

Taiwawe Catchment Structure Plan: archaeological assessment

**report to
Hot Water Beach NZ Limited**

Arden Cruickshank and Hayley Glover

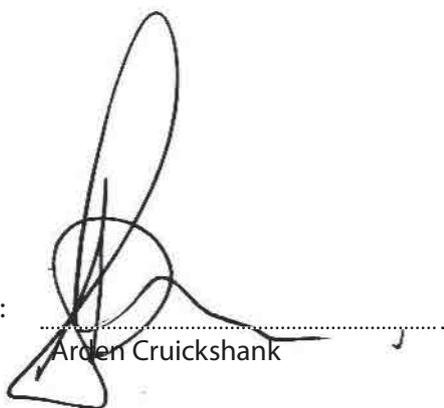


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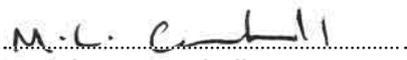
report to
Hot Water Beach NZ Limited

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1 Introduction

Hot Water Beach NZ Limited propose subdividing their property at 790C Hot Water Beach Road, Hot Water Beach (Lot 2 DP 387067). As part of this process, a structure plan is being developed to mitigate the impacts of developing the land. John McDermott of Hot Water Beach NZ Limited commissioned this assessment of the property from CFG Heritage Ltd to assist the plan.

1.1 Statutory Requirements

All archaeological sites, whether recorded or not, are protected by the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 and may not be destroyed, damaged or modified without an authority issued by Heritage New Zealand Pouhere Taonga (HNZPT).

An archaeological site is defined in the Heritage New Zealand Pouhere Taonga Act as:

- (a) any place in New Zealand, including any building or structure (or part of a building or structure), that—
 - (i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and
 - (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and
- (b) includes a site for which a declaration is made under section 43(1).

The Resource Management Act 1991 (RMA) requires City, District and Regional Councils to manage the use, development, and protection of natural and physical resources in a way that provides for the wellbeing of today's communities while safeguarding the options of future generations. The protection of historic heritage from inappropriate subdivision, use, and development is identified as a matter of national importance (Section 6f).

Historic heritage is defined as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from archaeological, architectural, cultural, historic, scientific, or technological qualities.

Historic heritage includes:

- historic sites, structures, places, and areas
- archaeological sites;
- sites of significance to Maori, including wahi tapu;
- surroundings associated with the natural and physical resources (RMA Section 2).

These categories are not mutually exclusive and some archaeological sites may include above ground structures or may also be places that are of significance to Maori.

Where resource consent is required for any activity the assessment of effects is required to address cultural and historic heritage matters.

2 Methodology

Records of archaeological sites in the general vicinity were accessed from the SRS through ArchSite (www.archsite.org.nz) and incorporated into the project GIS. Archaeological site reports were accessed from the Heritage New Zealand Pouhere Taonga (HNZPT) digital Library. The TCDC Smart Maps GIS viewer provided information on Historic Heritage in the district plan. Soil types in the area were identified from S-Maps online viewer maintained by Landcare Research (<https://smap.landcareresearch.co.nz/app/>).

The property was surveyed by Arden Cruickshank of CFG Heritage Ltd and Peter Johnson of Ngati Hei on 23 September 2019. Because there are no planned locations for house platforms at this

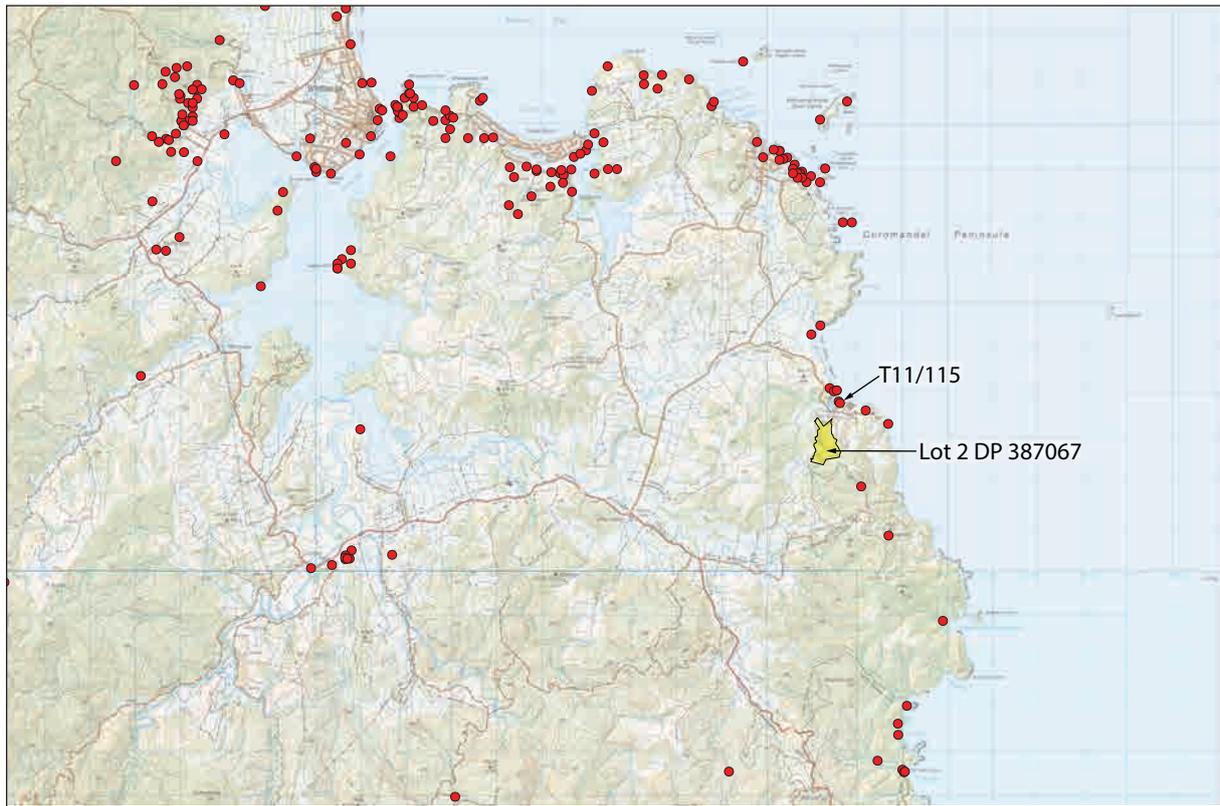


Figure 1. Map showing property and recorded archaeological sites in the vicinity.

stage, a targeted survey approach was used, focusing on the locations most likely to present archaeological evidence. This included creek lines, exposed ground around troughs, tracks, and other areas with exposed ground, as well as any visible depressions and flat areas within the paddocks. A 1 m gum spear was used to identify potential sub-surface archaeological deposits.

3 Background

Hot Water Beach is located on the east coast of the Coromandel Peninsula, approximately 13 km south-east of Whitianga. The Coromandel Peninsula is formed in large part by the Coromandel ranges. The ranges consist of a greywacke basement rock, with andesitic and rhyolitic volcanic eruptions dating from the Miocene and Pliocene forming the steep terrain (Homer and Moore 1992; Barker 1992). These later rhyolitic eruptions are responsible for much of the high-quality lithic resources that made the Coromandel Volcanic Zone a major source of obsidian and basalt for tool manufacture (Turner 2000:271). There is a major basalt quarry located at Tahanga, near Opito Bay, and obsidian deposits are located at Cooks Beach and Hahei. These lithic resources were exploited by Maori, with Taranga basalt and Cooks Beach obsidian being exchanged and transported over hundreds, and in some cases thousands, of kilometres (Turner 2000:7, Sheppard et al. 2011).

The property is located less than 1 km inland of the southern end of Hot Water Beach, bounded on the east by Taiwawe Lane, and on the west by the Taiwawe Stream. Soils on the property are dominated by the Rangiuru family of mottled orthic soils, presenting as silty loam over clay. This soil is imperfectly drained, vulnerable to water logging and susceptible to slips. Most of this property would not be suited to Maori horticulture or storage.

3.1 Pre-European Maori

There is well documented pre-European Maori occupation around Mercury Bay and surrounding areas like Hot Water Beach, with evidence dating back to the 15th century AD, if not earlier. Most archaeological research and investigation in Hot Water Beach has been piecemeal, related to the development of community facilities and residential areas, rather than systematic and targeted investigations to ascertain the nature and timing of settlement within the area.

Early settlement of Hot Water Beach is evident from the identified archaeological sites in the area, which includes pa (T11/73 and T11/122), midden/oven sites (T11/75 and T11/115), stone working areas (T11/485 and T11/511), a quarry (T11/74), and an urupa or burial ground (T11/112). The intensity of sites located at similar locations which have been subject to more archaeological investigation suggests that it is likely that additional evidence of pre-European Maori settlement exists in the area but has yet to be recorded.

3.2 European settlement

Europeans first landed on the Coromandel Peninsula in 1769 in the expedition led by Cook, who was attempting to track the transit of Mercury across the sun. His first sighting of Mercury occurred in Mercury Bay / Te Whanganui a Hei, on Cooks Beach, approximately 8km north-west of Hot Water Beach. Cook stayed in the area from the 3–15 November (Knight 2014).

By the early 1800s, whaling stations had been established on the eastern coast of the Coromandel Peninsula, and the timber industry grew at this time as well (Knight 2014). The Whenuakite Valley, just behind Hot Water Beach, was exploited for its supply of kauri, which was particularly useful as spars for ship building. A tramway was built in 1874 from Whenuakite to the base of the Tairua hills when the areas being felled became more distant from the streams (Knight 2014). In the Whenuakite valley, the kauri gum industry also came into being with the felling of the trees. Gum deposits in Whenuakite were abundant, and a small town named 'Gum Town' came into being in the area, now called Coroglen (Knight 2014).

When the timber milling and gum trade industries began to wane in the early 1900s, many settlers began farming in the Whenuakite/Hot Water Beach area. Some of the first families who arrived in Hot Water Beach from the 1800s included the Creeds, Britains, Harsants, Hamiltons, and Marshalls, with the Pyes and Hinds arriving in the 1820s and 1830s (Knight 2014). Matthew Creed is thought to be the first European settler at Hot Water Beach, buying land in 1872, and was wed to Ramarihi te Kohiwi, daughter of a Maori chief in Tauranga. Creed established an orchard at Hot Water Beach, and was also involved in timber milling in the Whenuakite Valley (Knight 2014).

3.3 Archaeological Investigations

The Coromandel Peninsula has a high number of recorded archaeological sites pertaining to early settlement in New Zealand. Sites are often located on palaeodune systems near the beach front near streams and estuaries (Gumbley et al. 2018). Although a substantial amount of archaeology has been done throughout the Coromandel Peninsula, there has been limited archaeological investigation focussing specifically on Hot Water Beach, particularly inland, and it is probable that unrecorded sites exist in the area.

In 1969, Leahy and colleagues carried out an excavation at midden site T11/115, situated on the dune flats of Hot Water Beach (Leahy 1974). Three main occupation layers were identified across the excavation, but the overall extent of the site was not able to be determined. Numerous hangi and firepits were located, as well as postholes, and a pit with moa bone, fishhooks and shell in the fill. Midden consisting of shell, bone (including moa), and a wide range of artefactual material was present throughout multiple layers. The artefactual material included fishing equipment, ornaments, worked shell, worked bone, lithic flakes and tools including adzes, and more. Faunal remains included fish, the majority of which was snapper (*Crysophrys auratus*), birds, including moa, dog, seal, whale, and rat. Shellfish remains were scattered throughout the layers and dominated by cats-eye shells

(*Turbo smaragdus*). Several radiocarbon dates were obtained from Layer 4, though most of these were problematic. Dates from two marine shell samples were potentially more reliable, and suggest that occupation represented by Layer 4 occurred in the mid to late 15th century or the early 16th century AD. These dates are surprisingly late, given the nature of the archaeological evidence which is in line with the expectations of early settlement.

Further investigation of T11/115 was carried out prior to development of toilet facilities at Hot Water Beach by Gumbley in 2001, 2002, and in 2017 (Gumbley et al. 2018). In 2001, Gumbley determined that shell deposits, as identified by probing, extended approximately 7.5 m north and east of the toilet building. A single test pit was dug and three stratigraphic layers were identified. Layer 3 was a black greasy layer with charcoal and shell, consistent with the layer identified by Leahy as Layer 4 (Gumbley et al. 2018). In 2002, six additional test pits were dug to determine the extent of the site. Test pits at the western and eastern ends of the carpark showed positive evidence of archaeology, but no archaeological deposits were identified in the test pits dug on rising ground southeast of the carpark. A further two test pits were dug west of the toilet building and car park, in the Hot Water Beach Motor Camp, and no archaeological deposits identified, suggesting that any deposits associated with T11/115 had been destroyed by extensive earthworks undertaken within the camp-ground (Gumbley et al. 2018).

Gumbley's 2017 excavations took place only where infrastructure for the new toilet building was required. Bulk samples of undisturbed midden, which was present in deposits approximately 100–150 mm thick at the base of the charcoal stained cultural layer, were taken from three locations. Artefacts included stone artefacts of Tahanga basalt, chert, and obsidian and fishhook cores of moa bone. An analysis of shellfish species represented in the midden showed that cats-eye shells (*Turbo smaragdus*) were the most common species present, followed by black nerita (*Nerita atramentosa*), radiate limpets (*Cellana radians*) and green lipped mussel (*Perna canaliculus*). Analysis of microfossils and charcoal was undertaken, and six samples were used for radiocarbon dating. Date ranges were coarse but suggested that T11/115 was settled from the 14th or early 15th century AD, consistent with the archaeological evidence present (Gumbley et al. 2018).

In 1981 and 1982, as part of Easdale and Jacomb's survey of Coromandel beaches (Easdale and Jacomb 1982), Hot Water Beach was surveyed for archaeological sites. One new site was identified at Hot Water Beach during the survey, T11/511. This was identified as midden with a 'living floor' on a natural terrace at the northern end of the beach, with shell and lithic flakes in a layer of blackened sand.

In 2011, a pedestrian survey was carried out by Campbell at 790 Hot Water Beach Road, where a residential subdivision had been proposed (Campbell 2011). The survey was visual only, with no intrusive methods like test pitting or probing used, and no evidence of archaeology was encountered.

4 Field Survey

The property was surveyed on 23 September 2019 by Arden Cruickshank of CFG Heritage and Peter Johnson of Ngati Hei. The primary focus of the survey was to determine whether any unrecorded archaeological sites, including evidence of historic land use, were present within the proposed development areas. As such, those areas which were identified in the Structure Plan as being Conservation Areas were not inspected. A targeted survey approach was used, focusing on the locations most likely to present archaeological evidence. This included creek lines, exposed ground around troughs, tracks, and other areas with exposed ground, as well as any visible depressions and flat areas within the paddocks.

The property consists of several ridges and gullies that lead north towards the Taiwawe Creek. Generally, the ridges are grazed, and the gullies are in native bush with some invasive species.

The eastern boundary is dominated by a retired crop-dusting runway which appears to have been constructed by bulldozing material from the upper portion down the slope to build up the surface. It is clearly visible in a 1966 aerial photograph of the property showing the extent of earthworks. This has been heavily compacted and does not probe well. The length was inspected to see if any redeposited midden was visible, but none was observed.

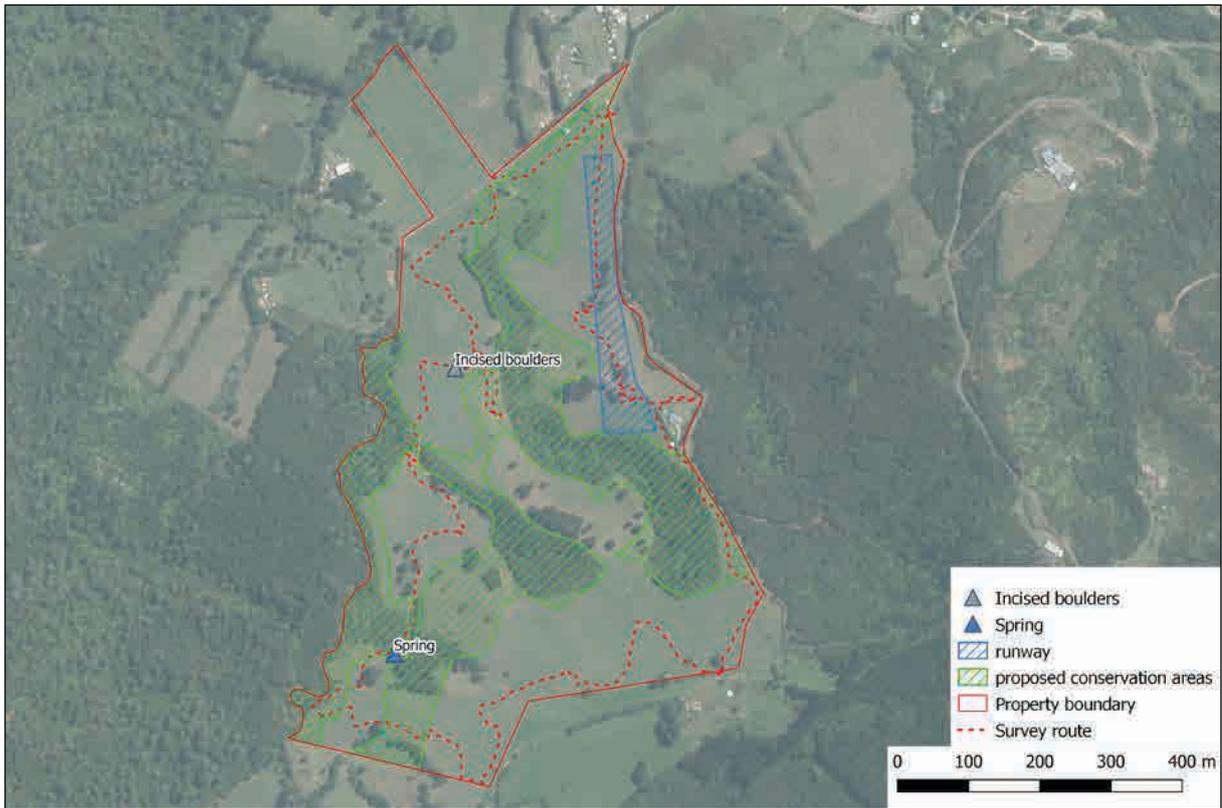


Figure 2. Plan of property showing proposed conservation areas and points of interest.



Figure 3. Portion of bulldozed hill where airfield material was cut from.



Figure 4. View of natural spring and pumphouse.



Figure 5. Collection of boulders with machine incisions.

Elsewhere on the property, areas of erosion and recent track cuttings were inspected for any evidence of midden or gardening, but nothing was noted. The portion of the floodplain that runs along the Taiwawe Stream that intersects was initially inspected but deemed to be unlikely to yield any archaeological material as it is likely to be subject to regular flooding events.

A natural spring exists on the property approximately 90 m east of the Taiwawe Stream. This is surrounded by a mixture of native bush and gorse and had a pump house attached to it presumably to provide water to the troughs on the property. No archaeological features were identified in the road cutting beside the spring but the heavy vegetation surrounding it has restricted visibility.

There was a collection of boulders located within a paddock with various incisions on them. These have been interpreted as caused by a digger bucket rather than petroglyphs. They were probably placed there during track formation on the property.

4.1 Summary

The property was subject to a targeted survey focusing on those areas that are likely to be affected by any future development. There were no archaeological features identified during the survey and this is likely a result of the poor quality of soils that cover the majority of the property. Any Maori land use would have most likely been associated with the Taiwawe Stream and its tributaries, which were not surveyed in any detail for this assessment and are proposed as part of the conservation areas for the property.

5 Assessment

No evidence of pre-1900 sites was found during research or targeted field survey of this property. As the entire property was not surveyed, it is possible that some archaeological evidence of previous land use may exist within the vegetated land surrounding the Taiwawe Stream and its tributaries.

Because there are no current plans for locations of house platforms or associated earthworks, the effects of the project are not currently able to be assessed. When plans are available for proposed earthworks a more detailed assessment of effects will be able to be determined.

6 Recommendations

These recommendations are only made based on the archaeological values that have been outlined above. Any other values associated with special interest groups, including tangata whenua, can only be determined by them. It is recommended that:

- Although no archaeological features have been identified during this assessment, it does not mean that there is no archaeological risk involved in future subdivision of the property. Further archaeological assessment would be required to make a determination on any proposed subdivision and associated earthworks.
- since archaeological research cannot always detect sites of traditional significance to Maori, or wahi tapu, the appropriate tangata whenua authorities should be consulted regarding the possible existence of such sites, and the recommendations in this report.

References

- Barker, R. 1992. *Geology of the Coromandel Peninsula*. Pagez Productions, Auckland.
- Campbell, M. 2011. 790 Hot Water Beach Road: Archaeological assessment. Unpublished CFG Heritage Ltd. Report for Hot Developments Ltd.
- Easdale, S. and C. Jacomb. 1982. Coromandel Coastal Survey: A study of archaeological sites on the beaches of the Coromandel Peninsula. Unpublished report.
- Gumbley W., M. Laumea, and M. Sutton. 2018. Hot Water Beach: Archaeological report for site T11/115, Pt Allotment 10, Hahei Parish. Unpublished report for the Thames-Coromandel District Council and Heritage New Zealand Pouhere Taonga.
- Homer, L. and P. Moore. 1992. *Vanishing Volcanoes: A Guide to the Landforms and Rock Formations of the Coromandel Peninsula*. Landscape Productions, Wellington.
- Knight, N. 2014. Coromandel Peninsula – Hot Water Beach History. *Hot Water Beach – The Information Hot Spot*, <https://www.hotwaterbeach.org.nz/history/> (accessed 23 September 2019).
- Leahy, A. 1974. Excavations at Hot Water Beach (N44/69), Coromandel Peninsula. *Records of the Auckland Institute and Museum*, 11: 23-76.
- Simmons, A. 2002. Archaeological report on a pit located in the Coastal Lifestyles subdivision at Hot Water Beach, Coromandel Peninsula. Unpublished report for Bill Morris.
- Sheppard, P., G. Irwin, S. Lin, and C. McCaffrey. 2011. Characterization of New Zealand obsidian using pXRF. *Journal of Archaeological Science*, 38(1): 45-46.
- Turner, M. 2000. The function, design and distribution of New Zealand adzes. PhD Thesis, University of Auckland.