

Annexure 1b

The archaeology of the islands

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1.0 Introduction

The significance of the inner gulf to both Maori and early European settlement is evident in traditional histories passed down orally from one generation to another and in the written records made after the arrival of Europeans. Traditional histories record some of the major events in the gulf's history: the arrival of ocean-going waka (canoes), the struggles for dominance and the relationships between different iwi and the impacts of European colonization. However, details of the economies and lifestyles of the people who lived here before the arrival of Europeans are rarely recorded in oral traditions, and information on aspects of daily life recorded by early European settlers at the time of contact is limited and not always reliable. The written record relating to early European settlement provides more detail, but only part of the story.

2.0 The archaeological record

Archaeological sites provide the physical expression of the Hauraki Gulf's history and reveal information not known from the oral or written histories of the area. Some archaeological sites are considered waahi tapu (sacred places) by iwi, in addition to being significant repositories of archaeological information.

The most common archaeological sites found in the Hauraki Gulf - middens - are part of a historical landscape that extends not only across the islands but through time as well. Some date back to the very earliest period of settlement. They exemplify the importance of understanding and recording archaeological remains, even when they do not seem to be significant or very visible features within the landscape. Middens are made up of food remains (predominantly shellfish remains, but also the bones of fish, birds and marine mammals). Collectively and in some cases individually they can provide a great deal of information on subsistence, the environment at the time and, through dating and comparative studies, the history of settlement and the impact of humans on the environment.

Other commonly identified archaeological features include pits (the remains of structures for storing kumara and other produce) and terraces (areas levelled for house sites or agriculture). Concentrations of these features may indicate the presence of a kainga (settlement site). Pa are the most complex of the Maori sites with their defensive earthworks, use of natural defences and strategic locations. They often contain a full range of archaeological features - living terraces, pits and middens as well as defensive ditches and banks.

The islands also contain the archaeological remains of early European settlement, many relating to farm settlements and the exploitation of natural resources (mining and the timber industry). Historic remains of European settlement in the 19th and early 20th century in the islands are also visible in the form of military, maritime, domestic and industrial structures.

3.0 Archaeological research

The islands in the Hauraki Gulf vary in size, geology and the number and diversity of their archaeological sites. Over 750 sites are recorded on Waiheke, the largest of the inner gulf islands, 350 or so sites on Motutapu, 70 on Ponui, 70 on Motukorea (Browns Island), 70 on Motuihe, 30 on Rakino, 12 on Rangitoto's volcanic cone, around 20 on Rotoroa, and 5 on Pakatoa. In the outer gulf, Great Barrier and the surrounding islands contain c.800 sites, Little Barrier c.80, and a number have been recorded on the Mokohinau islands. The high number of sites confirms the significance of the islands to New Zealand's heritage and also reflects the active approach that archaeologists have taken to site recording and investigation in the region.

The first detailed archaeological investigations were carried out in the 1950s when Jack Golson excavated the deeply stratified site at Pig Bay, Motutapu. Then between 1956 and 1959 V Fisher excavated an 'archaic' (early) site at Ponui. From the beginning of archaeological recording and research it was recognised that the gulf contains some of the earliest evidence for the settlement of New Zealand.

Archaeological survey and site investigation continued sporadically in the following years, with the University of Auckland's Department of Anthropology and the archaeologists at the Auckland Institute and Museum carrying out most of the work. Significant work included the discovery and investigation of the Sunde Site on Motutapu which provided evidence of human occupation prior to the eruption of Rangitoto c.600 years ago; and the survey of Motutapu by Janet Davidson in the late 1960s, recording over 300 sites.

However, it was not until the late 1980s that a systematic programme of investigation of the islands emerged, co-ordinated by Geoff Irwin at the Department of Anthropology. Since then Ponui and Motutapu have been intensively surveyed and investigated. Gradually as the results and materials are analysed, radiocarbon dates extracted for many sites, and the evidence considered, a greater understanding of early settlement patterns and social behaviour is emerging.

On other islands survey coverage continues to be patchy, with some areas well surveyed and others still unexamined. In the years since the introduction of the Resource Management Act 1991 more surveys and small excavations have been carried out on Waiheke and Rakino as part of assessments of environmental effects, but these have been piecemeal and development driven.

While the focus of archaeological site recording in the early days was on pre-European remains, in recent years early European sites have increasingly been added to the archaeological record. This has included recognition of the old homesteads, schools, mines, shipwrecks, wharves and jetties that represent the first stages in the transformation of the islands into an integral part of modern Auckland, whether used for suburban living, recreation or conservation.

The archaeological research to date has focused on a number of key themes. These have included:

- the islands as an ideal location for the early settlement of New Zealand
- the development of social networks across the coastal North Island
- warfare and defence - the growing pressures on settlement
- European settlement of the Auckland region.

4.0 Early settlement

Perhaps one of the most important and debated themes in archaeology is the settlement of New Zealand and when it occurred. It is largely accepted that the Polynesians reached New Zealand as a result of deliberate exploration and controlled voyaging. Based on linguistic, cultural and genetic studies it is clear that New Zealand was settled from east Polynesia. The dates for this have been hotly contested but it is generally agreed that the first settlers had arrived by c.1200AD. The recognition of archaic sites (shell middens particularly rich in artefacts) remains central to our understanding of this migration history. The number of archaic midden sites on Ponui, Waiheke (Owhiti), Motutapu (the Sunde Site), Motukorea (Browns Island), and further out, Great Barrier (Harataonga), to name a few, is clear evidence that the islands provided ideal environments for these early settlers.

The apparent preference for initial settlement on the islands may be partly explained by the nature of the voyagers' small island homelands, but the islands also provided the conditions required to establish the tropical cultigens that formed the basis of Polynesian horticulture. While New Zealand offered abundant bird and marine life, it had no agricultural crops and generally a more temperate climate than eastern Polynesia. The islands, however, offered a warmer microclimate than the mainland, which enabled the Polynesian cultigens to be propagated and the foundation for long-term and more intensive settlement of the country to be laid.

Other possible archaic sites that have been identified include stone working areas, for example, on Rakino, which show early exploitation of the local natural resources.

The archaeology of the Sunde site on Motutapu revealed occupation beneath the ash associated with the 14th century appearance of Rangitoto. Footprints in the volcanic ash indicated that the occupants of the island returned after the eruption to witness the

devastation of their former settlement. Archaeological deposits dating to before and after the eruption of Rangitoto show a change in local flora and fauna, with decimation of the birdlife due to the destruction of Motutapu's forests. Motutapu archaeological data also contained evidence of now extinct species such as the giant eagle. Archaeological evidence from after the eruption indicated that agriculture later played a significant role on Motutapu, and the volcanic ash would have improved soil fertility.

5.0 Development of social networks

The islands do not show a pattern of isolated settlement by Maori, instead the sites formed an interconnected group. The archaeology of the islands shows that there was considerable movement of people and goods between the islands, Coromandel Peninsula, Auckland isthmus, and Northland.

Analysis of archaeological materials shows that obsidian was taken to the islands from as far away as Mayor Island in the Bay of Plenty, and high quality argillite was being obtained from the South Island. The early sites on Ponui, Waiheke and Motutapu also had significant artefacts made from moa bone, although there is no indication that these birds were ever present on the islands. A high quality stone (greywacke) from Motutapu was exchanged widely throughout different regions, as well as being used locally.

6.0 Warfare and defence

As the human population increased there was greater pressure on the rich resources of the islands and the density and distribution of sites identified in the archaeological record increased both in number and size. Pa sites started to appear in the 16th century in strategic locations around the islands, with a range of defensive systems constantly adapting to local conditions. Around 90-100 pa are recorded throughout the inner islands and around 50 on the outer islands.

The islands' pa reflect not only the socio-political instability of the past but also the islands' strategic value in controlling movements through the gulf and beyond. For example Motukorea lies at the mouth of the Tamaki River, which provided access through to the Manukau via portages (places where waka were dragged across a short stretch of land), giving it particular strategic significance. Pa are located on headlands throughout the islands to guard the bays, provide early warning of the approach and general movement of waka within the Hauraki Gulf, and provide a refuge in times of war.

7.0 European settlement

While fewer than the archaeological sites of the pre-European period, a growing number of sites reflecting early European settlement and activities are being added to the archaeological record. However, none of these sites has been archaeologically excavated yet, although archaeologists are increasingly working with historians, architects and other heritage groups on recording the 19th and early 20th century transformations of the landscape.

Examples on Waiheke include the remains of a 19th century manganese mining operation scattered across the landscape at Awaawaroa. At the head of Te Matuku Bay a historic cemetery is a significant reminder of one of the early European settlements on the island. There are few recorded remains of the significant early boatbuilding and spar extraction industries on Waiheke, but there is still the potential to identify such sites. Nineteenth-century copper mining and shipbuilding sites have been recorded on Great Barrier, as well as late 19th to early 20th century sites related to silver and gold mining and the timber industry. Early (19th century) farm settlement sites have been recorded on Motuihe, Motukorea, Motutapu and Great Barrier. Baches dating to the 1920s and 1930s are still present on Rangitoto, with associated structures and sites, significant remnants of a lifestyle that is gradually disappearing in New Zealand. Most dramatic though, are the remnants of large World War II gun emplacements at Stony Batter on Waiheke and at Motutapu, with a chain of lesser defences on Rangitoto, elsewhere on Motutapu, Motuihe and the Mokohinau islands. The lighthouse on Burgess Island (in the Mokohinau group) is

also a significant historic structure. The research potential of all these sites for historical archaeology is considerable.

8.0 The Hauraki Gulf archaeology project

While hundreds of archaeological sites have been recorded on the islands, the vast majority of these were recorded before the days of GPS (global positioning systems). Many were recorded in the days of the imperial rather than the metric map system. As a result the accuracy of recorded locations was often no more than to within 100-200m. This meant it was often difficult to relocate sites on the ground, especially where vegetation growth or land use had changed significantly since the time when the sites were recorded. In these situations it can be difficult to establish whether sites are still present in the landscape, or have been destroyed or altered in the years since they were recorded.

To remedy this in 2002 Auckland City started an ambitious project to upgrade the information about all recorded archaeological sites in the islands. The aim is to establish the precise location and extent of all known archaeological sites, with their boundaries marked on aerial plans and property boundaries overlaid. In addition the archaeological significance of each site (its ability to provide information on the history of the islands), including its state and condition, are being evaluated. This will greatly assist in the protection and sustainable management of archaeological sites, and provide much better information for landowners about the location and extent of archaeological sites on their property.

Development and settlement of some of the islands continues at a rapid pace, especially in the coastal areas where most of the archaeological sites are located, posing a significant threat to the surviving archaeological remains. By improving the information about the recorded archaeological sites on the islands, the Hauraki Gulf project will result in better management of the archaeological resource to ensure the survival of the unique, the significant and the representative for future generations.

9.0 Glossary of archaeological terms

Term	Meaning
artefact	any object relating to history of New Zealand
cultigen	plant species or cultivars that are completely dependent on domestication and cannot persist other than for one or a few growing seasons without renewed human propagation
dendroglyph	artwork carved into a tree
ditch	any purposely built trench - usually refers to parts of the defensive work on pa sites
findspot	location where an artefact has been found
hangi	stone-lined earth oven
kainga	undefended habitation site usually including archaeological features such as house platforms and storage pits
midden	prehistoric or historic period rubbish dump - in coastal areas these are typically shells from cooking pits and often contain other items including hangi stones
modified/made/garden soils	evidence of changes to a soil purposefully carried out to enhance conditions for horticulture or habitation (often includes the addition of shell or stone)
pa	Maori fortified location. Built in both prehistoric and historic times, pa sites usually contain a large number of storage pits, terraces and house platforms, and were fortified with combinations of ditches and palisades. Maungakiekie (One Tree Hill) is an outstanding example of a pa.

Term	Meaning
petroglyph	artwork carved into stone
pit	A purposefully excavated hole in the ground. Usually rectangular or sub-rectangular in shape although other forms exist. In pre-European times they were most commonly used for storing kumara and often covered. Pits may also have other purposes, be subterranean (such as in caves and bell-shaped rua) and may also refer to such holes dug during colonial times for a variety of purposes.
platform	a purposefully levelled area
quarry	location of a source of material for stonework
rua	deep pit used for storing kumara usually with a small entrance at the top
stone flaking/working area	area with debris from making stone tools
terrace	excavated and flattened area on a slope
urupa	Maori burial site