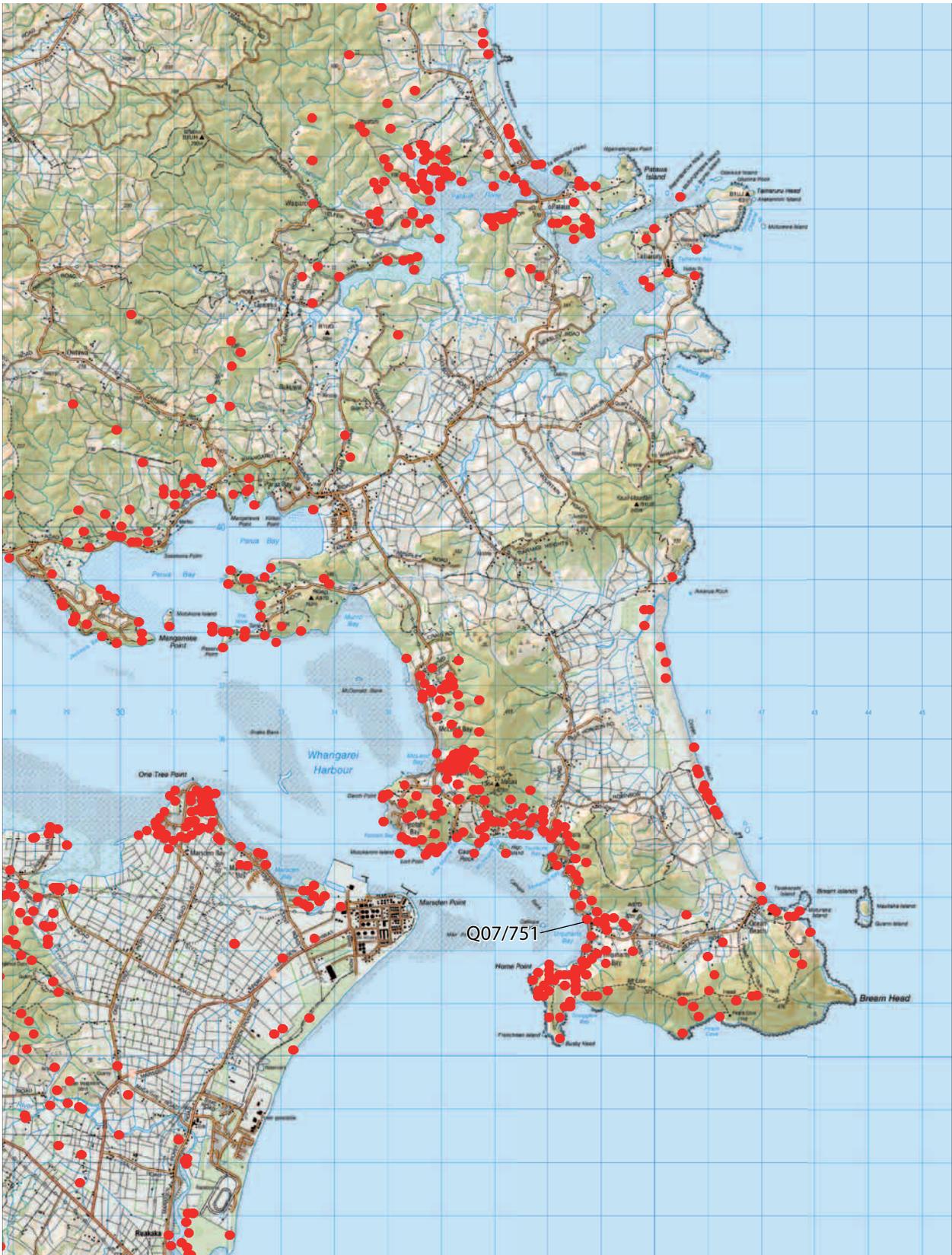
Little formal archaeological investigation has been carried out previously in Urquharts Bay. Some limited investigation has been carried out by Phillips on the part of Q07/751 across the road at 2567 Whangarei Heads Road, but this was after the site had already been significantly modified (Phillips 2006a). Koiwi were also discovered near the road verge on the edge of the same property (Phillips 2006b). Q07/751 is a relatively extensive occupation site and although much of the site has now been damaged or destroyed the remaining parts can still provide information on past Maori occupation of the area.

Archaeological investigation

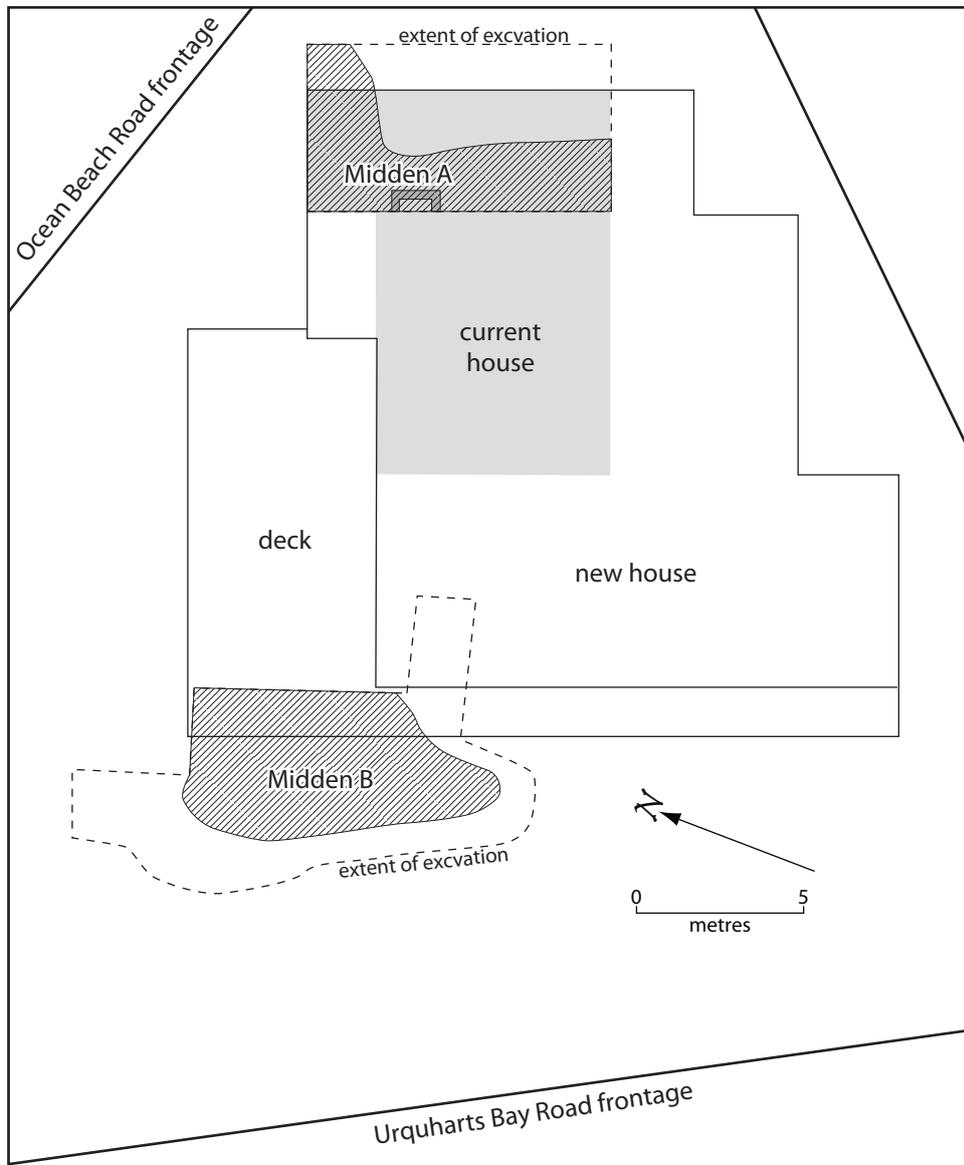
Archaeological investigation and recording of features of the part of site Q07/751 to be affected by the development took place from 9–11 January 2012.

Methodology

Prior to the investigation the kitchen and bathroom at the back of the existing house was demolished allowing this area could be inspected prior to the new house being constructed. The main three-room part of the original cottage was retained and the area of the new building footprint extending east and west from this was



1. Location map showing the location of Q07/751 and the distribution of archaeological sites in the outer Whangarei Harbour.



2. Overall site plan showing the boundary of the property, the footprint of the current house and proposed extensions, and the areas investigated.

the area investigated. The area at the front of the property where the new driveway and carport are to be constructed was also investigated.

Topsoil and overburden in the areas investigated was removed by the use of a small hydraulic excavator and then the surface cleaned down and any features or midden excavated, sampled and recorded. A plan of the areas excavated and features was drawn by hand using reference points off the existing house to tie them into the site plan. Digital photographs were taken at all stages of the investigation and details of the midden deposits and features recorded in a field notebook. Three 1 m squares were excavated by hand and the midden was sampled from these squares by taking bulk 10 litre samples in 50 mm spits from the top of the midden to the base.

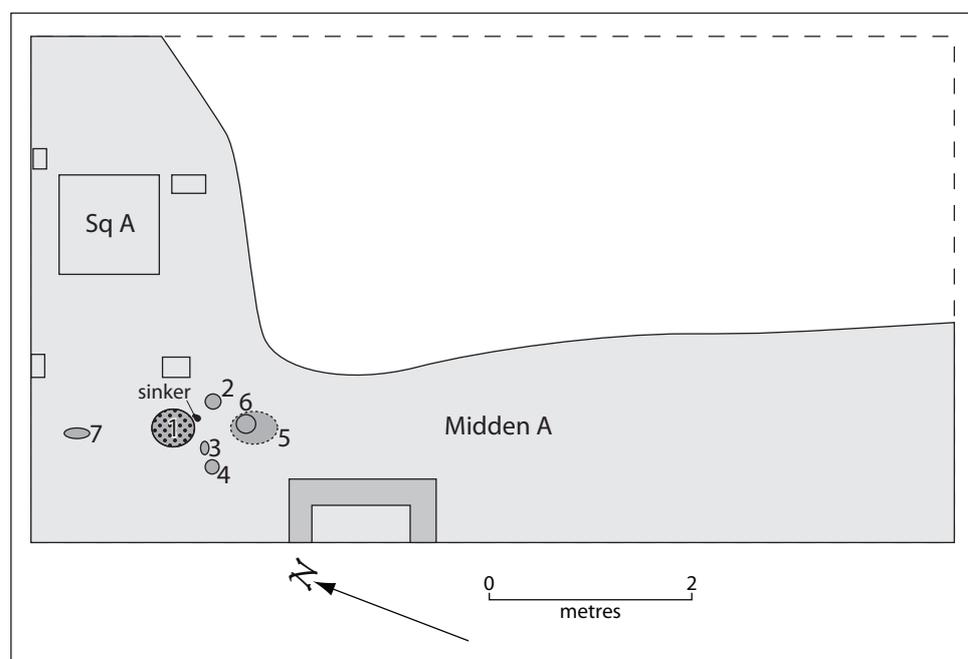
Two areas of midden were investigated, one at the back (east) of the house (Midden A) and one at the front (west) of the property on the slope leading down to a natural beach terrace just above Urquharts Bay Road (Midden B). No fea-

tures were recorded in Midden B and just five postholes and one oven scoop under Midden A.

Midden A

At the back of the house midden was present across the area covered by the footprint of the proposed building, although some of this was modern. A trench dug across the southern end of the area showed that the shell deposit was up to 400 mm deep, but historic artefacts such as bottle glass and nails were mixed through the shell and there was no charcoal fire cracked rock to suggest that it was a pre-European midden. This area had also been much disturbed by trenches for services and postholes for the house piles. It was not investigated further.

At the northern end of the area the shell deposit had again been disturbed by historic activity and house piles, but appeared to be more intact. The surface of the midden was cleaned down and a 1 m square was excavated by hand to sample it (Square A). Once the midden had been sampled it was removed by spade to reveal any features below. Square A was 100 deep and elsewhere Midden A was up to 150 mm deep. One oven scoop (Feature 1) and five postholes were found cut into the surface at the base of the midden. The oven was a small circular feature 400 mm in diameter defined by a concentration of fire cracked rocks around the outside. The fill of the oven was 80 mm deep and contained shell midden and fishbone, but very little charcoal. On the south side of the oven a stone net weight was found sitting on the same surface that the postholes had been cut into. The postholes around the oven formed no clear pattern. Feature 5 was recorded as a concentration of fishbone but the fact that it was located at the top of the midden and had a post-hole (Feature 6) beneath it, and it appeared to be historic in origin. Square historic postholes continued to the edge of the area investigated. Bottle glass and ceramics



3. *Midden A plan.*



4. Disturbed or redeposited shell at the back of the house. Scales = 1 m and 0.5 m.



5. Oven and associated postholes at the base of Midden A – note the net weight at the edge of the oven and the historic posthole to the right. Scale = 0.5 m.

around the chimney base of the old house (Figure 3) indicated that the house had been on the site from at least the 1920s.

On the south side of the property an area was opened up with the hydraulic excavator but found to have been totally disturbed by a series of septic tanks and service trenches. The area on the north side of the house where the garage, which had a concrete footing, had formerly been was not investigated. Under the house itself the area appeared to have been benched down prior to construction and test trenches dug up to the edge of the house at both the back and the front revealed no archaeological deposits.

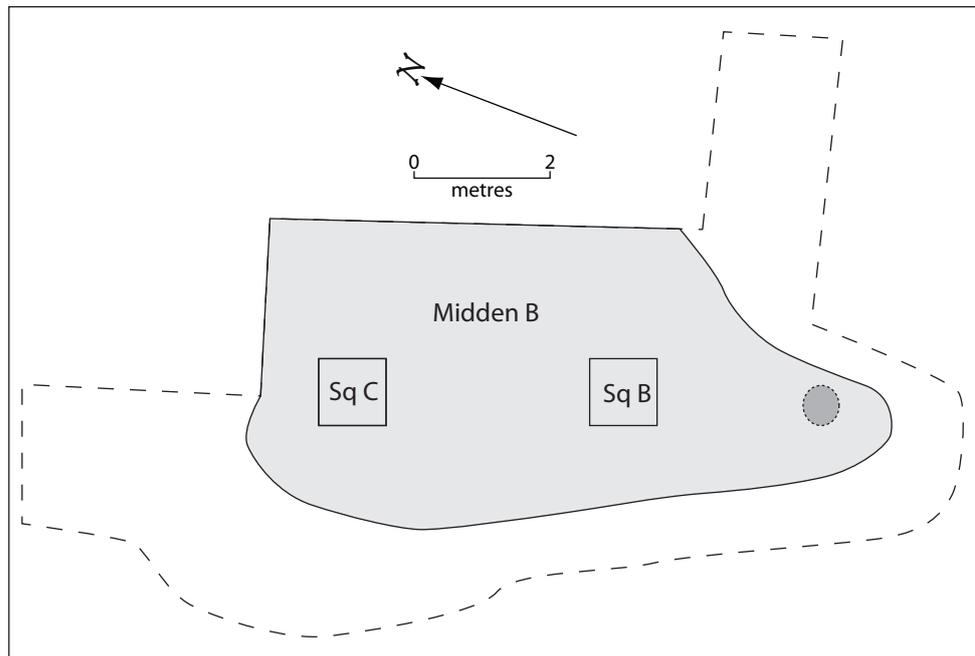
Feature	Length	Width	Depth
2	120	120	330
3	100	50	70
4	80	80	90
6	200	150	500
7	250	150	120

Table 1. Dimensions for postholes in the base of Midden A.

Midden B

At the front of the house another area of midden was investigated. This is where the new driveway access will cut across the natural beach terrace and the new house will be benched down into the slope above the driveway. A trench was opened up in the south corner of the property where the carport will be located but no shell or other archaeology was present. The midden was then exposed and the surface cleaned down. The soil overlying the midden was much disturbed with clay subsoil mixed into the topsoil and at the top of the slope towards the house the ground was totally disturbed down to sterile clay subsoil. No midden was present on the flatter area outside the house at the top of the slope.

Two 1 m squares (Squares B and C) were marked out to sample the midden (Figure 6). The depth of the midden was relatively uniform with Square B ranging from 140 mm on the uphill side to 70 mm on the downhill side. Square C was



6. Midden B plan.

slightly deeper, ranging from 170 to 140 mm. Once the midden had been sampled two 1 m wide trenches were dug by hand down the slope. The south side of the midden was also progressively removed by spade to check for any features below. The midden contained abundant pipi and cockle shell along with fire cracked rock, but there was no indication of any features on the slope. At the south side of the area a pohutakawa tree had once stood on the slope and the roots from this tree extended throughout the midden (tree roots were present in the bases of both Squares B and C, see Figures 8 and 9). One possible oven scoop was exposed on the south side of the midden but was either very disturbed by roots or had been created by them. Although the midden was noticeably darker with more charcoal in this area there was no evidence of any in situ burning. Samples of fish and other bone and a small number of obsidian flakes were hand collected during the excavation of the trenches through the midden.

7. Midden B cleaned down prior to excavation. Scale = 1 m.



Midden analysis

Two of the three 1 m squares that were sampled were selected for analysis – Square A in Midden A at the back of the house and Square C in Midden B at the front. All of the samples were bulk 10 litre samples taken from 50 mm spits. The samples were wet sieved through a 6 mm screen, dried, and then sorted to taxon using standard archaeological methods.

Shell

The predominant species are pipi (*Paphies australis*) and cockle (*Austrovenus stutchburyi*) (Table 2), which are both still abun-



8. Square B after excavation. Scales = 1 m.



9. Square C after excavation. Scales = 1 m.

dant in Urquharts Bay today. The main difference between the two midden deposits is in the size range of the shells present. The samples from Midden A contained mainly large whole valves with the shell being slightly more fragmented from spit 2. This would seem to represent shells that have been hand selected, resulting in larger specimens making up a higher proportion of the midden. This is shown in the greater mean weight and low MNI per gram figures for the samples from Midden A in Table 3. In Midden B the samples suggest a strategy of mass collection of shellfish with shells of all sizes being scooped up together. This is reflected both in the much higher MNI compared to Midden A and the very low MNI per gram. Samples from both middens also had a minor component of oven stone fragments and charcoal, indicating cooking nearby.

Pipi and cockle are estuarine or muddy shore species while tuatua is an open shore species. Urquharts Bay today is a relatively muddy shore, though it may have been less so in pre-European times, while the nearest open beach is Smugglers Bay outside Busby Head. Cat's eye is a rocky shore species and could have been gathered from any of the nearby rocky points.

Sample	Pipi (<i>Paphies australis</i>)	Cockle (<i>Austrovenus stutchburyi</i>)	Tuatua (<i>Paphies subtriangulata</i>)	Cat's Eye (<i>Turbo smaragdus</i>)	Miscellaneous gastropods	Miscellaneous bivalves	Total MNI
A-1	276	85			25		386
A2	407	466		31	3	2	909
C-1	1068	700	2	129	11		1910
C-2	1636	899	2	147	22	1	2707
C-3	977	489	4	100	19		1589

Table 2. Counts of shell by species (MNI).

Sample	MNI	weight (gm)	mean weight (gm)	MNI/gm
A-1	386	7190	18.62	0.053
A-2	909	4716	5.18	0.192
C-1	1910	4087	2.14	0.467
C-2	2707	5311	1.96	0.509
C-3	1589	5358	3.37	0.296

Table 3. Comparison of weight and count of shell.

Fish

Samples of fish and other bone were recovered from all excavated squares, from Trench B and from Features 1 and 6. Fish bone was sieved out of the bulk samples from Squares A and C, while the remainder was hand-picked during excavation. Although the assemblage is small six species were identified with at least one other unidentified species (one each of the opercular, hyomandibular and maxilla from two contexts; Table 4). The most common species identified was snapper which, along with kahawai, may be caught on a baited hook. Leatherjacket, flounder, mackerel and eagle ray are more likely to be netted. No hooks were recovered from the excavation, although this is not uncommon, while a net weight was recovered (Figure 13). Flounder and eagle ray are bottom dwellers, leatherjacket are reef dwellers, snapper and kahawai can occur both in harbours and the open sea while mackerel are open sea fish. One snapper premaxilla was very small, indicating the probable importance of the Whangarei Harbour as a snapper nursery.

This small assemblage represents a variety of fishing methods across a variety of habitats, all of which would have been easily accessible from Urquharts Bay.

	Kahawai (<i>Arripis trutta</i>)	Snapper (<i>Pagrus auratus</i>)	Leatherjacket (<i>Parika scaber</i>)	Flounder (cf <i>Rhombosolea</i> sp.)	Mackerel (<i>Trachurus</i> sp.)	Fish sp.	Eagle ray (<i>Myliobatus tenuicaudatus</i>)	Shark/ray (Chondrichthyes)
bulk samples								
Midden A	Sq A	3			Y			
Midden B	Sq C	2		1		2		
other samples								
Midden A	F1	3	1		1			Y
	F 6				Y			
Midden B	Sq B	1						
	Trench B	1	3			1	1	

Y = present (*Trachurus* sp. scutes or Chondrichthyes vertebrae)

Table 4. NISPs of identified fish by context.

Snapper predominate but this is not specifically a snapper fishery. The assemblage is too small to say whether fish were being primarily consumed on site or were being preserved for later, off-site consumption.

Other bone

A single dog tooth and a rat jaw and rat humerus were recovered from Midden A Square A, and a mid-shaft long bone of an unidentified small bird was recovered from Feature 1.

Artefacts

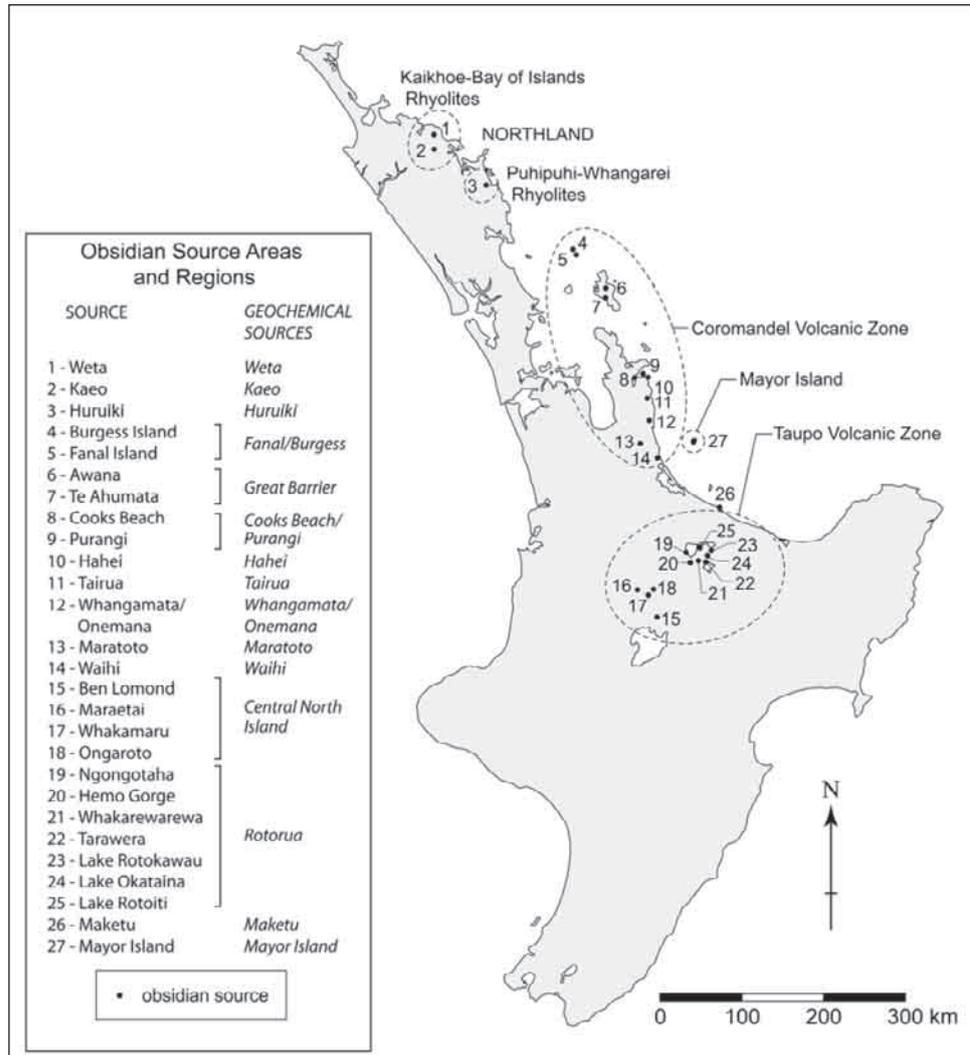
A total of 17 flakes of obsidian, four chert flakes and one formal stone artefact were recovered from throughout the excavation (Table 6).

All of the obsidian flakes were small (11 being less than 20 mm long) with the largest from Midden A having a maximum length of 41 mm. These looked to be of various types – several were green in colour while others were grey, and some with inclusions and phenocrysts. In order to determine if these differences were significant they were analysed using an Innov-X Delta portable x-ray fluorescence (pXRF) by Andrew McAlister of the Department of Anthropology, University of Auckland. This tests the chemical composition of the obsidian and determines which source the obsidian came from. Some of the samples were too small to cover the entire area of the detector window (Table 5), and it is considered likely that the true concentrations of these samples were underestimated slightly. Two of the small samples (#4 and #10) gave unusual results and were analysed twice to check for analytic error, but both sets of results were almost identical.

Samples were assigned to source using data from Sheppard et al. (2011: Table 3), a recent review of the geochemistry of New Zealand obsidian sources. Two pieces were from Northland sources (one each from Huruiki, the closest source to the site, and Kaeo), one from the Coromandel Peninsula (Cooks/Purangi) while the others are from island sources, Great Barrier and Fanal/Burgess, both Hauraki

Context	Analysis#	Size/condition	Surface	Probable source
Midden B	#3	medium	good	Mayor Island
Midden B	#5	medium	reasonable	Mayor Island
Midden B	#6	medium	good	Mayor Island
Midden B	#12	small	reasonable	Mayor Island
Midden A	#15	large/burnt?	good	Mayor Island
Feature 1	#17	small/thin/burnt?	poor	Mayor Island
Midden B	#9	small	reasonable	Kaeo
Midden B	#10	small	reasonable	Cooks/Purangi
Midden B	#1	large	good	Great Barrier
Midden B	#2	large	good	Great Barrier
Midden B	#7	medium	reasonable	Great Barrier
Midden B	#13	small/thin	poor	Great Barrier
Midden A	#14	small	poor	Great Barrier
Midden A	#16	large	good	Great Barrier
Midden B	#8	medium	reasonable	Fanal/Burgess
Midden B	#11	small	poor	Fanal/Burgess
Midden B	#4	small	reasonable	Huruiki

Table 5. Summary of samples arranged by grouping.



10. New Zealand obsidian sources. Adapted from Shepard et al. 2011: Figure 1.

Gulf sources, and Mayor Island in the Bay of Plenty, the source of the best quality obsidian. This obsidian is the most commonly found in New Zealand archaeological sites and is green in transmitted light.

Chert was only found in Midden A with one large flake 95 mm long having some unifacial wear along one edge indicating use for scraping or a similar task and one other piece 62 mm long being a prepared core. Two pieces from Square A were waste flakes less than 10 mm long. All of the chert was tan in colour.

The stone net weight was found at the side of the oven scoop in Midden A (Feature 1, see Figure 5). It is made of a coarse volcanic stone and overall measures 95 mm long and a maximum of 79 mm in diameter, weighing 578 g. It has been shaped, with a squared cross-section and a lashing groove around the top, where it is a maximum of

11. Chert and obsidian flakes from Midden A.



Context	obsidian	chert	net weight
Feature 1	1		1
Midden A	2	2	
Sq A, Sp 1		2	
Sq A, Sp 2	1		
Midden B	13		

Table 6. Distribution of stone flakes and artefacts.

51 mm in diameter. A more subtle lashing groove also runs longitudinally around it.

Chronology

A sample of pipi shell from Square A, Spit 2, was submitted to the University of Waikato Radiocarbon Laboratory for radiocarbon (¹⁴C) dating. The sample (Wk 33114) returned a conventional age of 738 ± 29 BP, which calibrates to AD 1470–1670 at a 95% confidence interval. This is the only date taken on the site so far. It places the occupation soon after the early, settlement period of pre-European Maori history, and well before European contact.

Discussion

Archaeological investigations at 4 Ocean Beach Road were limited to the footprint of the proposed new house. Small pockets of site Q07/751 remain partially intact on the property, mainly in the northwest corner. The site extends Ocean Beach Road to the adjoining lots (2567 Whangarei Heads Road) and includes findings of koiwi (Philips 2006 a, b). It is clearly a more extensive site than the small area investigated. Investigations showed that while approximately 80 years of historic occupation had impacted heavily on the part of the site at 4 Ocean Beach Road, some isolated features and relatively intact deposits remained.

The two midden deposits concentrated on the recovery of evidence of exploitation of marine resources. The differences between the two samples – one hand-picked, the other mass capture – suggests that the two areas were not exactly contemporaneous, though it seems likely they were from the same or a closely related occupation. Shellfish and fish exploitation seems to have followed a generalised strategy, targeting different local habitats and using a variety of methods – the net sinker indicates one of these. The obsidian and chert flakes may have been used for a range of activities such as food preparation, working with fibre and plant material, and wood-working.

The radiocarbon date indicates occupation of this part of the site between the late 15th and mid-17th centuries. A site as extensive as this may have been occu-



12 (above). Obsidian flakes from Midden B.

13 (left). Stone fishing net weight from Feature 1.



pied and reoccupied over a long period. One unexpected result of the analysis was to find obsidian from six different sources, especially in such a small sample. This indicates the wide-spread connections of the people who lived here and implies the site may be more significant than the limited excavation so far suggests.

Acknowledgements

The excavation crew consisted of Jaden Harris (Director), Kane Ditchfield and Cameron McCaffrey. Thanks to the clients Don Grimwood and Anni Veart-Smith for their hospitality during the course of the excavation and to Bruce Cartwright for providing and operating the hydraulic excavator.

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