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PUHINUI EXCAVATIONS : AN INTERIM REPORT

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The contract to undertake an archaeological investigation of the area proposed for the southwestern sewer interceptor at Oyster Point (N42/17), South Auckland, has been partially fulfilled with the completion of a mapping, survey and excavation programme. This interim report includes a short introduction to the history of the project, as well as an account of the initial ground survey, aerial photography and excavation strategy. Stratigraphy and features from area excavations within the pipeline transect are briefly summarised and tentative interpretations of some features are offered. Finds from the investigations are listed and briefly described.

Stratigraphy throughout the transect is relatively simple. Brown loam soils have formed on a scoriaceous brown loam base and on massive basal lava. A cultural layer of varying complexity overlies the brown loam and is capped with a rich organic top-soil.

Evidence suggests that artificial platforms along the west bank of the Puhinui Creek were intensively used for cooking. Post-hole and pit features adjacent to them indicate a number of structures of a permanent nature.

Sheltered depressions next to lava outcrops, within the pipeline transect, have been built up with brown loam soil. Stone structures surrounding them are probably the result not only of the clearance of scoria from these shallow depressions, but also of scoria clearance and subsequent gathering of soil from adjacent areas.

Stone enclosures with post holes, midden dumps and hearth features are associated with areas of garden soil and probably represent temporary field shelters.

Introduction

The Puhinui investigation (authorised under N.Z.H.P.T. Authority 1978/38) is a project in contract archaeology, undertaken by the Pre-history Section of the Department of Anthropology, University of Auckland, for the New Zealand Historic Places Trust. The area under threat, Oyster Point (Fig. 1), is part of the Wiri Mountain-McLaughlins Mountain prehistoric garden zone (N42/17), previously investigated by Agnes Sullivan (1972, 1974, 1975, in preparation), who carried out extensive mapping and limited excavation in the region.

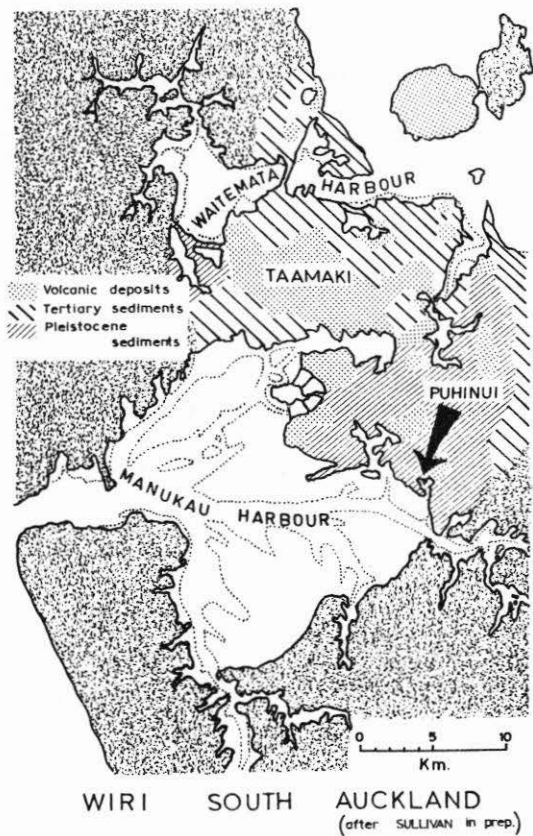


FIGURE 1. Showing location of Puhinui excavation.

The Puhinui programme was designed to investigate the archaeological remains of a transect, 30m wide and approximately 460m long, through which the Auckland Regional Authority's new south-western interceptor sewage main will pass. The path of the interceptor crosses a single paddock, bordered on the west side by the Puhinui Creek and on the east side by a quarried area (Fig. 2). The name of the creek was adopted for the project. The proposed location of the sewer was realigned after consultation with two archaeologists, Aileen Fox and Agnes Sullivan (see Sullivan, 1973), who judged the realignment to reduce the amount of damage "... to what is one of the last intact areas of extensive pre-historic gardening activity and settlement which at one time surrounded most pa sites situated on volcanic cones in the Auckland area. As such the whole intact area of Oyster Point is nearly a unique example of an almost vanished landscape once typical of the Auckland Isthmus" (Anon., 1978).

The Puhinui programme has included: (1) an intensive ground survey to map in detail the remains of prehistoric field boundaries (scoria stone rows, stone heaps and mounds, stone alignments and enclosures); (2) low level colour and colour infrared aerial photography to record distributions of these features in the wider area; and (3) excavation of selected areas within the transect path. This interim report outlines these stages of investigation and the initial excavation results.

Ground survey

A two man team carried out a plane table survey of features along the line of the transect. A series of detailed base maps (1cm : 2m scale), to be used in subsequent investigations, was produced. The area surveyed extends 35m either side of the transect, thus providing a suitable context within which excavated areas could be interpreted. Four stations, separated from each other by 100m intervals, were aligned in the centre of the strip and ringed with white painted tyres. These acted as location markers for aerial photography and as the base-line for the grid used in recording during excavation. The final map produced from this survey is large and unsuitable for publication with this interim report.

Aerial photography

Low level aerial photography produced two proof sets of oblique and near-vertical photographs. Three enlargements were made of choice frames. The writer assisted with photography and took the opportunity to photograph the site area using colour slides and colour infrared film. The results provide an aerial record of the transect prior to modification.

Excavation planning

Excavations were based on recommendations presented in the 'Outline and Budget' for archaeological investigations at Oyster Point which was produced by the Anthropology Department, University of Auckland, (Anon.,1978). The recommendations subdivided the pipeline transect into areas which were labelled A to N (Fig.2). These subdivisions were based on the types of archaeological features within the areas.

Three kinds of excavations were to be carried out in the designated areas: (1) four areas likely to be associated with occupation (A, H, J and L), were to be completely excavated: (2) six areas thought to be associated with cultivation activities (C, E, G, I, M and N), were to have selected features within them investigated; and (3), four areas, (B, D, F and K), were to be tested to determine what, if any, remains were present.

Area A was characterised as a stream bank occupation zone. Gardening and fishing features indicated a probably multi-purpose habitation zone. Surface features included: shell midden at the bank base across the full extent of the transect, artificial platforms constructed into the stream bank, and stone mounds and traces of former stone rows running inland from the stream bank. The flat area back from the bank top in Area A lacked strongly marked surface features, containing only indeterminate suggestions of possible former structures, although some subsurface shell midden was noted. As with the shell midden along the stream bank, traces of surface features including bank side terraces continued on either side of the pipeline transect and probably formed part of an intensive streamside occupation zone on the east side of this creek.

Area H was characterised as a narrow segment of relatively featureless low-lying ground, immediately below a low raised ridge on which were concentrated terraces, stone heaps and down-slope walls. Because of the likelihood that Area H would contain evidence of occupation or activity associated with the ridge side occupation zone, a thorough investigation was recommended.

Area J was described as being situated on a raised basal lava outcrop which had a thin soil cover. Wall remnants suggested extensive subdivision and use of some flattish rocky surfaces. The outlines of a stone-walled field shelter enclosure were also noted. All structures of Area J required thorough investigation because of the probability of recovering information regarding the utilisation and temporary occupation of rocky ground.

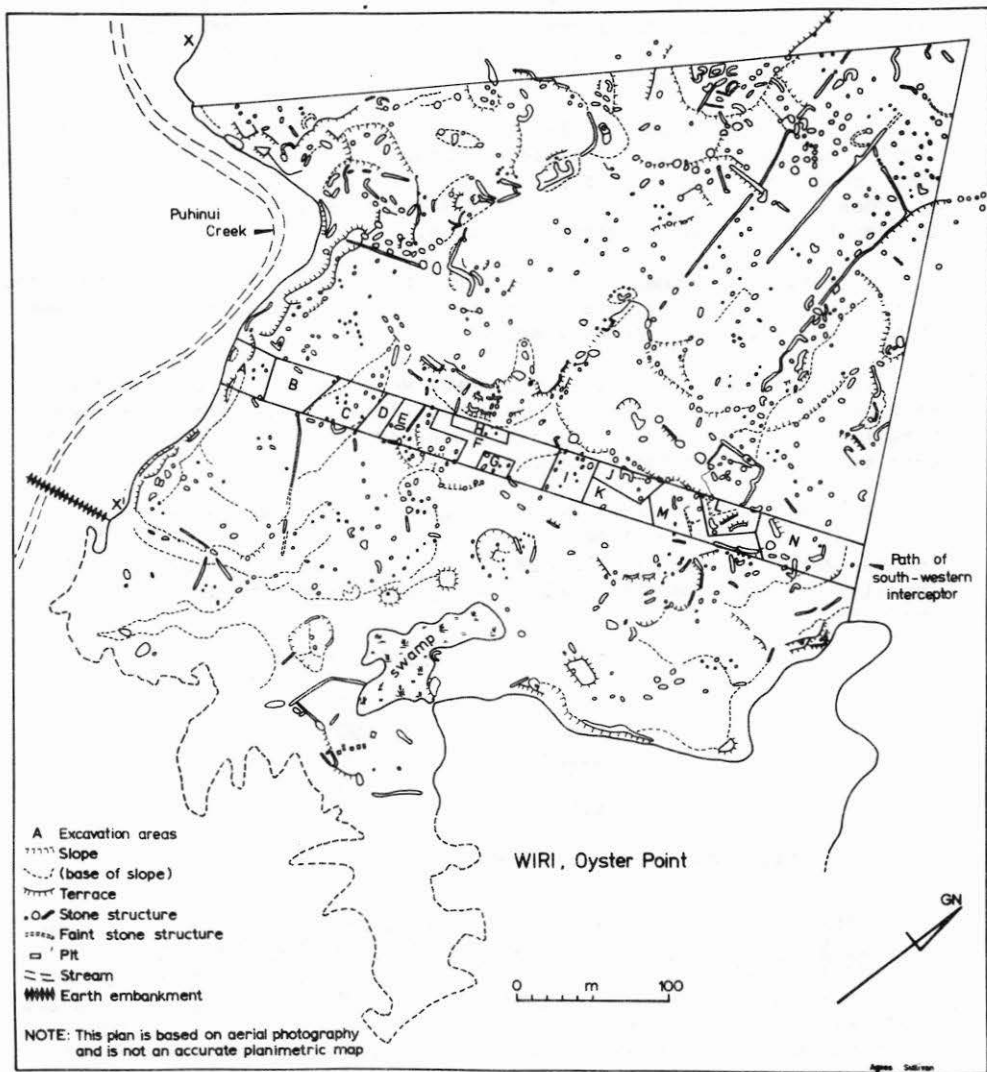


FIGURE 2. Showing Oyster Point field boundaries and stone structures related to prehistoric Maori settlement and gardening.

Area L was described as being similar to J but one in which additional artificial platforms were suggested. The area lies to the south of a concentrated, well preserved remnant of a partially stone outlined garden enclosure.

The remaining areas of the transect were characterised as having varying concentrations of surface features. These features included stone heaps, wall remnants and stone alignments. The age and nature of these structures required clarification as well as their possible relationship with adjacent gardening areas.

Initially, recommendations of the 'Outline and Budget' were followed. As work progressed, the excavation accommodated new information and was balanced with the finance available.

As investigations started two sheds were erected by the Auckland Regional Authority. One had a concrete floor and was used as an on-site laboratory and shelter, while the other had a gravel floor and was used as a store-shed for equipment.

Two seasons of excavation (29 October to 21 December 1979 and 7 January to 25 January 1980) opened approximately 1400m² (Table 1). An average of thirteen excavators (University students), for each of the eleven weeks, spent a total of 589 person-days working on the project.

<u>Area</u>	<u>Square metres</u>
A	700
D,E	250
C,G,H	100
I,J	250
L,M,N	100

TABLE 1. Excavated areas at Puhinui.

During this time the excavation was covered in the media by newspapers, New Zealand Herald (3/2/79, 24/2/79, 1/6/79, 27/11/79 and 29/11/79), Auckland Star (30/1/79, 26/11/79), radio (Radio Pacific and 1YA interview) and television (TV1 30/1/80; TV2 27/11/79). A pamphlet entitled 'Puhinui Excavations: Prehistory in Auckland' was produced as a general summary of field investigations for excavators and general public alike. During excavations and initial laboratory investigations a short video film was made by a team from the Auckland Technical Institute. This film is to be used for educational purposes.

Stratigraphy and features

Stratigraphy throughout the pipeline transect is relatively simple (Fig.3). Brown loam soils have formed on a scoriaceous brown loam base (Areas A to D) and on massive basal lava (Areas E to N). A cultural layer of varying complexity overlies this brown loam and is capped with a rich organic topsoil.

Area A (Plate 1). A complex stratigraphy was associated with stone embankments along the stream edge. An artificial platform was discovered, and was found to have been cut into the stream bank. A retaining wall of scoria boulders had reinforced not only the edges of the platform, but also the stream bank to either side. Other platforms had been constructed by depositing debris behind the stone embankment building up the existing bank. A generalised stratigraphic profile (Fig.3 - Area A) for an embankment shows loose scoria stones sitting on the scoriaceous brown loam base, which became increasingly clay-like toward the stream edge. Loose shell (cockle, mudsnail, scallop, oyster) and fishbone midden covered the stones, and was in turn covered either by the top soil or by a further layer of soil-fill, containing crushed shell. In this manner the stream bank had been modified creating a number of platforms.

Elsewhere in Area A the cultural deposits were represented by a soil layer of variable colour and thickness. Stratigraphic units included fire-blackened soil associated with hearths, shell scatters within a soil matrix, midden dumps and a generally darkened soil which sometimes contained small scoria pebbles and charcoal fragments.

Features from within these deposits included: hearths, a cooking pit, collections of fire reddened stones, remains of a burial (?), post holes, a shallow pit depression surrounded by four post holes and a number of small stake holes, a stone mound (a purposefully constructed ring of stones filled with small scoria rocks and soil) and stone heaps (random accumulations of stones).

Features and stratigraphy suggest that Area A was a zone of intense cooking activity. The construction of artificial platforms by the building of retaining walls, and the erection of shelters (represented by postholes) which covered the cooking terrace and shallow pit, suggest that the area had fairly continual domestic use.

The mangrove-covered mud banks adjacent to Area A were investigated to relate the excavations to a series of stone rows through the Puhinui Creek. These structures were interpreted as fish traps which had recently become covered with a greasy blue-grey mud. Excavated sections through the mud showed that the scoria rocks in the creek were probably

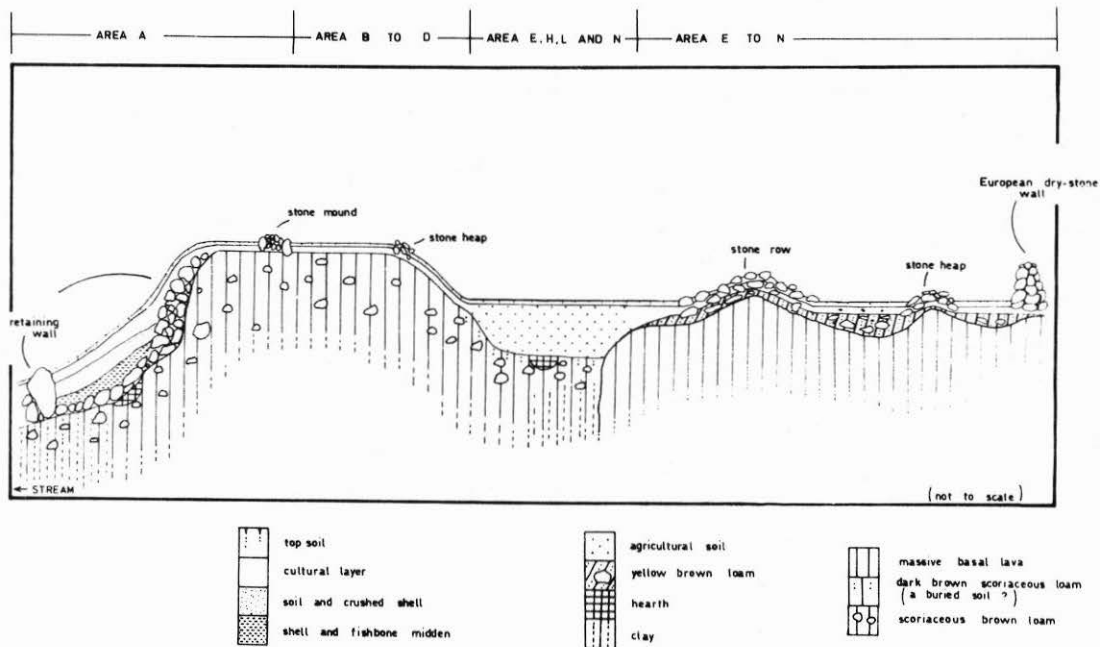


FIGURE 3. Simplified schematic representation of excavation stratigraphy.

related to others deposited on a bed of compact silt also found within the stratigraphic section of the stream bank. Large amounts of well preserved macro-plant remains, including adzed wood, were directly related stratigraphically to these scoria rocks. The stratigraphic sequence suggests that the fish traps are prehistoric in origin and that it is highly likely that they were a part of the activities of the prehistoric Maori who gardened on Oyster Point. There are good ethnographic records of this practice in the local area.

Area B to D (Fig.3). The Areas in the pipeline transect labelled B to D have a base of scoriaceous yellow-brown loam. The cultural layer is represented by a dark brown loam containing scoria stones. This is capped by a layer of topsoil. Stone heaps and a stone row are the dominant features, and probably represent a major field division.

Area E to I, K and M. In Areas E to I, K and M a darkened cultural loam exists between the top-soil and the yellow-brown loam which overlies the massive basal lava. Scattered patches of blackened soil (Areas H and L) indicated areas of fire. These fires occurred in recent and prehistoric times.

Features of these areas include stone heaps and stone rows. Excavation has shown that these dumps of scoria stones had been purposefully placed over patches of basal lava which are very close to the surface. This is especially true of those areas where the base of massive lava and scoriaceous loam meet (see below).

Area E, H, L and N. Shallow depressions adjacent to the lava flows contain a charcoal flecked layer of mottled brown loam which is relatively free of scoria stones. This layer rests on top of the compact dark brown scoriaceous loam under which is the basal clay subsoil (Fig.3). The mottled brown loam within these depressions has been interpreted as an agricultural soil. Cultural features associated with this soil include hearths, fire blackened soil, a small midden dump and postholes. A single C-shaped ring of scoria rocks adjacent to a stone row in Area E may have been a garden shelter.

Area J. (Plate 2). Area J has a stratigraphy which is similar to that found in Areas E to I. The major difference is that the cultural layer may be divided into two units: the lower unit of a yellow-brown loam and the upper unit of dark brown loam. Stratigraphy is directly related to stone-walled field shelter enclosures. Features associated with these structures include hearths, midden dumps, fire blackened soil and postholes.

AREA OF EXCAVATION

<u>FINDS</u>	A	E	I	J	L	M
<u>MODERN</u>						
Glass	114(1)	30(2)	-	37(3)	-	-
Metal						
cartridge cap (4)	9	3	1	1	-	-
bullet	1	-	-	-	-	-
nail	-	-	-	1	-	-
penknife	1	-	-	-	-	-
Rubber ring (5)	-	-	-	1	-	-
Bone						
pig	P	-	-	-	-	-
rabbit	P	P	-	-	-	-
rat ?	P	-	-	-	-	-
Teeth, sheep	-	-	-	-	-	P
<u>PREHISTORIC</u>						
Obsidian	44	-	1	7	1	-
Stone						
fire stones	P	P	-	P	-	-
2B argillite adze	1	-	-	-	-	-
basalt adze	1	-	-	-	-	-
sandstone grinder	1	-	-	-	-	-
basalt adze flake	-	-	-	1	-	-
pebbles (6)	P	P	-	P	-	-
Petrified wood flakes	1	-	-	29	-	-
Kauri gum	-	-	-	P	-	-
Adzed stake	P	-	-	-	-	-
Bone						
bird	P	-	-	-	-	-
fish	P	-	-	P	-	-
human	P	-	-	-	-	-
rat ?	P	-	-	-	-	-
Teeth						
dog	P	-	-	-	-	-
human	P	-	-	-	-	-

P - present. (1) All fragments belong to one green bottle (ca.1900).
 (2) One modern beer bottle. (3) A modern bottle. (4) Manufacturers brands on caps indicate 1880-1900 to recent cartridge types. (5) Modern farm equipment. (6) Small polished pebbles, sometimes termed 'moa crop stones', are thought to be natural water worn stones found locally.

TABLE 2. Interim list of Puhinui excavation finds.

Stratigraphy and features indicate three periods of occupation utilising L-shaped and C-shaped field shelters. These have been interpreted as temporary dwellings, probably associated with gardening activities in the adjacent depression between the lava and scoriaceous brown loam.

Finds

Table 2 is a list of excavation finds. These have been separated into two categories: modern and prehistoric. Modern finds were found in the top soil which varied in depth from 10 to 15 centimetres. Glass fragments are likely to have come from single liquor bottles, in the respective Areas, which have broken and become scattered. Metal cartridge caps were found in excavations throughout the pipeline transect. Manufacturers brand marks on the caps indicate that shooting (rabbits, ducks) was probably carried out on Oyster Point in the late 1800's. Metal pieces, a rubber object and bone complete the list of modern material.

Prehistoric finds include green and grey obsidian flakes, fire stones, a sandstone grinder, two adzes, kauri gum nodules, adze flakes, petrified wood flakes and an assortment of bones. It is interesting to note the greater number of obsidian flakes in Area A and the concentration of petrified wood flakes associated with the stone-walled field shelters of Area J.

Conclusions

Oyster Point was the scene of activities associated with the construction of garden enclosures, clearance of stone from areas and stream-side cooking. Artificial living platforms were constructed along the Puhinui Creek banks using scoria boulders and rocks as retaining walls. Elsewhere stone-walled field shelters were erected. Midden, hearths and oven stones were encountered in both areas. Domestic structures of a more permanent nature along the stream bank area included a cooking pit, a shallow pit depression and a cooking terrace.

Stone heaps and stone rows have been constructed over patches of shallow subsoil and protruding lava. These areas were probably of little use to the Maori gardener. Shallow depressions of scoriaceous brown loam adjacent to massive lava outcrops were cleared of stones. Brown loam soils were then gathered and deposited in these depressions to create scoria-free soil for cultivation. Stone features are probably the result of not only the clearance of scoria from these shallow depressions, but also of scoria clearance and subsequent gathering of soil from adjacent areas. Small stone-walled enclosures

located on basal lava within the area of gardening probably represent temporary field shelters. These structures are not unlike those recorded in the Mahaka Valley Historical Project, Hawaii (Green, 1970:20). It is highly likely that all activities within the Oyster Point area were connected with a wider complex of paa occupation related to McLaughlins Mountain.

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PUHINUI Plate 1. Area A, McLaughlin's Mountain in the background.



PUHINUI Plate 2. Area J, excavation of C-shaped enclosure.