NORTHERN ARCHAEOLOGICAL RESEARCH

ARCHAEOLOGICAL SURVEY AND ASSESSMENT OF THE GOODFELLOW RESIDENTIAL PROPOSAL, LOT 2 57873, HAHANGARUA BAY MOTURUA ISLAND, BAY OF ISLANDS.



Prepared for B & M Goodfellow Moturua

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By Leigh Johnson and Elisabeth Callaghan Northern Archaeological Research Ltd.

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Introduction

M & B Goodfellow propose to construct a house with associated services on their property at Hahangarua Bay, on Moturua Island, in the Bay of Islands. Northern Archaeological Research Ltd was commissioned by A Mitchell of behalf of the Goodfellow's to undertake an archaeological survey and assessment of the proposal. The survey and assessment was undertaken to record archaeological sites in the areas affected by the proposal and to advise the owners of their obligations under the Heritage New Zealand Pouhere Taonga Act, 2014, in respect of any affected archaeological sites. The survey was undertaken by Leigh Johnson and Elisabeth Callaghan on the 31st May 2024. This report outlines the results.

Location (Physical Environment and Setting)

The proposed new house and associated services is located at Hahangarua Bay, between Opunga Bay and Awa-awaroa Bay on the Moturua Island (Legal Description: Lot 2 DP 57873) (Figure 1). The location is situated some 30m from the MHWM, in an area of mown grass, former fruit trees (also now mown grass); an area of scrubby regenerating bush; and an area now used to house bee-hives. The property ranges in elevation from 0-60m ASL. The location of the proposed house is located at approximately 4-10m ASL. The property is zoned under the operative FNDC District Plan as General Coastal and is in an Outstanding Landscape. The property is not in a Statutory Acknowledgement area and no areas of the property are listed as areas of Cultural Significance or wahi tapu. Soils in the area of the pole replacement programme comprise Marua Light Brown Clay loam of the Rolling and Hilly land series (Sutherland *et al.* 1980).

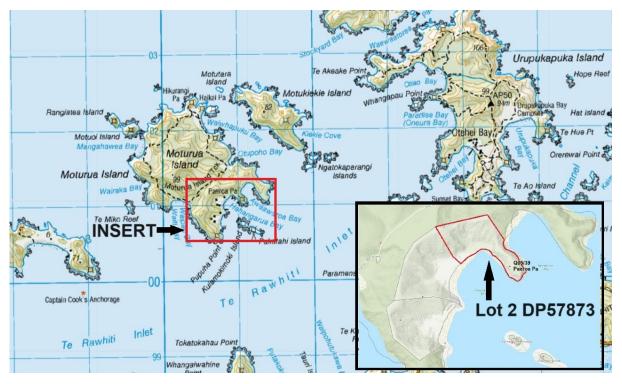


FIGURE 1. THE LOCATION OF THE GOODFELLOW PROPERTY PROPOSAL ON MOTURUA ISLAND (Q05).

Proposed Development

The Goodfellows propose to build a house with associated services (power, water, septic treatment and disposal) on their property at Hahungarua Bay, Moturua Island, Bay of Islands (Figures 2-5 & 48). The residential proposal comprises of a Lockwood House and deck (18.5m length x 13.3m wide). This will involve some vegetation clearance and removal of four or five blue gum stumps. Water will be initially collected in a 5000L tank adjacent to the house then pumped uphill to two 25,000L tanks (one for house use, one for firefighting) (an area of $8m \times 5m$). Electricity will be provided from the existing Lockwood house connection via an underground cable (approximately 65m long x10cm wide x 600mm deep). A septic treatment system is proposed to be located at the north end of the house ($3m \times 2m \times 2.5m$ deep). The waste water will be pumped via an overland disposal area to the south and east of the house.

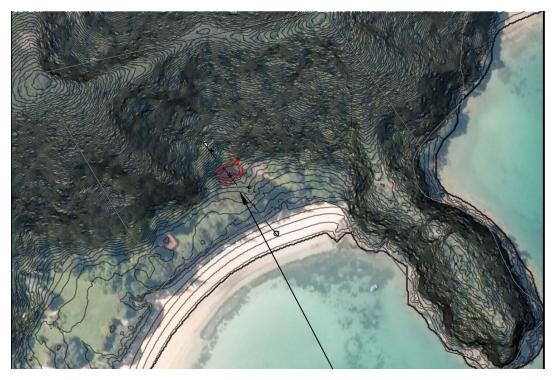


FIGURE 2. THE PROPOSED HOUSE LOCATION ON LOT 2 DP 57873 (Base Plan Wilton Joubert dated April 2024, Courtesy of A Mitchell, May 2024).

Statutory Obligations

The following is a brief outline of statutory obligations in New Zealand in respect of archaeological sites prepared by the Heritage New Zealand Pouhere Taonga (HNZ).

There are two main pieces of legislation in New Zealand that control work affecting archaeological sites. These are the *Heritage New Zealand Pouhere Taonga Act*, 2014 (HNZPTA), and the *Resource Management Act*, 1991(RMA).

HERITAGE NEW ZEALAND POUHERE TAONGA ACT 2014 ARCHAEOLOGICAL PROVISIONS

The Heritage New Zealand Pouhere Taonga (HNZPT) administers the Heritage New Zealand Pouhere Taonga Act (HNZPTA). All archaeological sites in New Zealand are protected under the HNZPTA and may only be modified with the written authority of the HNZPT.

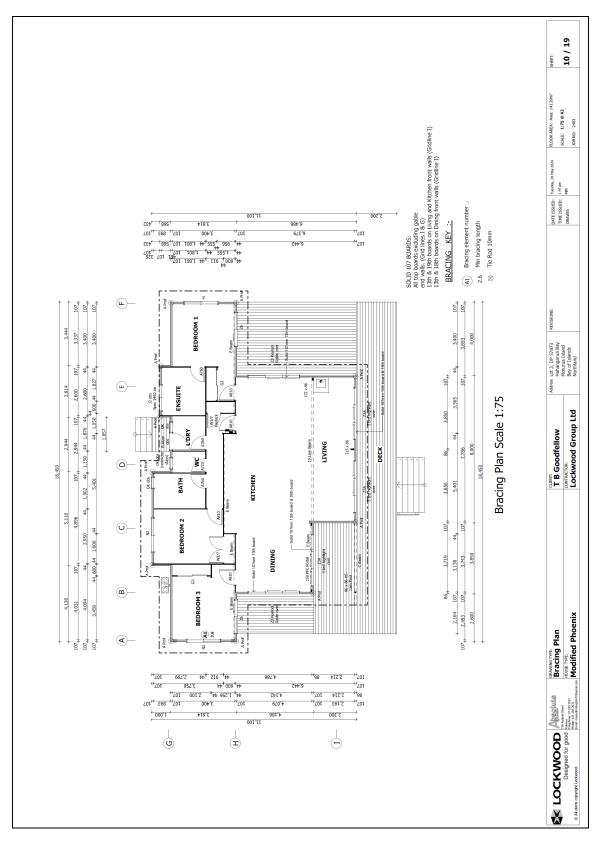


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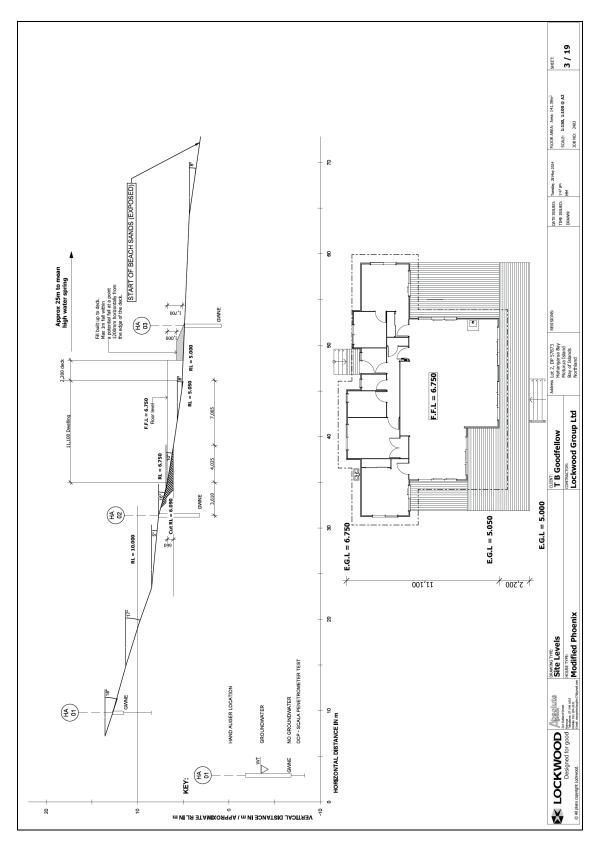


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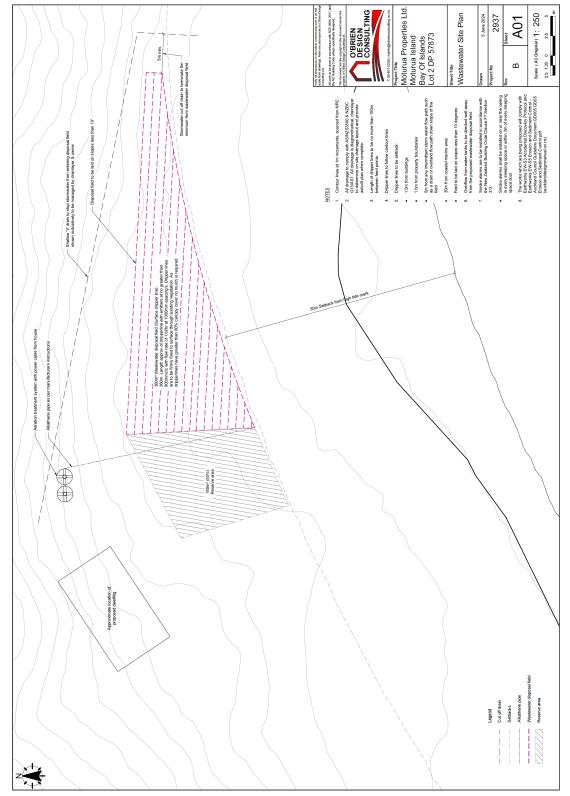


FIGURE 5. THE PLAN OF THE WASTE WATER TREATMENT STATION LOCATION AND WASTE WATER DISPOSAL (O'Brien Design Consulting Ltd. Courtesy of A. Mitchell May 2024)

The maximum penalty in the HNZPTA for un-authorised damage of an archaeological site is \$120,000. The maximum penalty for un-authorised site destruction is \$300,000. The HNZA contains a consent (commonly referred to as an "Authority") process for any work of any nature affecting archaeological sites, where an archaeological site is defined as:

Any place in New Zealand, including any building or structure (or part of a building or structure), that -

a. 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

b. Provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and

c. Includes a site for which a declaration is made under section 43(1)

Any person who intends carrying out work that may damage, modify or destroy an archaeological site must first obtain an authority from the HNZPT (Part 3 Section 44). The process applies to archaeological sites on all land in New Zealand irrespective of the type of tenure.

The archaeological authority process applies to all sites that fit the Heritage New Zealand definition, regardless of whether:

- The site is recorded in the NZ Archaeological Association (NZAA) Site Recording Scheme or registered/declared by the Heritage New Zealand Pouhere Taonga,
- The site only becomes known about as a result of ground disturbance and /or
- The activity is permitted under a district or regional plan, or resource or building consent has been granted.

Heritage New Zealand Pouhere Taonga also maintains a Register of Historic Places, Historic Areas, Wahi Tapu and Wahi Tapu Areas. The register can include some archaeological sites (though the main database for archaeological sites is maintained independently by the NZAA). The purpose of the register is to inform members of the public about such places and to assist with their protection under the *Resource Management Act*, 1991.

THE RESOURCE MANAGEMENT ACT 1991 ARCHAEOLOGICAL PROVISIONS

The RMA requires City, District and regional; Councils to manage the use, development, and protection of natural and physical resources in a way that provided for the well-being of today's communities while safeguarding the options for 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 area
- 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 (RMA 4th Schedule and the district plan assessment criteria (if appropriate).

Methodology and Constraints

Background research into the archaeology and subsequent history of the affected area included the examination of late 19th and early 20th century land plans and survey reports held by Land Information NZ, Auckland. New Zealand Archaeological Association site record forms were checked for previously recorded archaeological sites, and a review of regional archaeological publications relating to the area was undertaken.

The archaeological survey was undertaken on foot to access all the proposal. All areas of the proposal (including machine access) were covered to varying degrees of detail and all adjacent subsoil exposures were also examined where they occurred. The likelihood of undetected subsurface archaeological remains was also considered.

Constraints

Survey conditions were good in some areas; however, many areas were challenging given the dense regenerating bush and scrub and an area of beehives. The dense vegetation also limited the ability to take meaningful photographs of some areas of the proposal.

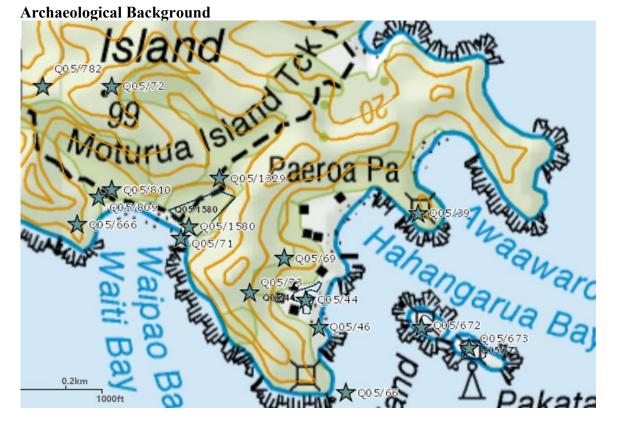


FIGURE 6. THE PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN RELATION TO THE GOODFELLOW PROPOSAL (Courtesy of NZAA Database *Archsite*-May 2024).

NZAA Site Number	J. Kennedy Fieldnote Numbers	Imperial Site Numbers	Site Type	Recorded By/When
	N12/51		Hahangarua Parallel Drain series. Flat area	1968 J. Kennedy (Survey. Location Mapped)
	N12/53		Hahangarua Parallel Drain series. Flat area	1968 J. Kennedy (Survey. Location Mapped)
Q05/39	N12/52	N12/1	Pa Paeroa	1964 L.Groube (Excavated) 1968 J. Kennedy (Survey and Mapped) 1984. K Rountree. (Mapped) Williams and King (Surveyed/Mapped)
Q05/44		N12/6	Cultivation Systems/Drains Opunga Bay Parallel Drain series. Flat area	1974 K. Peters (Survey, Excavation)
Q05/46	N12/54	N12/8	Cultivation Systems/Drains Opunga Bay Parallel Drain series. Slope area	1968 J. Kennedy (Survey. Location Mapped) 1974 K. Peters (Survey, Excavation) 1996 & 1997 L. Johnson, (Survey, Excavation)
Q05/66	N12/55	N12/28	Terraces/Pa Pa <i>Pupuha</i>	1968 J. Kennedy (location noted as a pa on her map (Figure 8); listed as terraces on her site list) 1976 A. Leahy & W. Walsh (Survey) 2003 S. Burgess (Survey)
Q05/69		N12/31	Terrace & Ditch	1976 A. Leahy & W. Walsh (Survey)
Q05/73		N12/35	Midden	1976 A. Leahy & W. Walsh (Survey) 1996 & 1997 L. Johnson, (Survey, Excavation)

TABLE 1. THE PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE VICINITY OF THE GOODFELLOW PROPOSAL (Courtesy of NZAA Database *Archsite*-May 2022).

While not an archaeologist, the earliest site visit to Moturua to "identify the places associated with Marion's expedition" was the historian J Kelly in 1933 "using for identification purposes, the maps accompanying Crozets Voyage to Tasmania..." (Kelly 1951:13).

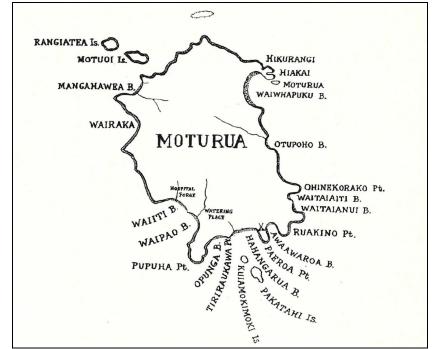
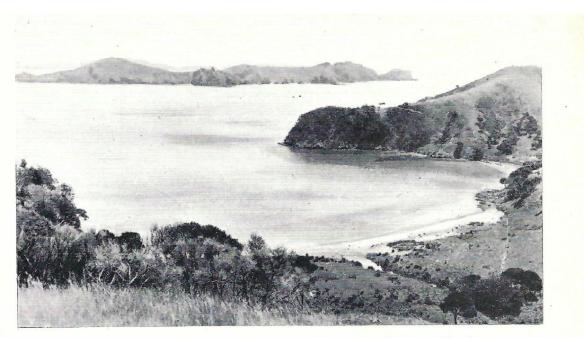
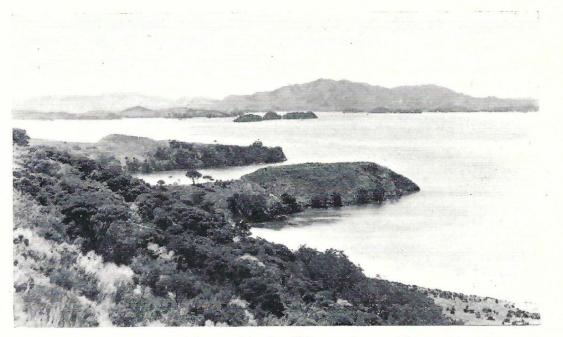


FIGURE 7. THE MAP REPRODUCED FROM KELLY (Kelly 1951:48-49).



Waipao, site of the shore station on Moturua or Marion Island, showing the stream from which the French drew their water. The hospital and forge were erected in the small bay on the extreme right.



Paeroa village on Moturua Island, which was destroyed by a party of sailors commanded by Lieutenant Roux, was situated on the peninsula in the foreground.

PLATES 1 & 2. PHOTOGRAPHS OF MOTURUA ISLAND IN THE 1930s (Kelly 1951:32-33).

Kelly used the dairies and charts of the 18th Century French explorer Marion du Fresne and officers of his crews of the *Mascarin* and the *Marquis de Castries* to relocate the locations of interest. He was accompanied on the site visits by members of the local hapu including Neha Hakaraia, Mrs Ria Hakaraia (who lived at Orokawa Bay) and Kiritapu [Te Nana?], who supplied oral traditions associated with places and events in the area. Kelly wrote an article outlining the results of his site visit in the *Journal of the Polynesian Society*; which he revised and re-wrote as a book in 1951 (Kelly 1951). With the exception of Ann Salmond's ethnographic interpretation/analysis of the events of 1772 (Salmond 1993), Kelly's book was the earliest, interpretative historical account of the visit of the French, by someone who was very familiar with the location. The book has a number of images of the site visits he undertook during the early 1930s and in the later 1950s, including of Waipao Bay and 'Paeroa Village' (Paeroa Pa) (Plates 1 and 2).

While a number of archaeological surveys have been undertaken of the Orokawa Peninsula there appears to have been some inconsistency in the recording of archaeological sites over the years; and some of the information appears to have been removed from the NZ Archaeological Association database between 2004 and the present day. Parts of Moturua have been visited by archaeologists either as part of a rescue archaeology exercise; general surveys; or as a result of development proposals. As a result, some archaeological sites and/or features have been recorded and/or re-recorded under a variety of NZAA site numbers, which leads to some confusion in identification (Table 1).

As far as we are aware, no previous archaeological excavations have been undertaken in Hahangarua Bay itself. However, a number of archaeological sites in other parts of Moturua Island have been subject to archaeological excavation. An outline of the archaeological background of the island has previously been outlined by the writer in relation to developments in the immediately adjacent Opunga Bay to the south by the Heatley family (Johnson 1997, 1998a, 1998b, 2001). A brief overview of this background is outlined here with some corrections and additions.

The initial archaeological investigations on Moturua Island were undertaken by Les Groube of the University of Otago in the summer season of 1964-65. The site investigated consisted of Paeroa Pa, Q05/39, located on the headland immediately above the north east end of Hahangarua Bay. The excavation itself was undertaken by Groube with the assistance of seven students (Groube 1996: 109). These are understood to have been J. Kennedy, K. Peters and J. Baragwanath (M Goodfellow pers comm) and four others whose names are currently unknown.

The archaeological investigation was notable for two reasons.

Initially, when undertaken, the excavation of the pa was the largest rescue excavation undertaken in New Zaland at that time (Groube 1966: 109). The excavation appears to have been implemented at Paeroa Pa specifically because the then landowner, Sir William Goodfellow, had planted a range of trees on the pa and this was leading to the "...gradual destruction of this site by tree roots planted by the owner" (Groube 1966: 108). The planting program appears to have occurred as part of a more general native and exotic tree planting program by Sir William on the Goodfellow Hahangarua property at this time. The excavation occurred prior to any archaeological protection legislation in New Zealand and in addition to the donors listed by Groube (1966: 109) was partly funded by Sir William (B. Goodfellow pers. comm). Groube noted at the time that "Archaeological research in New Zealand for the last 7 or 8 years has been involved mainly with rescue excavations" (Groube 1966: 113).

The second notable element of the 1964-65, as outlined by the writer in 1997 (Johnson 1997: 3), appears to have been the first "text aided" archaeological excavation in New Zealand. The specific focus of the Paeroa Pa excavation, as outlined previously by the writer "...appears to have been the location and identification of a precontact Maori house, to be able to more accurately define precontact settlement and document the nature of protohistoric and historic change in settlement and at the same time, resolve arguments over the function of storage pits...that had been suggested as 'sunken floored' houses" (Johnson 1997: 3). The "text" element of the excavation used by Groube was the plan of the pa drawn by the French in 1772. As outlined by the writer in 1997, "Paeroa Pa had been partially sacked and burnt, the fighting stage demolished and the palisades loaded onto the Mascarin and Marquis De Castries for firewood by the French under the orders of Crozet and Du Clesmur in retaliation for the killing of Marion Du Fresne in Te Hue Bay in the south east Bay of Islands in June 1772. Prior to, or including the sacking, the French mapped the pa in detail, in both plan and profile, including its defences, earthworks and internal structures, including a range of houses or structures associated with both ...[economic] and social contexts. This site, significantly, remains the only Maori settlement mapped at contact in New Zealand and, together with surviving journals from Du Fresnes visit, as Groube (1996: 108) noted, provided one of the finest records of prehistoric peoples anywhere in the world "and was one that Groube had hoped to capitalise on through archaeological definition of Maori settlement structures at the close of prehistory.

... the excavations of Paeroa Pa proved exacting and the uncovered remains difficult to interpret. Initially, the heat during the summer in which the excavations took place and the nature of the light coloured, heavy, greywacke subsoil that dried out and cracked into large hexagonal, blocks, meant that the structural remains by which much of the evidence of settlement could be determined, disappeared within a period of two days (Groube 1965: 5). Secondly, a period of subsequent erosion of the site and re-occupation with major reconstruction and reconfiguration of the pa, c1820, and a post 1840 episode of gardening left little of the 1772 site unmodified or undisturbed (Groube 1965:6) (Johnson 1997; 3-4).

It appears that in May 1966 (Peters 1975: 171), Groube, pursued the same research objectives on Te Kuri's Village on the adjacent Orokawa Peninsula in the south east Bay of Islands. Here also, Groube ran into further difficulties that limited the results in relation to late pre-contact settlement structures (Groube 1966: 111).

Also in May 1966, Groube briefly investigated an agricultural site on Moturua Island consisting of a small number of drains on a slope that had been "...accidentally re-discovered by the Otago University Expedition in the 1964-65 season" (Groube 1966: 112). The specific

location of the site was not outlined by Groube other then a general comment that the site occurred "nearby" Paeroa Pa (Groube 1966: 111) and in "another bay" (Groube 1966: 112). The investigation consisted of at least two, and possibly more, test pits (Peters 1975: 172). On the basis of the exposed profiles, Groube outlined that "...the artificial soil [man made agricultural soil] associated with the drain complexes was identical to the soils covering much of the Paeroa site and associated with post 1840 agriculture" (Groube 1966: 111).

During the May 1966 investigation at the same agricultural drains site, Groube also outlined the existence of a lower agricultural soil or garden layer separated from the upper agricultural or garden layer by a layer of erosion material (Groube 1966: 111-112). Groube outlined that the lower agricultural layer was "...very different in texture and content from the more recent kumara soils...an extensive and deep artificial soil..." (Groube 1966: 111) but did not specify what the textual and content difference was. Groube also outlined the "... presence of irregular excavated holes at the base of the lower artificial soil would suggest taro not kumara cultivation, a significant conclusion, if confirmed, in assessing the importance of agriculture in the early occupation of New Zealand" (Groube 1966: 112). Groube outlined that the lower agricultural layer provided a radiocarbon date of 800 ± 90 AD and stated "...that these two bays on Moturua Island encompass the total prehistoric sequence in New Zealand form 800 to 1772" and that the site was "...one of the most important in New Zealand" (Groube 1966:112). Unfortunately, no map showing the location of the agricultural site on the island was provided by Groube in any of the published accounts and no site record form was completed for the site detailing the site's specific location.

In 1969, Jean Kenndy, published Settlement in the Bay of Islands 1772. A study in Text-Aided Field Archaeology. Anthropology Department University of Otago. The work attempts an ethnographic reconstruction of life in the south east Bay of Islands in 1772 based on the accounts of the area by Marion Du Fresne's officers and crew. Kennedy outlines that she worked with Groube on Paeroa Pa in 1964-5, on Te Kuri's Village on the Orokawa Peninsula and in the investigation of the agricultural site in 1966 and with the "...party of Auckland of students..." (Peters 1975:172) who re-examined the earlier investigated agricultural sites on the island in 1968 (Kennedy 1969: Acknowledgements). In this context it appears her work was part of, or an extension of, Groube's University of Otago based, mid-1960s Moturua Island Archaeological Research Project. Kennedy's work appears to have been a valuable compliment to the archaeological investigations and may, in the long run, be of more significance. Of relevance, Kennedy undertook what Groube, and later Peters, failed to do, which was to locate the archaeological sites recorded on Moturua Island that had been identified during the project. The sites identified in the adjacent Hahangarua and Opunga Bays, using her own field numbering system, include Paeroa Pa, N12/58, located on the headland above the north east end of Hahangarua Bay; N12/51, a "parallel drain series, flat area" in the south west section of Hahangarua Bay N12/53, "parallel drain series, flat area" in the north east end of Hahangarua Bay; and N12/54, a "parallel drain series, slope" in the southwest section of Opunga Bay (Kennedy 1969: 204 and 227) (Figure 8). Unfortunately, it appears, for

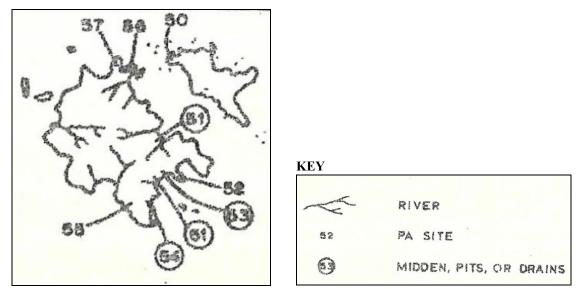


FIGURE 8. KENNEDY'S LOCATION PLAN OF THE ARCHAEOLOGICAL SITES (AND KEY) RECORDED IN 1968 ON MOTURUA ISLAND (Kennedy 1969:227). Note: N12/51 AND N12/53 are located in Hahangarua Bay; N12/54 is located in Opunga Bay.

reasons unknown, not all of Kennedy's sites were incorporated or translated into the New Zealand Archaeological Association Site Recording Scheme¹. Confusingly, given that Kennedy and Peters both appear to have been present at the excavations on the island in 1968, Kennedy (1969) does not mention the flat land "drain series" at Opunga and Peters (1975) doesn't mention the two flat land "drain series" at Hahangarua. Kennedy does outline however that the excavations undertaken by Groube on Moturua Island were at Paeroa Pa, N12/58 (N12/1 now Q05/39), and the "parallel drain series, slope", N12/54 (N12/8 now Q05/46), in Opunga Bay (Kennedy 1969: 149).

In 1975 K. Peters published the results of the University of Auckland students' investigation on Moturua Island in 1968. As outlined by Peters, the aim of the investigation was "...firstly to investigate the extent of the slope garden and collect reliable carbon samples for dating as a check on the initial date, and secondly to investigate then holes at the bottom of the early man made soil to ascertain if they were created by taro cultivation...A third aim was to investigate the flat behind the beach, because...it was anticipated that occupation or cultivation activities has also occurred there in the past "(Peters 1975: 171-2).

The 1968 excavation of the ditch/drain slope garden at Opunga Bay revealed the same stratified agricultural profile reported by Groube. The dates from the lower agricultural layer, Layer 6, $(720 \pm 100 \text{ before } 1950)$ proved slightly younger than that obtained earlier by Groube and on this basis led Peters to claim "...that agriculture was well established in the 13th century throughout the North Island" (Peters 1975: 179). No dates were provided for the upper agricultural layer (layer 2) at this time. The holes reported for the garden earlier by

¹ Kennedy's plans and records were submitted to NZAA and were available until at least 2004, however due to the discrepancies of her numbering system and the NZAA numbering system-has eventually led to almost all of her records being removed from the NZAA database.

Groube at the base of the underlying layer, Layer 7, were interpreted as being formed either by initial garden clearance or over enthusiastic excavation, rather than taro cultivation as earlier suggested by Groube (Peters 1975: 173).

Further investigation of agricultural remains was carried out on what now appears to have been the immediately adjacent beach flat at Opunga Bay. Here, a single agricultural horizon (Layers 2 and 3) was identified. Obsidian hydration readings were taken from samples in Layer 3 that provided measurements of "...1.65 to 1.93 microns" but unfortunately these were not translated into calendar years. Notwithstanding, Peters outlined that the two "contemporary" agricultural layers...were of an age comparable to several well-known Archaic elsewhere" (1975: 177). As reported by Johnson this early assignation was widely accepted by the archaeological community in New Zealand (1997: 5).

In contrast to the earlier investigations in the bay, Peters did record the hillslope and beach flat sites in the NZAA Site Recording Scheme. Both are described in these original SRFs as occurring in the "Little bay south of Sir Willian Goodfellow's bay..." which is clearly Opunga Bay. The stratified garden and drains on the hillside occur in the south west end of Opunga Bay ("Field system on south slope (Left hand facing beach from sea)") and was recorded as N12/6 (Q05/44). The garden system on the flat occurs on the Opunga Bay beach flat, immediately below and slightly to the east of the slope garden and drains ("on flat behind beach") and was recorded as N12/8 (Q05/46). In reality, both sets of archaeological remains are likely to have been continuous and consist of components of the same site and could have been recorded as components under the same site number. J. Robinson has recently outlined that both sites were "less than 5m apart" (SRF Additional Information). Unfortunately, as recently outlined by J Robinson (SRF Additional Information), Peters gave an incorrect NZMS 1 grid reference for N12/6, placing the site in nearby Otupoho Bay on the east side of the island. Further, for reasons unknown, the site is shown on the old NZMS 1, N12 NZAA File Map as located on the hillside in Hahangarua Bay (Figure 9).



FIGURE 9. THE NZAA FILEKEEPER NZMS1 MAP SHOWING THE LOCATION OF N12/6 AND N12/8 IN 1968 (NZAA Filekeeper File 1968-2007).

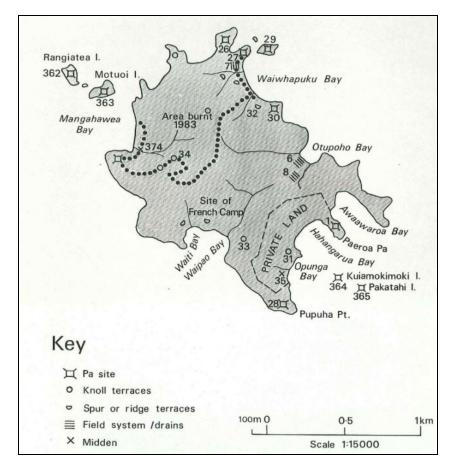


FIGURE 10. THE MIS-LOCATION OF N12/6 AND N12/8 IN OTUPOHO BAY BY ROUNDTREE (1984:33) FOLLOWING LEAHY AND WALSH (1976).

To further complicate matters, at or about the point that Peters was writing up the 1968 investigation in 1975, A. Leahy and W. Walsh, during an archaeological survey of Moturua Island as part of a wider archaeological survey of the Bay of Islands and Kerikeri, Paihia Area for the former New Zealand Historic Places Trust (Leahy and Walsh 1976) recorded a stratified site exposed in some individual or family summer holiday camp water hole in the centre of the Opunga Bay beach flat that included the same agricultural horizon. These remains, the same site as Q05/44 and Q05/46, were recorded under another NZAA site number, N12/35 (Q05/73). It also appears, following Peters incorrect SRF for Q05/44, Leahy and Walsh (1976: 13 and 14) also incorrectly outlined the Groube and Peter's garden investigations as occurring in Otupoho Bay; a mistake repeated by Rountree (1984:3) in her archaeological survey of Moturua Island for the former Bay of Islands Maritime and Historic Park Board in 1984 (Rountree 1984). This confusion may also go some way in explaining L. Furey's mis-location of the two sites, N12/6 and 8, in her outline of Maori Gardening for the Department of Conservation in 2006, as occurring on the "south facing slope below the [Paeroa] pa" (Furey 2006:57) and Maingay's (1996:1) description of N12/6 as occurring "...in the next bay to the north [of Opunga]" (Hahangarua) in her Archaeological Inspection of Opunga Bay for C. Heatley in 1996.

In 1981, further archaeological investigations were undertaken on the north west side of Moturua Island at Mangahawea Bay by J. McKay. As detailed by the writer in 1997 (Johnson 1997: 6) the investigation was not written up but is understood to have revealed a stratified site with lower levels consistent with early New Zealand East Polynesian or Archaic settlement and upper levels with 19th century bottle glass. This site is currently under considerably more detailed investigation by J Robinson, Heritage New Zealand Pouhere Taonga who has identified the more ubiquitous overlying agricultural horizon behind the site. The analysis and research is on-going. (Robinson pers comm.).

Following J Maingay's 1996 inspection of C. Heatley's residential proposal in Opunga Bay, the writer undertook a series of archaeological surveys and assessments and an investigation of varying components of the Heatley proposal in the bay in the late 1990s (see Johnson 1997, 1998a, 1998b, 2001).

The work was stated at the time (Johnson 1997) to cover archaeological sites N12/8 (Q05/46) and N12/35 (Q05/73), as it was understood at the time that N12/6 (Q05/44) was located in adjacent Hahangarua Bay to the north east. However, M Goddard and J Robinson (2023 SRF Additional Information) have determined that N12/6 (Q05/44) is in fact on the beach flat at Opunga Bay. As such, the title of the Johnson 1997 report should also have included N12/6 (Q05/44), acknowledging that all the reported remains covered in Opunga Bay are really all the same site.

A series of test pits on the north-west and west south-west, and two trench excavations across the beach flat either side of the central intermittent stream channel, exposed the stratified site on the beach flat and drains on the hillside. The lower cultural layer was dated by both C_{14} radiocarbon and obsidian hydration to the mid-15th century (Johnson 1997: 24). The more ubiquitous overlying agricultural layer was dated on the same basis to the 17th century (Johnson 1997: 34-5). It is probable that gardening or agriculture of some form or nature will have accompanied any and all settlement on Moturua Island and the remains represented by Layer 3 on the beach flat may well have occurred in conjunction with the occupation of *Pupuha* Pa (Q05/66) a short distance above to the south. However, an unusual feature of Moturua Island is that made agricultural soils appear to occur over a wide area on the island. While historical accounts of cultivation on the island include both Maori and French cultivation in 1772 through to supplying the tourist Cream Trip in the 1960s, the most likely explanation for the evident expansive gardening (including that across the top of Paeroa Pa) is supplying the whaling industry almost throughout the entire 19th century.

More recently, as a result of the 'deluge' in February 2023, followed a week later by Cyclone Gabrielle, it is understood that human remains (koiwi) of some four individuals were exposed at the mouth of the central intermittent stream channel where it discharges onto Hahangarua Beach (J Robinson pers. comm.) It is understood these remains were re-interred at the base of a large pohutukawa on the south side of the mouth of the channel (A Mitchell pers. comm).

Historical Background

Cook (1769) and Du Fresne (1772)

On the 29th November 1769, Captain James Cook anchored south of Motuarohia Island and stayed until the 5th December 1769-some six days in total. Lee states that Cook's journals record that "of the 375 acres of Moturua Island, some 50 acres were under cultivation" (Lee 1983:18). Salmond states "Cook described it as about three miles in circumfrence, with about forthy to fiftly acres of root crops (according to Banks, sweet potatoes, yamms & c' planted around a village" (Salmond 1993:230). Salmond hypothesised that the cultivations were associated with an undefended village which Banks and Cook had "visited earlier in the day". Unfortunately there is no record of where these cultivations or the village were located on the island.

In contrast, the French ships the *Mascarin* and *de Castries* entered the Bay on the 1st May 1772 and stayed until the 13th July 1772-some 74 days. The French had called into the Bay to make repairs to their ships and reprovision. Many of the crew were sick and a hospital tent was set up on at Waiti Bay on the south west side of Moturua Island. The French also established a forge in the Bay and collected water from the stream at Waipao Bay, immediately to the south east. The French used a number of 'huts' in these bays (Waiti and Waipao) to store nets and other equipment. Paeroa Pa (located between Awaawaroa and Hahangarua Bays) was visited by the French and mapped. No settlement appears to have been observed at the time of the French visit in either Hahangarua or Opunga Bay.

This observation of settlement on the island in 1772, was supported by the detailed charts/maps that the French drew of the Bay of Islands, which they called *Port Marion*. The charts shown in Figures 11 and 12 are attributed to M. Du Fresne as working copies, which clearly had information added to after the events in the Bay. A further chart, attributed to de Clesmure (an officer of the *Castries*), was drawn some 11 years later and formed the basis of the painted chart reproduced as Figure 13. There are significant differences in the 1772 and 1783 charts, but both sets show Paeroa Pa and the French shore camp at Waiti and Waipao Bays (which the French charts record as having had a small village at Waipao Bay). The account written by Crozet states "...On the 12th[May], the weather being fine and the vessels in safety, Mr Marion had tents pitched in a cove which was abeam of the vessel, on an island to which he had given his name. There was a river in this bay which gave sufficient water to supply the two vessels and he also had the sick taken ashore and set up a gatehouse there" (Ollivier and Spencer :11) and which Roux records "in the bay we had taken over, the natives had several grass huts near the vessel. They abandoned them for some reason" (Ollivier and Spencer 1985:147) while Crozet writes "They had abandoned the little huts that they used to live in in the cove where our hospital was and near the masting camp. They pulled up not only their potatoes but the wood as well, to plant it elsewhere" (Ollivier & Spencer 1985:291). Kelly states "...the natives had a few small huts near the stream which ran into the little creek of which we had taken possession. They abandoned them..." (Kelly 1951:30) and Salmond records "a group of huts in the bay were immediately abandoned by their occuants (who also dug up their gardens and took away building timbers)" (Salmond 1993: 379). A further village/settlement is shown on the northern side of the island.

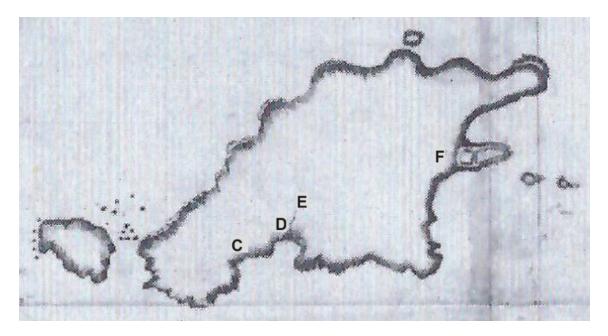


FIGURE 11. DETAIL OF THE MASCARIN MAP ENTITLED PLAN OF PORT MARION DATED 1772 OF THE SOUTH-EAST BAY OF ISLANDS SHOWING MOTURUA ISLAND AND SITES RELATING TO THE VISIT OF MARION DU FRESNE. (Bibliotheque Nationale, Departement des Cartes et Plans, (Pf 189:5:1/1 *in* Ollivier and Spencer 1985:384). Key (as per the translation) C= First camp [Waiti Bay] D=Place where there was a tent to guard the water barrels [Waipao Bay] E=Stream where we got water [Waipao Bay] F= Fortified village burnt by the French [Paeroa Pa]. Note: The chart has been re-labelled and reorientated.

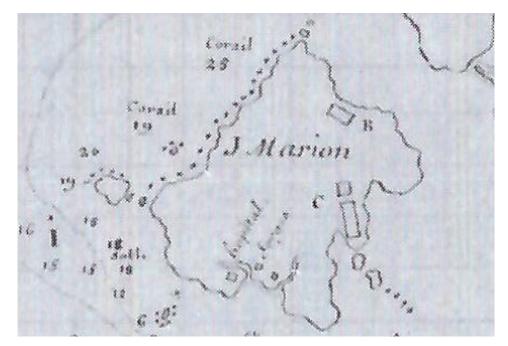


FIGURE 12. DETAIL OF UNTITLED: PLAN OF PORT MARION DATED 1772. (Bibliotheque Nationale, Departement des Cartes et Plans, (Pf 189:5:2D in Ollivier and Spencer 1985:386). Key (as per the translation) B= Villages with few huts [Waiwhapuku Bay?/ Otupoho Bay?] C= Fortified village burnt by the French [Paeroa Pa]. The location of the French 'hospital' and 'forge' are also shown in the area of Waiti and Waipao Bays.



FIGURE 13. DETAIL OF DE CLESMURE'S CHART DATED 1783 ENTITLED PLAN DU PORT MARION SHOWING MOTURUA ISLAND (*in* Salmond 1993:208-209). Key (as per the translation) B= "fortress which we stormed and destroyed" [Paeroa Pa]. A number of other small unnamed and unreferenced settlements are shown at Waiti and Waipao Bay and another settlement on a northern eastern stream; and what may be the reference to Pupuha Pa on the south east side of Moturua.

Cultivations were recorded by Le Dez during the 1772 visit described that "the slopes and hills in the bay were cultivated with sweet potato, indicating a strong preference for hill gardening while the rest of the countryside was covered with either ferns or forest. Ferns, which formed the basis of the local diet, were moderate in height when growing by the sea or on the hills, while those in the vlleys and on the foothilles grew very tall and produced roots about the thickness of a man's thumb" (*in* Salmond 1993:405).

In addition to the native cultivations, the French (notably Crozet) also undertook a planting regime during their stay "I formed a garden on Moutouaro [Moturoa], in which I sowed the seed of all sorts of vegetables, stones, and the pips of our fruits, wheat, millet, maize, and in fact every variety of grain which I had brought from the Cape of Good Hope,, everything succedded admiravly, several of the grains sprouted and appeared above ground and the wheat grew with surprising vigour...The garden on [Moturua] Island alone was not sufficient to satisfy my desires; I planted stones and pips wherever I went-in the plains, in the glens, on the slopes, and even on the mountains; I also sowed everywhere the few of the different varieties of grains, and most of the officers did the same. We tried in vain to get the savages to grow some, and explained to them the use of wheat, of other elementary grains and of the quality of the fruits of which we showed them the stones. But they had no more mind for this than brutes" (Crozet in Salmond 1993:406).

Roux states: "As they are very intellegent we made them understand that the plantings we made on Marion Island, such as wheat, rice, maize, potatoes and various nuts, could be of great use to them; all of these seeds grew well even though it was winter. They seemed very satisfied and made us understand that they would take care of them. I do not know whether they would have kept all these seeds, which would have given them a resource all the greater because they have only potatoes and fernroot..." (*in* Ollivier & Spencer 1985: 167)

The most significant event during the French visit was the assassination of Marion Du Fresne (the Captain of the *Mascarin*) who along with 12 others, was killed in Te Hue Bay on the 12th June. The next morning, a longboat and crew from the *de Castries* went to collect firewood at Ongete Bay at the east end of Orokawa Bay. Eleven of the 12 crew were killed on landing. In retaliation for the killing of the Marion du Fresne and 24 of the expedition, the French attacked Paeroa Pa on Moturua Island (at the northern end of Hahangarua Bay) on the 14th June, killing and estimated 250 men, women and children. It took until the 7th July before Te Kuri's village was searched by the French for evidence of the fate of Mr Marion and his crew, after which the village was burnt. It is also understood that Te Kuri's Pa (Taurikura) and Tangitu Pa were also searched and burnt. Between the 7th July and the 14th July, when the two ships departed for France, it would appear that many of the villages in the Bay were sacked and burnt; and the journals indicate that before departure, any Maori who ventured within the vicinity of the French was shot on sight.

The French retribution was to have serious long terms effects on the political hegemony in the Bay of Islands, with the result of what Lee refers to as "internicine warfare" occurring between 1772 and 1820, with Kaiteke (also known as Tareha and Te Kemara) eventually 'appropriating' Moturua by the 1820s (Lee 1983:34). Ngare Raumati had a series of battles "...until about 1829. Then, with...Ngare Raumati...defeated and Ngapuhi in control of the Bay, Moturua belonged to the chief Te Kemara and his people. Te Kemara and his Ngare Raumati wife sometimes lived at Otupoho Bay and their descendants lived on the island and farmed it, until most of Moturua was sold to the Crown in 1968" (Cassels & Lee et al 1989:130)

The focus of European shipping moved to Paroa Bay until the 1820s and then on to Kororareka and Otuihu. By the 1830s, Moturua Island appears to have been largely bypassed by European shipping. The shifting focus for shipping in the Bay is indicated by the chart dated 1833, which shows no information for Moturua Island (where the island is un-named and vague in its outline. An annotation "Cooks B [Bay?}" is the only naming in the vicinity of the island (Figure 14).

Likewise the *Acheron* chart shows no cultural or historical information for the island, other than labelling the island "Motu Rua" (Figure 15). Again, no bays on the island are named and no geographical information for the island is shown.



FIGURE 14. DETAIL OF MAP DATED 1833, SHOWING MOTURUA ISLAND AS AN UN-NAMED ISLAND AND AN ANNOTATION OF "Cooks B[Bay?]". (Courtesy of Auckland Libraries Heritage Collections Reference: Map 5449).



FIGURE 15. DETAIL OF THE 1849 *ACHERON* CHART ENTITLED BAY OF ISLANDS, SURVEYED BY G.H. RICHARDS AND P. W. OKE, UNDER THE DIRECTION OF CAPT^N J.L. STOKES (Courtesy of Auckland Libraries Heritage Collections Reference: Map 3920) NO INDICATION OF ANY SETTLEMENTS OR DWELLINGS IN HAHANGARUA BAY.

Land Ownership 19th century-1940s

From a review of the old land plans, it appears the property remained as unalienated Maori land until the mid-20th century, having been put into native title (ML 6672) in 1897 (Figure 16). The old land plan dated 1897 shows no cultural or historic information for Hahangarua Bay or the island as a whole. No bays are named and no settlements or streams are shown.

It is our understanding that the Native Land Court Minute Book for the investigation of title ML 6672 states that: "Otupoho bay on Moturua was described as having gardens of kūmara for whalers, "Te Rangi and his wife culted [cultivated] kūmara at Otupoho on Moturua but that cultivation was made for the whaling [.....]". He has culted and ran cattle on these islands 3 times [......] of the operations were in the nature of permanent operations" (NMB25 1898:143 in Goddard 2022:60). Otupoho Bay is located to the north and west of Hahangarua Bay. From the Goddard research and interpretation, it appears that the main cultivations during the later 19th century were Mangahawea, Opunga, Awaawaroa, Wai-iti along with Otupoho, which were all named as being cultivated contemporaneously during the late 19th century (Goddard 2022:61). While Goddard does not specifically mention Hahangarua Bay as having been cultivated in the 19th century, it is extremely unlikely that Hahangarua would not have been cultivated, given all the other bays were (and were named in the Native Land Court Documents). At present there is on-going research being undertaken by HNZPT through these documents for further information as to whether the records hold any information on Hahangarua Bay and whether these historic cultivations established for the '19th century whalers' extended into the bay (J Robinson pers comm.).



FIGURE 16. DETAIL OF OLD LAND PLAN ML6670 ENTITLED PLAN OF MOTURUA, WAEWAETORIA & OKAHU ISLANDS, DATED 1897 SHOWING MOTU RUA ISLAND.

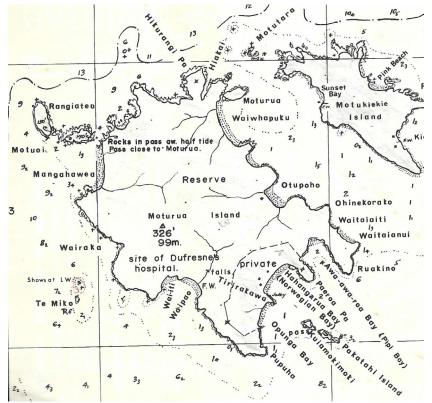


FIGURE 17. DETAIL OF A CHART COMPILED BETWEEN 1920-1974 BY A. PICKMERE (SURVEYOR) SHOWING MOTURUA ISLAND AND THE NAMED BAYS (in Watkins 1974)

No further cultural or historic information is shown in Lee's Historic Maps of the Bay of Islands, which covers the period from 1840-1900 (Lee 1969). With the exception of Paeroa Pa, and noting the site of Du Fresne's hospital, Pickmere's Charts of the area collated over the period 1920-1974, also shows no cultural or historic information for the island (Figure 17). However, all the bays are named. Hahangarua is noted as "Hahangarua (Norwegian Bay)" and being 'private' land; (Watkins 1974).

Norwegian whalers 1912-1913.

In July 1912 ships owned by the New Zealand Whaling Company (owned by Norwegians) were recorded in the press as being sent to Russell to search for whales in the northern waters and at the time the headquarters were planned to be in Deep Water Cove (Boese 1977:382). However, on arrival in the Bay of Islands rather than being stationed at Deep Water Cove or Russell as reported in the press (*Northern Advocate* 2 December 1912:7), the ships were stationed at Hahangarua Bay at Moturua Island. The sailing ship *Prince George* (fitted as a factory ship and as a transport ship) and two steamship whalers (harpoon ships) the *Whangaroa* and the *Whangarei* anchored off Hahangarua Bay were only part of a larger fleet operating in New Zealand at that time.

In addition to the three ships recorded at anchor in Hahangarua Bay, a shore station was also established at Hahangarua with components extending over most of the beach flat which included a large pre-fabricated house and storage sheds and two jetties (Plates 3-6). Images from 1912 (Kirkwood *in* Auckland Weekly News) and 1913 (Winkelmann) show the beach flat and structures as well as ancillary components such as boilers lying on the beach flat.

Boese records; "By the end of the year it was admitted the venture has not proved a success and it has been decided to cease operations" (*Auckland Weekly News*, Dec 1912 in Boese 1977:383). The *Whangaroa* and the *Whangarei* returned to Norway and the *Prince George* was relocated to Cape Town (ibid). When the Norwegian fleet left c.1913, the pre-fabricated house and sheds were removed and shipped to Australia (M Goodfellow pers comm).



PLATE 3. DETAIL FROM A PHOTOGRAPH IN THE AUCKLAND WEEKLY NEWS ENTITLED WHALERS IN THE BAY OF ISLANDS, IN THE AUCKLAND WEEKLY NEWS SHOWING THE (NORWEGIAN) NEW ZEALAND WHALING COMPANY SHORE STATION AT HAHANGARUA BAY AND THE SAILING SHIP "PRINCE GEORGE" WITH STEAMER HARPOON BOATS "WHANGAREP" AND "WHANGAROA" ANCHORED (Courtesy of Auckland Libraries Heritage Collections Reference: AWNS-19121212-12-02)



PLATE 4. DETAIL OF THE IMAGE ABOVE SHOWING THE HOUSE AND SHEDS ON THE HAHANGARUA BEACH FLAT IN DECEMBER 1912.



PLATE 5. DETAIL OF A PHOTOGRAPH DATED 1913 TAKEN BY HENRY WINKELMANN SHOWING HAHANGARUA BAY; THE NORWEGIAN WHALING SHORE STATION AT THE NORTHERN END OF THE BAY; AND THE ANCHORED HARPOON STEAMER BOATS (Courtesy of AIM Reference: PH-NEG-2716.



PLATE 6. DETAIL OF A PHOTOGRAPH DATED 1913 TAKEN BY HENRY WINKELMANN SHOWING HAHANGARUA BAY; THE NORWEGIAN WHALING STATION AT THE SOUTHERN AND CENTRAL PART OF THE BAY; AND THE ANCHORED HARPOON STEAMER BOAT AND FACTORY SHIP THE "*PRINCE GEORGE*" (Courtesy of AIM Reference: PH-NEG-2716.

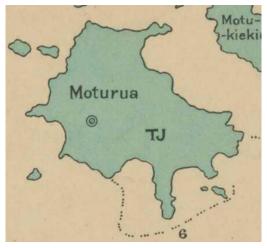


FIGURE 18. DETAIL OF THE GEOLOGICAL SURVEY MAP OF THE BAY OF ISLANDS DATED 1922 SHOWING MOTURUA ISLAND (Courtesy of Alexander Turnbull Library Reference: Alma MMSID 9918199632902836).



FIGURE 19. DETAIL OF A CADASTRAL MAP DATED 1930 SHOWING MOTURUA ISLAND AS [ML] 6672. (Courtesy of Alexander Turnbull Library Reference: Alma MMSID 9917947853502836).

The Geological Survey Plan dated 1922 (Figure 18) and the cadastral map dated 1930 (Figure 19) show no cultural or historical information such as houses, settlements or Pa on the island or at Hahangarua Bay.

Subdivision of the Island 1940s- present

Moturua Island was subdivided in 1939 into two blocks (Moturua A and Moturua B) as shown on land plan SO13021. Moturua A comprised the land between the south end of Awaararoa Bay the south end of Opunga Bay (inclusive of Paeroa Pa). Sir William Goodfellow (Avalon Investments Company) purchased the Pt A Moturua Island, comprising Opunga and Hahangarua Bays in or about the 1940s. As it took some years for the title to come through, there is a little uncertainty as to the actual date. The delay in the title issue may have been due to the Island having been part of the WWII Coastal Defence network between 1942-44. Hahangarua is noted on SO13021 as Hahangarua/Norwegian Bay. The beach flat is noted as "flat" with the hill and lower slopes noted as "scrub". No further cultural or historic information is shown for the Bay on the plan.

A brick and tile home for the Sir Bruce Goodfellow family was constructed in c.1951 (along with ancillary sheds and a caretaker's house), however the house is not shown on the 1951 aerial photograph (Plate 7). Sir William also planted extensive gardens (orchards, vegetable gardens and ornamental trees) over the entire property including clusters of blue gums and Pohutukawa; and an alignment of Norfolk pines along the beach front. Many of these trees are now being removed for safety reasons. The Opunga Bay property (DP 36233) was sold out of the family in or about 1966/67; the family retained the remainder of Pt A Moturua Island (Hahangarua Bay). The remainder of the island (Pt B Moturua Island 6672) is noted on the old land plan ML 6672 as having been sold by Maori owners to the Crown in 1968.

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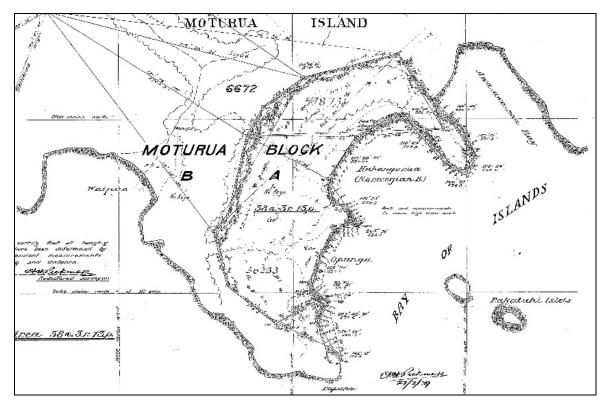


FIGURE 20. DETAIL OF OLD LAND PLAN ML13021 ENTITLED *MOTURUA A BLOCK*, DATED 1939 SHOWING MOTURUA ISLAND SUBDIVIDED INTO BLOCKS A AND B.

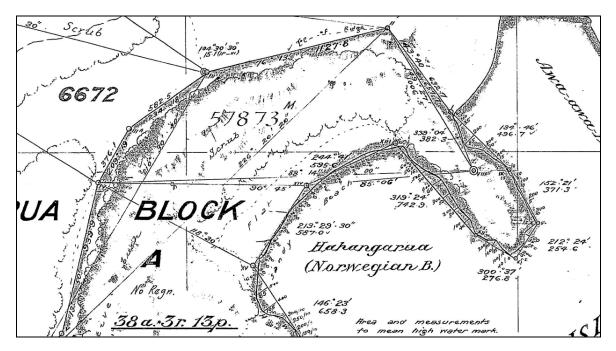


FIGURE 21. DETAIL OF ML13021 SHOWING HAHANGARUA BAY.

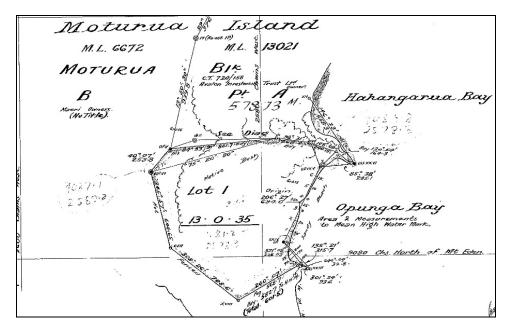


FIGURE 22. DETAIL OF OLD LAND PLAN DP36233 ENTITLED *PLAN OF PART MOTURUA A BLOCK*, DATED 1948 SHOWING PART A OF THE ISLAND BEING SUBDIVIDED INTO TWO LOTS, LOT 1 (Opunga Bay) AND PART A ML13021 (Hahangarua Bay). The owner of Part A and Lot 1 is shown as Avalon Investment Trust Ltd (Sir William Goodfellow).

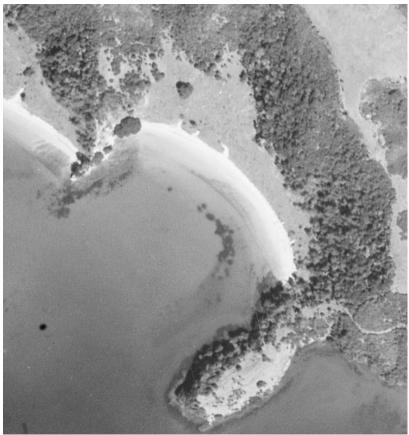


PLATE 7. DETAIL OF AN AERIAL PHOTOGRAPH DATED 1951 SHOWING HAHANGARUA BAY (Courtesy of *Retrolens* Reference: SN543 RN20)

During the 1950s (and likely earlier and later) Hahangarua Bay was used as a picnic beach by the general public (and the later Cream Trip) as evidenced by images dated to 1955 (Plates 8 and 9). The images are referenced as being taken on "Mita's Island", which appears to be a relatively common name for the island through the 1950s. The island is also referred to as Mita's Island in 1959 (Lennard 1959:9) and Bruce Goodfellow also recalled the island being called Mita's Island before the bay became more commonly known as Goodfellow Bay (B Goodfellow pers. comm). The reference to 'Mita' may be associated with 'Mita', who was referenced in the Native land Court in the 1880s as being associated with Waewaetoria (and possibly with the gardening on Moturua). "Mita[?] ei tai went [.....] to Waewaetorea to plant potatoes, I also went here to plant potatoes at the same time and our cultivations can be distinguished now" (NMB25 1898:112) (*in* Goddard 2023:60).



PLATE 8. DETAIL OF PHOTOGRAPH OF HAHANGARUA BAY, DATED 1955 ENTITLED "Beach Scene including bathers, Mita's Island, Bay of Islands" (Courtesy of Alexander Turnbull Library Reference: WA-36675-F).



PLATE 9. DETAIL OF PHOTOGRAPH OF HAHANGARUA BAY, DATED 1955 ENTITLED "Beach Scene including bathers, Mita's Island, Bay of Islands" (Courtesy of Alexander Turnbull Library Reference: WA-36679-F).

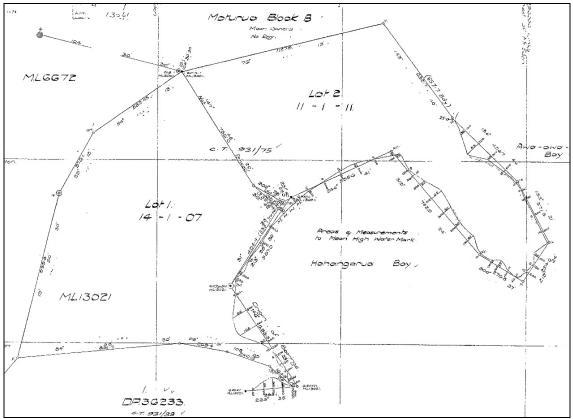


FIGURE 23. DETAIL OF OLD LAND PLAN DP57873 ENTITLED SUBDIVISION OF PT A BLOCK DATED 1966 SHOWING PART A (Hahangarua Bay) SUBDIVIDED INTO TWO LOTS. The owner of Part A is shown as Avalon Investment Trust Ltd (Sir William Goodfellow)



PLATE 10. DETAIL OF AN AERIAL PHOTOGRAPH DATED 1971 SHOWING HAHANGARUA BAY (Courtesy of *Retrolens* Reference: SN3468 RN C/1).

At around the same time (in or about 1966), the Bruce Goodfellow family purchased the Hahangarua Bay property from Avalon Investments Company; and Pt A area was subdivided into 2 Lots. (B Goodfelow pers comm.). The Sir William Goodfellow house, caretakers house and sheds were retained in Lot 1 DP57873; and a Lockwood house was constructed soon after the B Goodfellow purchase for guest accommodation in Lot 2 DP 57873. These structures and the garden plantings are shown in the aerial photograph dated 1971 (Plate 10) The subdivision in 1965 and 1966 are shown on the cadastral plans dated 1965 (Figure 24) and 1981 (Figure 25). No cultural or historical information is shown on the 1951cadastral plan. An area is marked wahi tapu on the 1981 plan (outside of the area in question).

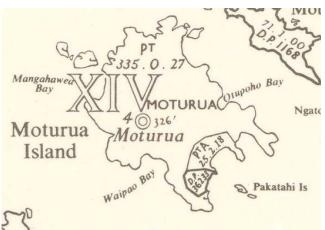


FIGURE 24. DETAIL OF A CADASTRAL MAP DATED 1965 SHOWING THE SUBDIVISION OF MOTURUA ISLAND. (Courtesy of Alexander Turnbull Library Reference: Alma MMSID 9915920813502836).

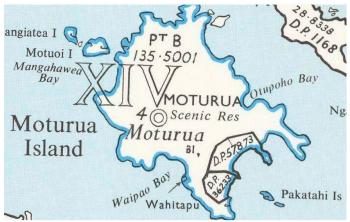


FIGURE 25. DETAIL OF A CADASTRAL MAP DATED 1981 SHOWING THE SUBDIVISION OF Pt A MOTURUA ISAND. (Courtesy of Alexander Turnbull Library Reference: Alma MMSID 9915776963502836).

The Bruce Goodfellow family has undertaken extensive re-plantings of native bush (including the Pohutukawa by the boat shed); and are part of the group supporting Guardians of the Bay of Islands (Paris 2015); Project Island Song (pest eradication and the re-introduction of native birds to the island); and have financially supported the on-going eradication of invasive weed species and wattles (Armitage 2023). More recently they have undertaken to remove most of the bamboo and blue gums from both Lots.

Survey Results

As a result of the fieldwork, a single archaeological site, Q05/1585, was located in the area of the proposed residential development (Figure 26). A New Zealand Archaeological Association Site Record Form has been completed for the sites and is appendicised in the report. A brief outline of the site is presented below.

Q05/1585. Made Agricultural Soil. NZTM E1708866 N6101168.

The site is located on the B. and M. Goodfellow property, (Lot 2 DP 57873) Hahangarua Bay, Moturua Island, Bay of Islands. The site is recorded for the lower hillside and the narrow central north-east section of the Hahangarua beach flat. The site is recorded at a point approximately 4-5m above sea level. (The GPS is given at the location of the house). The site appears in reasonable condition and occurs across an area of a proposed small residential dwelling.

As the result of 12 test pits, it appears that a made agricultural soil horizon of varying consistency and depth, between 20-30cm, under overlying topsoil and erosion layers of varying depths, 20-60cm, occurs across the area of the residential proposal and will extend in all quarters. The soil is characterised by the addition of intertidal beach shingle (beached rolled shell, fragmentary and whole, and stone) with occasional charcoal fragments and occasional white-orange crushed weathered and semi-consolidated clay. The colour and consistency of the layer varies with some exposures occurring without the beach shingle but with the crushed orange clay and in other areas with grey clay and brown soil. The area occurs in close proximity and below and to the south west of Paeroa Pa (Q05/39) and the soil horizon identified here is likely to be an extension of the same post 1840 garden layer found across all areas of the pa by L. Groube in 1964/65.



PLATE 11. THE PROPOSED LOCATION FOR THE HOUSE. THE PEG MARKS THE (FRONT) SOUTH EAST CORNER OF THE HOUSE (View to the north-west).



PLATE 12. THE REAR (SOUTH-WEST) CORNER OF THE HOUSE (arrow marks TP 3) AND 500L WATER TANK LOCATION IN THE REGENERATING BUSH AREA BEYOND (View to the north).



PLATE 13. THE LOCATION OF THE REAR OF THE HOUSE (View to the east).



PLATE 14. THE PREFERRED GENERAL LOCATION FOR THE WATER TANKS UPSLOPE TO THE WEST FROM THE HOUSE (View to the north-west).



PLATE 15. THE GENERAL LOCATION IDENTIFIED BY O'BRIEN DESIGN CONSULTING AS THE LOCATION OF THE WASTE WATER TREATMENT SYSTEM AND TP2 (View to the north-west).



PLATE 16. THE GENERAL LOCATION OF THE PROPOSED ELECTRICITY CABLE ROUTE TO THE HOUSE FROM THE EXISTING LOCKWOOD HOUSE (View to the north).



PLATE 17. THE GENERAL LOCATION OF THE PROPOSED ELECTRICITY CABLE ROUTE (AND TP11) TO THE HOUSE (View to the south east and existing Lockwood house).



FIGURE 26. THE APPROXIMATE LOCATION OF THE RESIDENTIAL PROPOSAL AND THE APPROXIMATE LOCATION OF THE TEST PITS 1-12 (Base Plan Courtesy Wilton Joubert May 2024).

To aid with the assessment of effects the area of the lower slope, mid slope and central north section of beach flat was probed in detail and a number of spade sized test pits with auger extension, were also dug in the areas identified by A. Mitchell as the areas of the proposal which would require earthworks. The results of the profiles is outlined below.

Test Pit Number	Proposal Location	NZTM	Profile Results.
1	House	E1708872 N6101158	20cm dark brown topsoil; over 25-30cm grey- brown soil mixed with beach shingle sand and
2	Waste Water	E1708843 N6101162	shell (made soil); over yellow clay subsoil. 10cm brown topsoil; over 45-55cm dark grey-
	Treatment Option 2		brown soil with sparse fragments of charcoal and a small quantity of heat discoloured stone at the base; over yellow clay subsoil
3	House	E1708861 N6101164	20cm mid-brown top soil; over orange/yellow mottled clay subsoil.
4	House	E1708866 N6101168	10cm mid-brown topsoil; over 25cm mottled mix of yellow/gray/orange clay with fragments of charcoal and rounded beach pebbles (made soil); over yellow/orange clay subsoil
5	House	E1708873 N6101168	10-15cm mid-brown topsoil; over 60 grey mottled clay erosion fill; over lighter grey layer of grey brown soil and beach shingle sand and shell (made soil).
6	Water tanks Option 1 (Lower elevation)	E1708841 N6101188	15cm mid-brown topsoil; over 40cm of mottled brown soil with pieces of orange-white clay; over 20cm of gritty beige coloured soil with beach shingle sand and shell (made soil); over yellow clay subsoil.
7	Water tanks Option 2 (Higher elevation) (preferred option)	E1708848 N6101195	10cm mid-brown topsoil; over 20cm grey- brown erosion fill; over 30cm gritty orange- white weathered clay-rock (made soil); over yellow clay subsoil
8	Waste Water Treatment Option 1	E1708866 N6101149	10cm dark brown topsoil; over 10cm grey brown mottled clay erosion fill; over 20cm beige coloured soil mixed with beach shingle sand and shell (made soil); over yellow clay subsoil.
9	Electricity Cable Route	E1708867 N6101150	10cm brown topsoil; over 30cm grey brown clay erosion fill with sparse fragments of shell; over 30cm orange-beige soil with beach shingle sand and shell (made soil); over yellow-grey clay subsoil
10	Electricity Cable Route	E1708852 N6101145	10cm brown topsoil; over 30cm grey brown clay erosion fill with sparse fragments of shell; over 30cm orange-beige soil with beach shingle sand and shell (made soil); over yellow-grey clay Subsoil
11	Electricity Cable Route	E1708837 N6101136	10cm mid-brown topsoil; over 30cm compacted brown soil with fragmentary shell (made soil?); over a beige coloured to light cream subsoil?
12	Electricity Cable Route	E1708825 N6101123	10cm brown topsoil; over 25cm grey clay and soil mix with shell fragments (made soil?);over dusty orange holocene beach sand subsoil

TABLE 2. THE TEST PIT PROFILE RESULTS.



PLATE 18. THE SHELL AND MADE SOIL IN TEST PIT 1 (house site).



PLATE 19. THE BURNT HANGI STONES FROM TP2 (WW DISPOSAL TANK SYSTEM.



PLATE 20. THE COMPACTED MADE SOIL FROM TP11

Archaeological Significance

Archaeological significance/values relate to the potential of a place to provide evidence of the history of New Zealand. The following matters must be taken into account when assessing archaeological value: Condition of the site; the sites rarity; the sites contextual value; the sites information potential; and any amenity value (HNZPT June 2014).

Site	Value	Assessment
	Condition	 Fair-Good. The location of the site has possibly been modified by the 1965 Groube excavation; and further features associated with the site are still likely to be extant subsurface. The site Q05/1585 has been affected by the Norwegian whaling station; 20th century cultivation and farming. Notwithstanding the site is still in good condition.
Q05/1585 Made Cultivation Soils	Rarity/ Uniqueness	The site/s are rare and unique as the location of a "first contact" site. The site is unique in that the French recorded the settlements in the Bay on maps and recorded the interactions in ships logs and diaries. The sites are the focus of cultural identity and therefore are regarded as notable.
	Contextual Value	The sites have contextual value as an element of pre-contact, protohistoric and historic Maori occupation in the coastal area.
	Information Potential	The sites features have information potential.
	Amenity Value	The site is located on private property, however there are opportunities for public information/interpretation. The sites have amenity value.
	Cultural Associations	The site has Maori cultural associations and is associated with the 1772 French visit (and descendants of the French crews of the <i>Mascarin</i> and <i>de Castries</i>).

TABLE 3. THE ARCHAEOLOGICAL SIGNIFICANCE.

Additional comments

The significance or value of archaeological site/s are associated with condition, rarity, contextual value, information potential and/or amenity value. No ranking is required, allowed or appropriate under the Act.

Heritage Significance

Heritage significance/values accounted for under the Resource Management Act 1991. The following matters must be taken into account when assessing Heritage significance/values include: historical, architectural, cultural, scientific and technological qualities (RMA 1991).

Properties	Criteria	Assessment	Significance
	Historical:	The sites on the property form part of a wider historic cultural/archaeological landscape on Moturua Island, and have known associations to historical events and persons.	High
Lot 2	Architectural:	Not applicable	N/A
DP57873	Social/Cultural:	The area has significance to the descendants of both French and Maori who were involved in the events of 1772. The cultural significance is to be determined by Tangata Whenua.	
	Mana whenua:	This to be determined by tangata whenua	
	Scientific:	The archaeological site in the bay has the potential to provide information on the age and proto-historic environment	Moderate-High
	Technology:	Not applicable	N/A
	Aesthetic:	The aesthetic value of the property should be determined by a landscape architect. The area is zoned as an Outstanding landscape under the FNDC District Plan.	High
	Context:	The properties and archaeological sites on Moturua Island have known historical contextual associations with each other.	High

TABLE 4. THE HERITAGE SIGNIFICANCE.

The heritage value of any location can only be ranked as of low, low-moderate, moderate, moderate-high, or high significance; at a local, regional or national level. No additional ranking is appropriate or required.

Overall, the heritage value of the general location of Hahangarua Bay is high (at a local and regional level) with associations to known historical figures and to recorded historic events.

Archaeological Assessment of Effects *General*

As an overview, the proposed residential development is located at the base of the hillside at the back of the Hahangarua Beach Flat. The house is located just off and slightly above the beach flat in an area in front of and including a small previously levelled platform formed by the Goodfellow's for a small orchard some decades ago. The house area extends into an area that also had some very large gum trees, formerly planted by Sir William Goodfellow that have been previously felled. Part of the area is now mown grass with the other part under a tangle of low vegetation and logs and tree stumps.

No archaeological remains were visible or identified on the surface over the area of the proposed residential dwelling. However, subsurface evaluation through the digging of a number of test pits revealed a varying but distinct layer of made agricultural soil across all areas of the proposal. This consisted primarily of an orange-yellow clay with fragmentary weathered rock and mostly fragmentary, beach rolled shell and small pebble intertidal beach shingle. In some test pits, the same layer was revealed, but without beach

shingle and in others, the soil component was darker grey-brown with beach gravels with no orange clay. The general soil profile and made agricultural soil layer appeared uniform across the comparatively small area of the proposed residence and gave no indication that the episode represented was anything other than a single and, albeit, widespread agricultural event. No other archeological remains were identified within the test pits. The lower layer in the test pits appeared undisturbed clay subsoil with what appeared to be no further potential for lower cultural layers.

From a brief assessment of the Hahangarua beach flat area the largest area of beach flat appeared at the south west end of the bay. The flat then narrows from approximately the centre of the bay to a comparatively restricted area forming an apex at the north east of the bay at the base of Paeroa Pa. The flat appears to have two or more dry intermittent outflow channels discharging to the beach. The most likely area for a full sequence of human settlement and related activities at Hahangarua is the comparatively large flat at the south west end of the bay. With early New Zealand East Polynesian remains found at adjacent Opunga Bay (Johnson 1997) and at Mangahawea on the north west side of the island (J. Robinson pers comm.), it is very likely both that remains of a similar nature will occur on the beach flat at the southern end of Hahangarua Beach and, if present, could be largest area of such remains on Moturua Island. However, it appears from the test pits, that this early settlement did not appear to extend into the area of the narrow beach flat section and lower slope at the centre north east end of the bay.

It appeared to us that the single layer of made agricultural soil evident the proposed house site is likely to equate to, and be a continuation of, the same made agricultural soil layer identified in 1964-5 by Groube on Paeroa Pa that covered both all elements of the site mapped by the French in 1772 and later Maori re-occupation, a short distance above the proposed house site to the north east. The made soil layer also appears likely to equate to and be a continuation of the made soil layer investigated by Groube at Opunga also in 1964-5; that investigated by Peters in 1968 at Opunga Bay; the same witnessed and recorded at Opunga by Leahy and Walsh in 1976; and that investigated by the writer in 1997 at Opunga Bay (Johnson 1997). From Groube's original investigation and from the subsequent record of archaeological, ethnographic historical research, it is clear that gardening occurred over significant sections of Moturua Island post 1840. The underlying made agricultural soil layer at Opunga, initially thought by Groube to relate to the 8th century, dated to the 17th century by Johnson (Johnson 1997:42-44) and now thought by Davidson and Johnson to be much later (Davidson 1984:120 in Johnson1997:42-44); and could well relate to the post-1840 period and potentially as the same period as the account of successive episodes of kumara gardens in nearby Otupoho Bay for the whaling industry at the end of the 19th century (Maori Land Court Records Northern Minute Book 25, Tai Tokerau 1898).

Lockwood House

It is important to note that the construction of the new Lockwood house has been designed specifically to limit any earthworks effects on any potential archaeological remains within the building area. This includes the location of the proposed dwelling off the beach flat, minimal foundation works and the location of the water tanks and sewage treatment tank off the beach flat and above ground sewage disposal.

For the house foundations, the method of construction chosen is the Surefoot Footing System (Figure 27). For the equivalent of each foundation pile, this system involves installing a metal plate with upright bolts pinned to the ground by six metal rods angled into the ground to 1.2m in depth. The framing is then simply bolted on to the top of the metal plates installed over the area of the footprint of the house & deck, covering 18.5m x 13.3m. This means there are no foundation pile holes dug into the ground over the area of the house footprint (https/www.surefoot.nz/about).

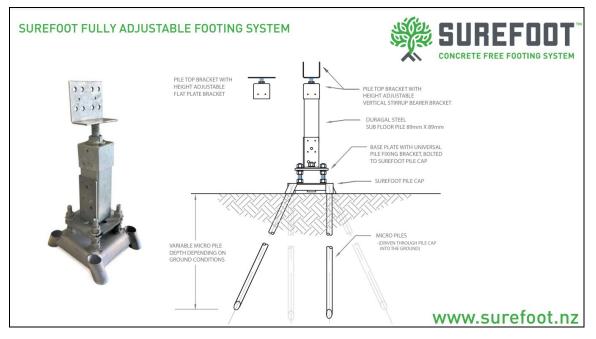


FIGURE 27. THE SUREFOOT FOUNDATION SYSTEM (Courtesy of Surefoot NZ).

The only specific earthworks in relation to the house footprint itself is that the front edge of the existing cut and fill terrace of the older Goodfellow orchard garden will be lowered and the fill placed on the ground surface at the front edge of the building. The proposed earthworks along section will extend to depth of between 0-660mm (max) over an area 20m in length and 5m wide. The fill at the front will cover a corresponding area (20 x 4m). In addition, the removal of four or five Blue Gum stumps may affect the underlying cultivation layer but this will affect an area mostly already displaced by the trees bases and roots.

From the three test pits dug along this section, TP3-5, the original Goodfellow fill section of the profile is comparatively shallow at the south west end overlying clay subsoil at a depth of 200mm. At the north east end topsoil overlies an old 600mm deep erosion layer. As such the comparatively shallow earthworks may have limited to no archeological effects. The fill section of this proposal occurs at the front of the dwelling. The fill will simply be placed on the ground with no earthworks involved. Consequently, it appears there will also be no archaeological effects.

Water

The water holding tank from the collected roof water is simply to be placed on the ground to the rear of the house on clay subsoil at the back of the old Goodfellow terrace. No earthworks are proposed for the installation of this tank.

The header tank will be located on the hillside above the level of the house roof to provide gravity fed water supply to the house. Two areas on the hillside above were considered for the location of the tank. The two areas appeared as old erosion slumps, one above the other. Test pits were dug at both locations and both revealed sections of the same made agricultural soil. The made soil layer in the lower test pit included fragmentary beach shell while, oddly, that on the upper test pit, a few metres above, showed the same orange-yellow made soil layer but with no shell. The installation of the tank at either location will simply involve the levelling of the topsoil layer by machine over an area of 8m x 5m and the addition of coarse sand with the installation of the tank on the sand. Any effects on the made agricultural layer here will be minor, if affected at all. The holding and header tanks will be connected by lines simply laid on the ground.

Waste Water Treatment system & disposal area

The proposed sewage treatment and disposal system consists of a treatment tank installed into the ground over an area of $4m \ge 2m$ to a depth of 1.2m. This will occur in the area of regenerating growth some 7m to the north east of the proposed house with a pipe connection, 20cm wide and 60cm deep, to the house. The installation of the treatment tank will involve the modification of the made agricultural soil layer to the specified dimensions, as will the pipe connection. From the treatment tank, a line will extend 7-8m over the ground surface to the disposal area a short distance to the north west. The disposal area again will simply be pinned to the ground over an area of approximately $30m \ge 10m$. The surface waste disposal does not appear to have any archaeological effects. A shallow swale/intercept drain is to be dug above the disposal area to divert storm water run-off. The proposed swale is 45m long x 300mm wide x $\leq 100mm$ deep.

Power

The power supply to the house is likely to be supplied from an existing supply at the existing Lockwood house on the beach flat some 60-70m to the south west. The connection will involve the digging of a cable trench from the existing Lockwood, 10cm wide and 60cm deep over the specified distance. The three test pits dug at intervals along this route indicate that this cable trench will extend into and possibly below the made agricultural soil layer to the specified dimensions.

We have been made aware that the existing power supply to the current Lockwood from the generator some 100m further to the south west may be of insufficient voltage to supply two houses. This latter cable may need to be replaced with a higher voltage cable. If this is the case, the existing cable will be taken up and the new cable installed in the already modified ground of the existing cable trench.

Access and laydown area

The earthworks associated with the establishment of the proposed Lockwood house will be undertaken by a small machine excavator. This will be unloaded on to the beach by barge and simply driven the small distance to the house site. Any materials required will simply be laid on the ground surface on the grass lawn area, without subsoil disturbance, on the gentle gradient at the lower section of the hillside.

Overview

The residential development proposal will affect the remains of a late pre-contact or early to mid-post contact Maori garden area recorded as Q05/1585. The effects will occur at the house foundation metal rod installation and minor cut and fill component of the house site, at the installation of the water header tank, the installation of the sewage treatment tank, the supply of power from the existing Lockwood house and possibly by the tree stump removal. As such, the Goodfellow's will need to apply for Authority from Heritage New Zealand Pouhere Taonga to modify in part archaeological site Q05/1585 (made soils).

It is recommended that the B. and M. Goodfellow apply for an Authority to modify an archaeological site under Section 44 of the HNZPT Act, 2014 to undertake the residential development. Given the ubiquitous nature of the archaeological garden evidence, all the proposed works within the specified area should be included in the Authority application.

It is recommended that the Authority be granted by HNZPT under Section 48(1)(a) of the Heritage New Zealand Pouhere Taonga Act 2014.

Given that:

- (a) The proposed residential dwelling has been designed to avoid and minimise any archaeological effects;
- (b) That the house is located off the beach flat onto the lower slope;
- (c) That the foundations have been specifically selected to limit ground disturbance over the foot print of the building;
- (d) That the potable and waste water earthworks and potential power cable will provide adequate and appropriate potential to examine the recorded garden soil horizon comprising Q05/1585.

We advise that the Authority be issued with the condition that **all** earthworks associated with the project be monitored by the Section 45 archaeologist.

Any change to the proposed works assessed in this report, will need to be subject to archaeological evaluation.

The survey of the proposal was conducted specifically to locate and record archaeological remains. The survey and report does not necessarily include the location and/or

assessment of wahi-tapu or sites of cultural or spiritual significance to the local Maori community, who are being approached independently for any information or concerns they may have.

Conclusion

Northern Archaeological Research Ltd were commissioned by A Mitchell on behalf of the M & B Goodfellow to survey the location of a proposed house and associated services on Lot 2 DP 57873, Hahangarua Bay, Moturua Island, in the Bay of Islands. One archaeological site Q051585 was located as a result of the fieldwork undertaken. Recommendations are made in accordance with the archaeological provisions of the Heritage New Zealand Pouhere Taonga, 2014, and standard procedures.

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NZAA Database Archsite <u>www.archsite.eaglegis.co.nz</u> FNDC Website Far North Maps. <u>www.fndc.govt.nz/Services/Far-North-Maps</u> HNZPT Digital Library <u>www.heritage.org.nz/archaeology/archaeology-digital-library</u> Surefoot Foundation Systems website (and You Tube Presentation) <u>https://www.surefoot.nz/</u>

Institutions

Alexander Turnbull Library Auckland Libraries Heritage Collections (Kura) Auckland Museum Library

Recommendations

- 1. One archaeological sites, Q05/1585 (made garden soils) will be affected by the proposal. As such the Goodfellows will require an HNZPT Authority to undertake the residential development.
- 2. It is recommended that the Goodfellows apply for an Authority to modify an archaeological site under Section 44 of the HNZPT Act, 2014 to undertake the residential development. Given the potential for subsurface archaeological remains, all the proposed works within the proposal area should be included in the Authority application.
- 3. It is recommended that the Authority be granted by HNZPT under Section 48(1)(a) of the Heritage New Zealand Pouhere Taonga Act 2014. The Authority will need to be issued with the condition that **all** earthworks associated with the project be monitored by the Section 45 archaeologist.
- 4. Any change to the proposed works assessed in this report, will need to be subject to archaeological evaluation.
- 5. The survey of the proposal was conducted specifically to locate and record archaeological remains. The survey and report does not necessarily include the location and/or assessment of wahi-tapu or sites of cultural or spiritual significance to the local Maori community, who should be approached independently for any information or concerns they may have.

APPENDIX NZAA Site Record and Additional Information Form

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION	NZAA METRIC SITE NUMBER: Q05/1585					
SITE RECORD FORM (METRIC)	DATE VISITED: 31.05.24					
Metric map number: Q05	SITE TYPE: Made agricultural soil					
Metric map name: BAY OF ISLANDS	SITE NAME: MAORI: -					
Metric map edition: 2000	OTHER:					
GPS Grid Ref NZTM East 1 7 0 8 8 6 6 North	6 1 0 1 1 6 8					
1. Aids to relocation of site (attach a sketch map): The site is located on the B. and M. Goodfellow property, Hahangarua Bay, Moturua Island, South East Bay of Islands. The site is recorded for the lower hillside and the narrow central north east section of the Hahangarua beach flat. The site is recorded at a point approximately 4m above sea level. (The GPS is given at the location of the house).						
2. State of site and possible future damage: The site appears in reasonable condition and occurs across an area of a proposed small residential dwelling.						
3. Description of site (Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached, include a summary here):						
As the result of 12 test pits, (see Johnson and Callaghan 2024 for details) it appears that a made agricultural soil horizon of varying consistency and depth between 20-30cm, is situated under overlying topsoil and erosion layers of varying depths (20-60cm), occurs across the area of the residential proposal and will extend in all quarters. The soil is characterised by the addition of intertidal beach shingle (beached rolled shell, fragmentary and whole, and stone) with occasional charcoal fragments and occasional white-orange crushed weathered and semi-consolidated clay. The colour and consistency of the layer varies with some exposures occurring without the beach shingle but with the crushed orange clay and in other areas with grey clay and brown soil. The area occurs in close proximity and below and to the south west of Paeroa Pa (Q05/39) and the soil horizon identified here is likely to be an extension of the same post 1840 garden layer found across all areas of the pa by L. Groube in 1964/65.						
Report: Johnson, L. & Callaghan, E. 2024. Archaeological Survey and Assessment of the Goodfellow Residential Proposal, Lot 2 DP 57873, Hahangarua Bay, Moturua Island, Bay of Islands <i>Unpublished Report</i> . Auckland: Northern Archaeological Research Ltd.						
4. Owner B & M Goodfellow T	enant/Manager:					
	ddress:					
 5. Nature of information (<i>hearsay, brief or extended visit, etc.</i>): Brief visit. Photographs (<i>reference numbers</i>): Aerial photographs (<i>reference numbers and clarity of site</i>): 						
6. Reported by: Leigh Johnson Filekeeper: Address: Northern Archaeological Research Ltd Date:						
67 Church St						
Devonport						
Auckland 0624						
7. New Zealand Historic Places Trust (for office use)						
Type of site	Present condition and future danger of destruction					
Local environment today						
	Local Body					
Land classification	Local Body					