

Tiritiri Matangi Fieldtrip Notes

Environment

Tiritiri Matangi (or Tiritiri as it is often known) is an example of a medium-sized 220 ha island within the inner Hauraki Gulf/Tikapa Moana. It is separated from the end of the Whangaparāoa Peninsula by the Whangaparāoa Passage. While we tend to think of it as an island lying offshore, it is only 3.5 km from the mainland and easily accessible by a short 40-minute paddle by canoe.

The north-east facing coastline of Tiritiri Matangi is exposed to the predominant source of wave energy in the Hauraki Gulf. While south-westerly conditions prevail in winter, the south-western side of the island (where the wharf is located) is more protected because wave fetch distances are more restricted from this direction.

The slopes down to the coastline of Tiritiri are generally steep with exposed rocky shorelines and relatively few beaches suitable for landing, especially on the north-east side. Most beaches are formed of cobbles or boulders with rock outcrops. The only significant stretch of soft shore sediment coastline is at Hobbs Beach (Field Trip Destination **B**).

Like most of the inner Gulf Islands Tiritiri is formed predominantly of greywacke metasandstone and argillite basement rocks. These are exposed as coastal rocks and cliffs, and are overtopped by Waitemata Group sedimentary rocks on the more moderate slopes above. Greywacke beach cobbles were valued for ovenstones by Māori, and pockets of flake quality greywacke on some inner Gulf islands were exploited for the manufacture of adze blades. After the settlement of Auckland was established, beach materials on inshore islands (including Tiritiri) were quarried for construction aggregate and road metal due to a lack of suitable material on the mainland.

The clay-rich soils that predominate on Tiritiri are generally unsuitable for traditional Māori cultivation, although small pockets of better soils exist in valleys and on coastal terraces. The island would have been forested at the time of arrival of Māori ancestors. However, the original vegetation had been substantially destroyed by fire and replaced by bracken fernland by the time of European settlement in the region in the 19th century. The island was farmed (grazed) from the 1850s until 1972, by which time less than 10% of the land remained in forest.

Archaeological/historical context

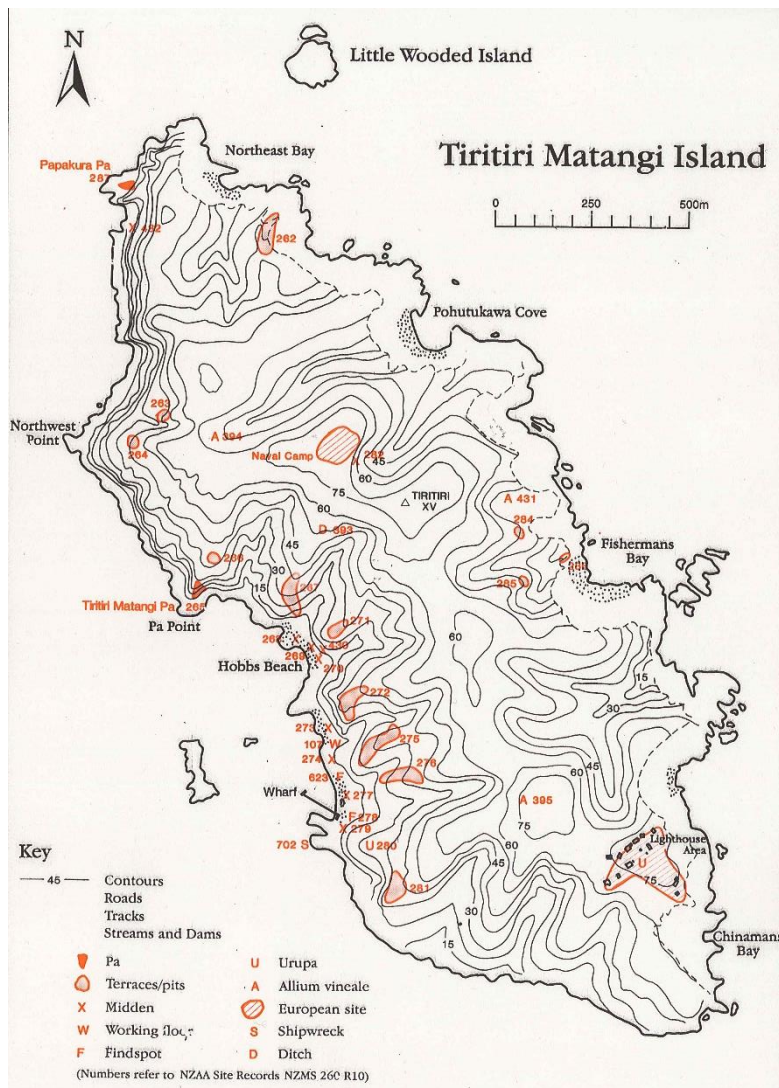
Tiritiri was surveyed for archaeological sites prior to the commencement of revegetation.

Based on the recorded site distribution, Māori occupation was primarily focussed on the south-western side of Tiritiri, which has easy access to the sea, and in particular along or in the vicinity of a back-beach terrace (now substantially lost to erosion) between Hobbs Beach and Wharf Bay.

There is a single recognizably early/pre-1500 CE (“archaic”) site (Field Trip Destination **A**) recorded on the island, at Wharf Bay. It is located where the ferry wharf is situated, near a reliable water source and semi-protected landing beach. Other recorded sites associated with subsequent Māori occupation include terrace sites (probable habitation sites), middens of shell and fishbone, a small number of food storage pits, and artefact findspots. Although adze preforms have been found on the island, no evidence has been found to date to indicate that local rock sources were used.

There are also two pā (earthwork fortification) sites recorded on the island (not part of the field trip). These are Tiritiri Matangi pā, after which the island is named, near Hobbs Beach, and Papakura pā at the western tip of the island. These are associated with Kawerau and Ngāti Pāoa/Hauraki iwi (tribal

entities), respectively. Both are insubstantial, and appear typical of 'fishing pā' that were located near seasonal fishing locations, and maintained as a refuge in times of threat. Papakura pā is said to have been attacked and destroyed by Kawerau around the beginning of the 18th century.



In general, the range and distribution of archaeological sites on Tiritiri is typical of short term temporary/seasonal habitation found on smaller Gulf islands. Evidence of more permanent occupation exists on islands that are larger and/or have soils suited to cultivation (for example, Motutapu).

Historical/traditional accounts relating to Tiritiri Matangi are generally consistent with the archaeological settlement pattern. Māori Land Court testimony, relating to the late 18th and early 19th century, records that Tiritiri was valued as a fishing location. Informants describe parties ranging in size from a single canoe carrying 10 people up to as many as “nine boat loads” visiting the island during the fishing season, and staying for periods of 2 days – 3 weeks in temporary camps. Fern root (bracken fern rhizome) was harvested as a food source whilst in residence. Tiritiri, along with the adjacent Mahurangi coastal waters between the Weiti River and Tawharanui, was highly valued as a shark fishing location. Migratory school sharks, in particular, could be caught in large numbers and preserved by drying for later consumption.

These seasonal movements between winter settlements where gardens were located, and temporary summer camps where fishing and shellfish gathering or hunting took place, characterised settlement patterns in the wider Tamaki/Hauraki region in the late period (Sullivan n.d.). Indeed, Māori populations in general were highly mobile at the time of and prior to European settlement.

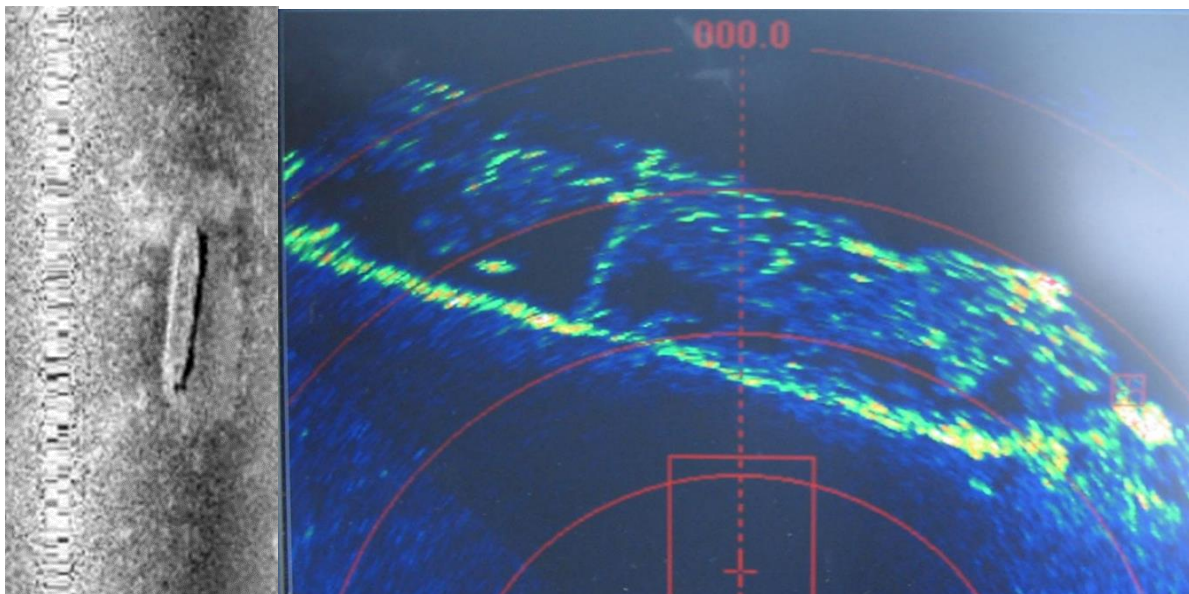
The lighthouse era

In 1857 a location at the southern end of the island was selected for a lighthouse and 20 hectares of was subsequently reserved for lighthouse purposes. The (existing) cast iron lighthouse, original keepers' cottages and flagpole had been completed by the end of 1864. The keepers' cottages formerly occupied the terrace where the visitor centre is located. These were subsequently demolished and replaced in 1917 by the existing houses and outbuildings. Other structures that form part of the lighthouse complex include the remains of a gun cotton foghorn and concrete gun cotton store (not accessible for safety reasons), a compressed air diaphonic foghorn and its electronic replacement; signal station, generator shed and store (interim museum), and assistant keepers house. A jetty, constructed in 1923 at Wharf Bay, was replaced by the existing concrete wharf in 1997. The lighthouse was electrified in 1955 and in 1956, a xenon light with a range of 58 nautical miles was installed, making it at the time one of the most powerful lights in the world. The lighthouse has been fully automated since 1984.

During World War 2, a decision was made to restrict the entrance to the Port of Auckland to the Whangaparāoa Passage. A controlled minefield covered by searchlights was laid across the passage and an extensive complex of coast defences constructed on the end of the peninsula. Tiritiri was occupied by the military, and a fortress observation post, port war signal station and camp were built on the island.

The lighthouse complex (Field Trip Destination **C**) has an interpretation centre, and a small museum (you may have to ask at the interpretation centre). This part of the field trip will be self-guided.

Mystery ('Compass rose') wreck



There are a number of known shipwrecks recorded in and around Tiritiri, but in 2001, an unidentified wreck was found during a sidescan sonar survey of the shipping lane 10 km east of the island. The vessel, which is around 42m in length and lies at a depth of 44m has since been explored by remote submersible, remains unidentified in spite of extensive research. The most likely scenario is that it was an obsolete 1870s-80s vessel deliberately sunk before 1925 in an early attempt to thwart inshore trawling. It is now protected in the Auckland Unitary Plan heritage schedule.

Conservation

Tiritiri was added to the Hauraki Gulf Maritime Park in 1971, with the volunteer-based revegetation of the island commencing in 1984. There is a lot of interpretation relating to this project at the interpretation centre (Field Trip Destination **C**) and along the Wattle Track walk from the wharf to the lighthouse complex.

Further reading

Dodd, Andy 2008. Tiritiri Matangi Archaeological and Historic Landscape: Heritage Assessment. Published electronically. Department of Conservation, Auckland.

<https://www.doc.govt.nz/globalassets/documents/conservation/historic/by-region/auckland/tiritiri-matangi/tiritiri-matangi-island-heritage-assessment-full-version.pdf>

Sullivan, A. 1983 Māori Gardening in Taamaki Before 1840. Unpublished manuscript, Department of Māori Studies, Victoria University, Wellington.



Field Trip Destination A: The Tiritiri wharf 'archaic' site at Wharf Bay



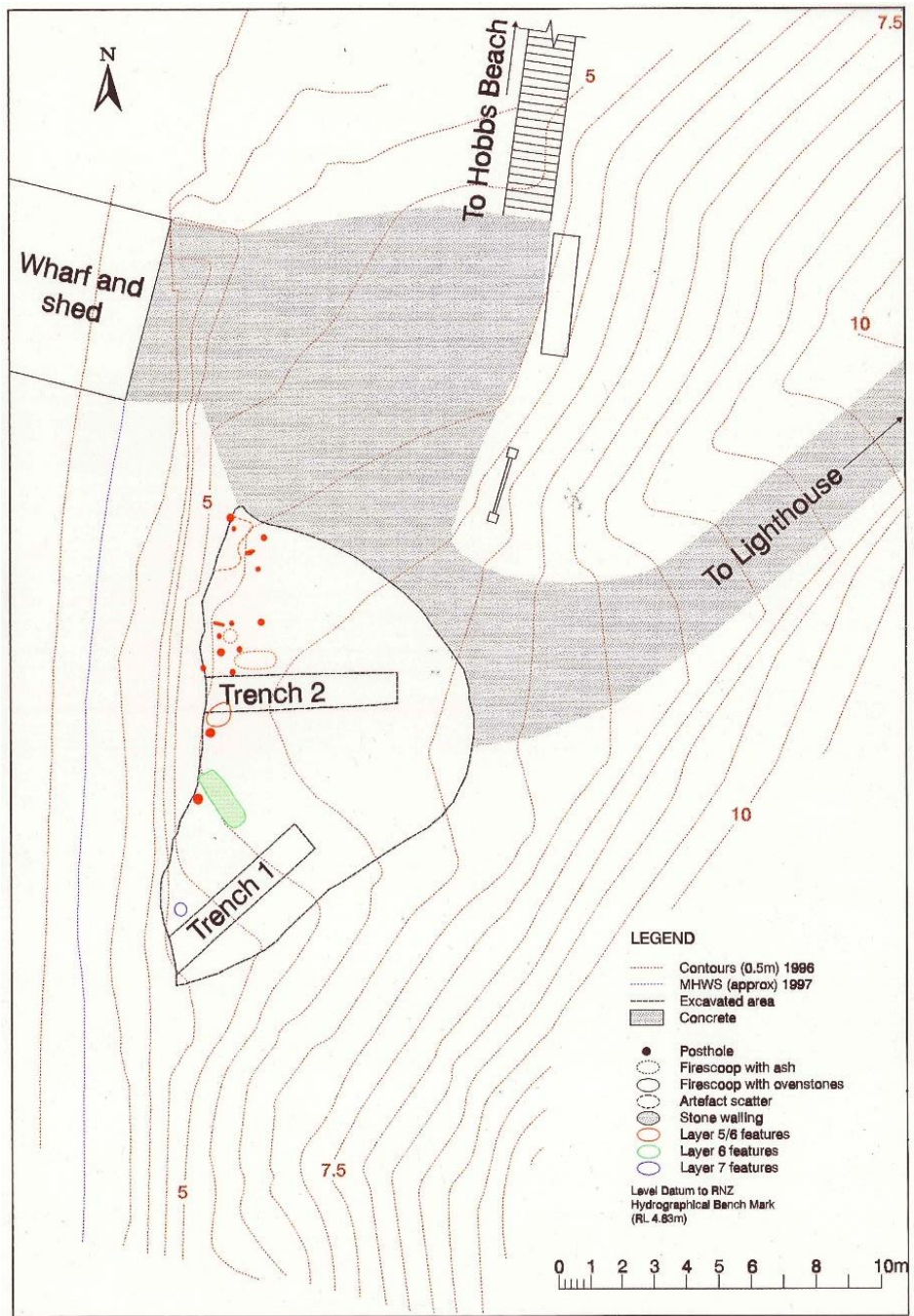
The Tiritiri wharf site in 1997 prior to excavation and levelling for the development of the present concrete wharf (location of existing wharf indicated by arrow). Initial occupation is marked by the dark coloured layer at the base of the escarpment.

The Tiritiri wharf site, now substantially destroyed by coastal erosion or obscured by development of the wharf and associated visitor facilities, occupied the bay to the south of the existing stream. Prior to 1997, an earlier timber wharf was located further to the north of the existing concrete wharf and closer to the mouth of the stream. An archaeological excavation took place prior to redevelopment of the abutment area and construction of the new wharf.

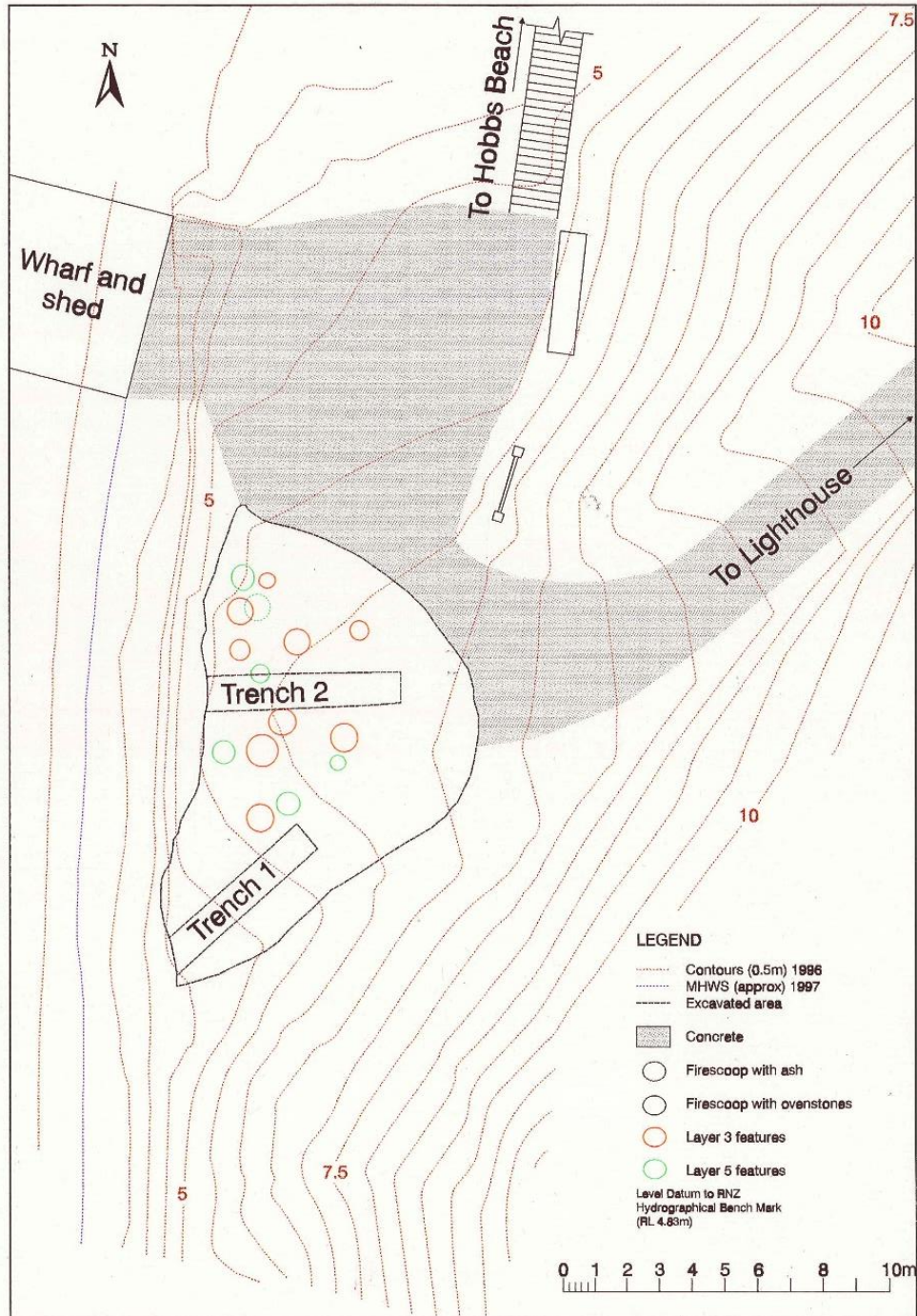
The site was located along an old raised gravel beach terrace which originally extended to the southern end of Wharf Bay. The local environment has likely changed considerably over time as the bay is vulnerable to coastal erosion exacerbated by rising sea level and removal of beach materials in the historic era. Up to a metre of the coastline and site was lost within a single month in 1996-7.

The site was up to 1.8 metres deep in the area that was excavated. Initial occupation commenced around 1400 CE, and the site was used intermittently for at least 200 years, spanning the transition between the early/archaic and late/classic periods in New Zealand archaeology.

The upper/later part of the site sequence had been removed during development of the first wharf and road in the 1920s.



Excavation site plan showing features recorded in Layers 6 and 7, and on the interface of L5/6. Note that the present wharf and shed are located in the vicinity of Trench 1



Excavation site plan showing features recorded in Layers 5 and 3.



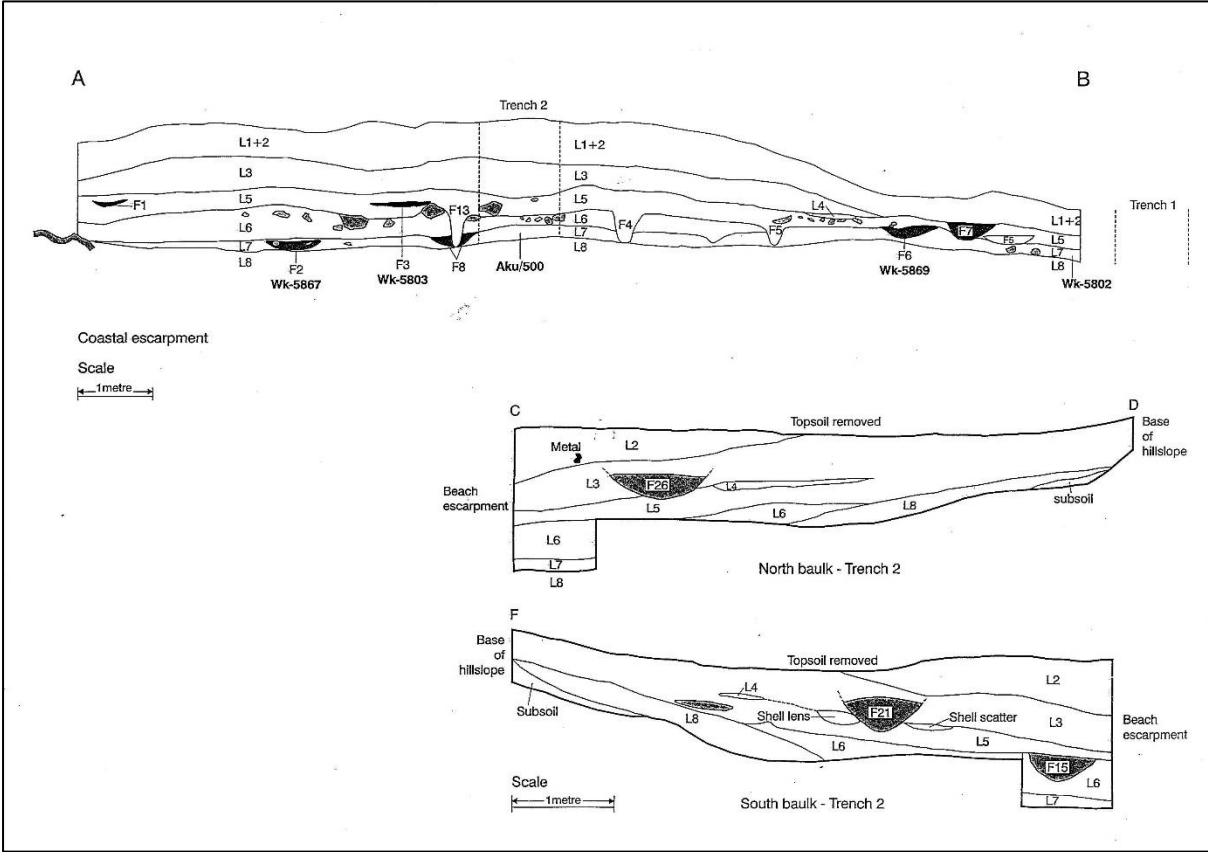
Surface of Layer 7, showing a large elasmobranch (shark) centra and obsidian flakes as found



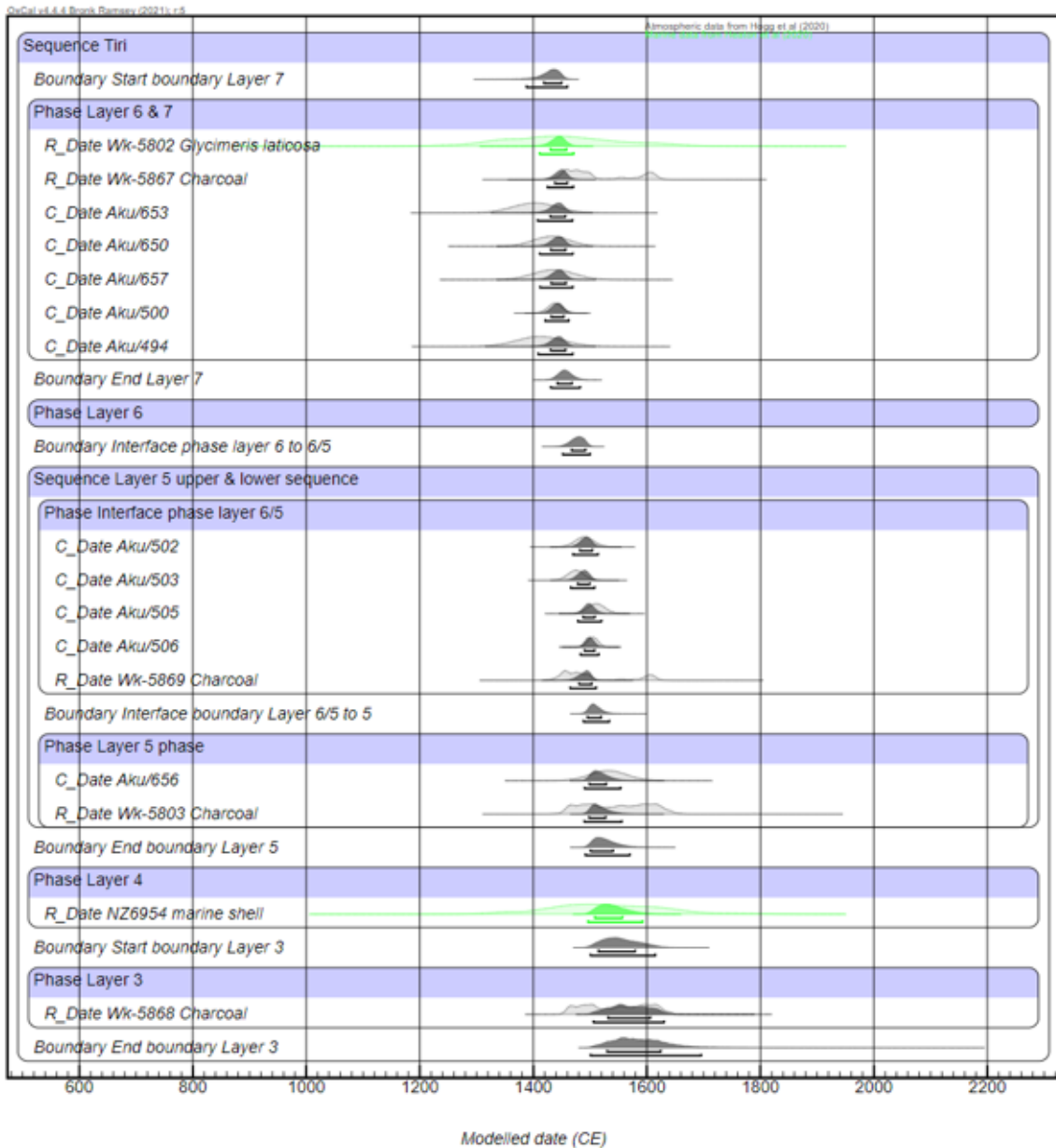
Earth ovens in Layer 3 exposed



Stone revetment associated with emplacement of the L6 fill, during excavation.



Section of beach escarpment prior to excavation and section drawings of escarpment (with sample locations for dating shown) and Trench 1.



Radiocarbon (Wk and NZ prefixes) and obsidian hydration (Aku) dates for the Tiri wharf site. There was no dateable material within Layer/Phase 4: the date shown is from an inundation layer at the Sunde site on Motutapu Island, which appears to be a ca 1550 CE isochron represented in both sites. Credit: Mclvor (2024).

References/reading

Jones, M. D., P. J. Sheppard and D. G. Sutton, 1998. Recent developments in obsidian hydration dating. *Records of the Australian Museum* 50(3): 235–240. Australian Museum, Sydney.

----- 2002. A Brief Prehistory of Time. PhD thesis, Anthropology, University of Auckland.

Mclvor, Zac. 2024. Tiritiri Matangi Bayesian Analysis of Radiocarbon Dates. Unpublished report to Robert Brassey.

Nims, Reno 2022. The Archaeological Ecodynamics of Northern Māori Fisheries: Climate Change, Harvest Effects, and Mass Capture in Northern Aotearoa. PhD thesis. Department of Anthropology, University of Auckland.

Hobbs Beach, Tiritiri

What you can see:

Hobbs Beach is located a short walk northwest from the wharf (Field Trip Destination **A**). There are several major exposures of midden along Hobbs Beach beneath the track. These exposures are part of an almost continuous, stratified midden that runs along most of the beach and has now been exposed by recent large weather events in Auckland. Midden is the most common archaeological site type in Aotearoa and can provide information on local subsistence procurement as well as behavioural and technological strategies (fishhooks, stone tools etc) and land use (as well as provide material that can be radiocarbon dated). Midden can also act as a marker for other archaeological deposits in the area.

The main exposures that are visible along the beach are described below in order of east to west (Figure 1).

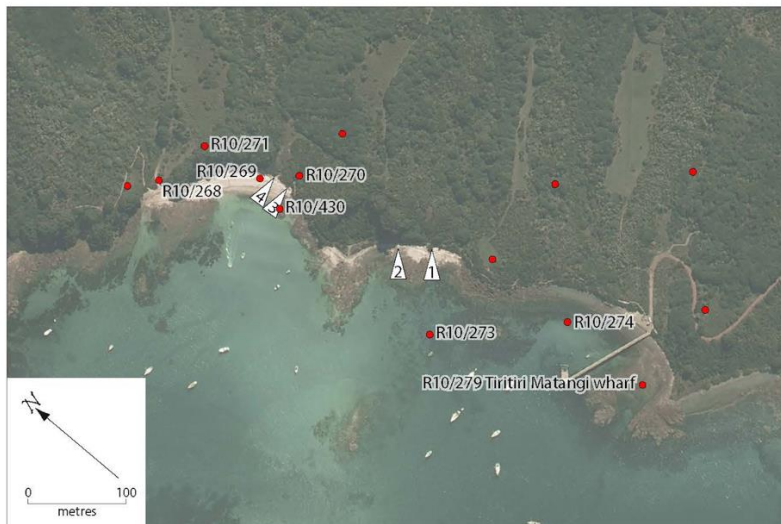


Figure 1. Exposures of midden along Hobbs Beach

The first exposure has undercut the track. A sparse, crushed midden layer containing heat cracked rocks and charcoal overlies a clay slope wash layer. Above this is a deeper layer of beach sand and shell, presumed to be deposited by a storm surge or similar process. Above this is a disturbed and crushed midden layer directly beneath the current ground surface (Figure 2).



Figure 2. First midden exposure

At the second exposure the beach sand deposit is still visible but there was no obvious layer beneath it. Above this was a midden about 450 mm deep, with the beach deposit partly mixed in, of pipi (*Paphies australis*), tuangi (*Austrovenus stutchburyi*), occasional tio repe (rock oyster, *Saccostrea glomerata*), akanakana (cat's eye, *Lunella smaragda*) and hopetea (white rock shell, *Dicathais orbita*) and other species. Occasional fish bone was visible with tāmure and kahawai (*Arripis trutta*) identified (Figure 3). At the east end of the exposure a fire feature 800 mm wide and 500 mm deep was exposed in section.



Figure 3. Second midden exposure

At the third exposure a dark, charcoal stained layer about 150 mm deep containing large heat cracked rocks and lenses of ash but very little shell was visible. This overlay the beach sand / shell deposit. Over this was a clay slope wash with occasional pockets of beach shell up to 250 mm deep, above which was a fill of clay and beach cobbles that appeared to have been used to build up the track. Some shell was present in this layer but it was not clear that this had a midden origin (Figure 4).



Figure 4. Third midden exposure

The fourth major exposure of midden where the track comes down to the beach on a boardwalk was a 400 mm deep deposit containing lenses of shelly and less shelly material, including an obvious fire feature, along with heat cracked rocks in a dark, charcoal stained matrix. The lower layers of shell were crushed while the shell in the fire feature was relatively whole, and included tuangi, pipi, hopotea and tio repe. It was not entirely clear if this was a single deposit or a series of unrelated deposits (Figure 5).



Figure 5. Fourth midden exposure