

Archaeological Inventory Survey of a 3-Acre Parcel and Associated Easement

TMK: (3) 6-4-005:017

Pu'ukapu Ahupua'a
South Kohala District
Island of Hawai'i

FINAL VERSION



Prepared By:

Robert B. Rechtman, Ph.D.,
J. David Nelson, B.A.,
and
Lauren Kupa'a

Prepared For:

Kristian Asing
41-680 Kaaumana Place
Waimanalo, HI 96795

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Archaeology • History • Ethnography • Architectural History

Office: (808) 969-6066 • Fax: (808) 443-0065

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EXECUTIVE SUMMARY

At the request of Kristian Asing (landowner), ASM Affiliates, Inc. conducted an archaeological inventory survey of a 3-acre parcel (TMK: (3) 6-4-005:017) and a 20 foot wide, government-owned access/utility easement located in Pu'ukapu Ahupua'a, South Kohala District, Island of Hawai'i. The landowner intends to construct a single-family residence on the three acre parcel, and utilize a roughly 320 meter long government-owned easement that links the parcel to existing Wong Way. Historical sources indicate that the parcel was in agriculture use in the early nineteenth century and that the government-owned easement area was considered to be part of a network of common use roadways; the entire area is currently used as pasture. Fieldwork for the current archaeological study included a visual inspection of the surface of the project area and subsurface testing (mechanical trenching) at selected locations. While the current study area is considered an integral element of a larger historical landscape (Site 30084), it is the conclusion of this study that use of the easement and development of the parcel will have no adverse effect on historic properties.

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1. INTRODUCTION

At the request of Kristian (landowner), ASM Affiliates, Inc. conducted an archaeological inventory survey of a 3-acre parcel (TMK: (3) 6-4-005:017) and a 20 foot wide, government-owned access/utility easement located in Pu‘ukapu Ahupua‘a, South Kohala District, Island of Hawai‘i (Figures 1 and 2). The landowner intends to develop the three acre parcel, and utilize the 20 foot wide by 320 meter long easement that links the parcel to Wong Way. Historical sources indicate that the parcel was in agriculture use in the early nineteenth century and that the government-owned easement area was considered to be part of a network of common use roadways; the entire area is currently used as pasture. Fieldwork for the current archaeological inventory survey included both a systematic surface inspection as well as subsurface testing. As a result of the current study it is determined that the current study area is a part of a larger historical landscape, however the surface survey and subsurface testing produced negative results with respect to the identification of any specific cultural resources.

The use of the government-owned access/utility easement is a trigger for compliance with State environmental regulations, thus the current study is considered a supporting document to the Environmental Assessment being prepared in compliance with HRS Chapter 343. The current archaeological inventory survey study was undertaken in accordance with Hawai‘i Administrative Rules (HAR) 13§13-275, and was performed in compliance with the Rules Governing Minimal Standards for Archaeological Inventory Surveys and Reports as contained in HAR 13§13–276. Compliance with the above standards is sufficient for meeting the initial historic preservation review process requirements of both the Department of Land and Natural Resources and the County of Hawai‘i Planning Department. This report contains background information outlining the project area’s physical and cultural contexts, a presentation of previous archaeological work in the vicinity of the parcel, and current survey expectations based on that previous work. Also presented is an explanation of the project’s methods, a summary of consultation, and detailed descriptions of the subsurface testing results.

PROJECT AREA DESCRIPTION

The project area is located on an open grassy plain in Pu‘ukapu Ahupua‘a, South Kohala District, Island of Hawai‘i (Figure 3). The current project area consists of both a 3-acre parcel (TMK: (3) 6-4-05:017), and a government-owned access/utility easement that links the parcel to a paved roadway (Wong Way). Beginning at Wong Way the easement (Figure 4), which measures 20 feet wide, extends for approximately 140 meters between Parcel 015 (to the east) and Parcel 014 (to the west), then it turns to the east (Figure 5) extending for approximately 190 meters between Parcels 015 and 016 to the south and 017 and 018 to the north (see Figure 2). The study area is located within the northeastern corner of a subdivision-like complex of *Māhele*-era *kuleana* awards, which were both agricultural and residential in nature. The 3-acre agricultural parcels are laid out in a three (north/south) by six (east/west) grid pattern in blocks of two separated by smaller strips of government-owned land. Along the south edge of the grid are twelve 0.25-acre parcels that were awarded as *kuleana* house lots during the *Māhele* (see the Cultural-Historical Context section below for a discussion of the Land Commission Awards of this area). The study area is bounded by larger tracts of grassland to the north (TMK: (3) 6-4-04:020) and east (TMK: (3) 6-4-04:013). The 3-acre parcel portion of the study area is currently fenced on the north, east, and south sides (Figure 6), and open on the west side.

The project area sits an elevation of roughly 2,915 feet above sea level. The topography is relatively flat with small undulations; there is however, an elevated weathered bedrock outcropping (Figure 7) adjacent to the western edge, and partially within the property in the northwestern corner. Vegetation within the study area is dominated by Kikuyu grass (*Cenchrus clandestinus*); no trees or shrubs were present (Figure 8). The soil within the project area is classified as Kikoni medial silt loam that consists of ash fields on ‘a‘ā flows from Mauna Kea (<http://www.websoilsurvey.sc.egov.usda.gov>). The soil is glacial in origin and contains basaltic rocks that date from 250,000 to 200,000 and 65,000 to 70,000 years old (Wolfe and Morris 1996).

1. Introduction

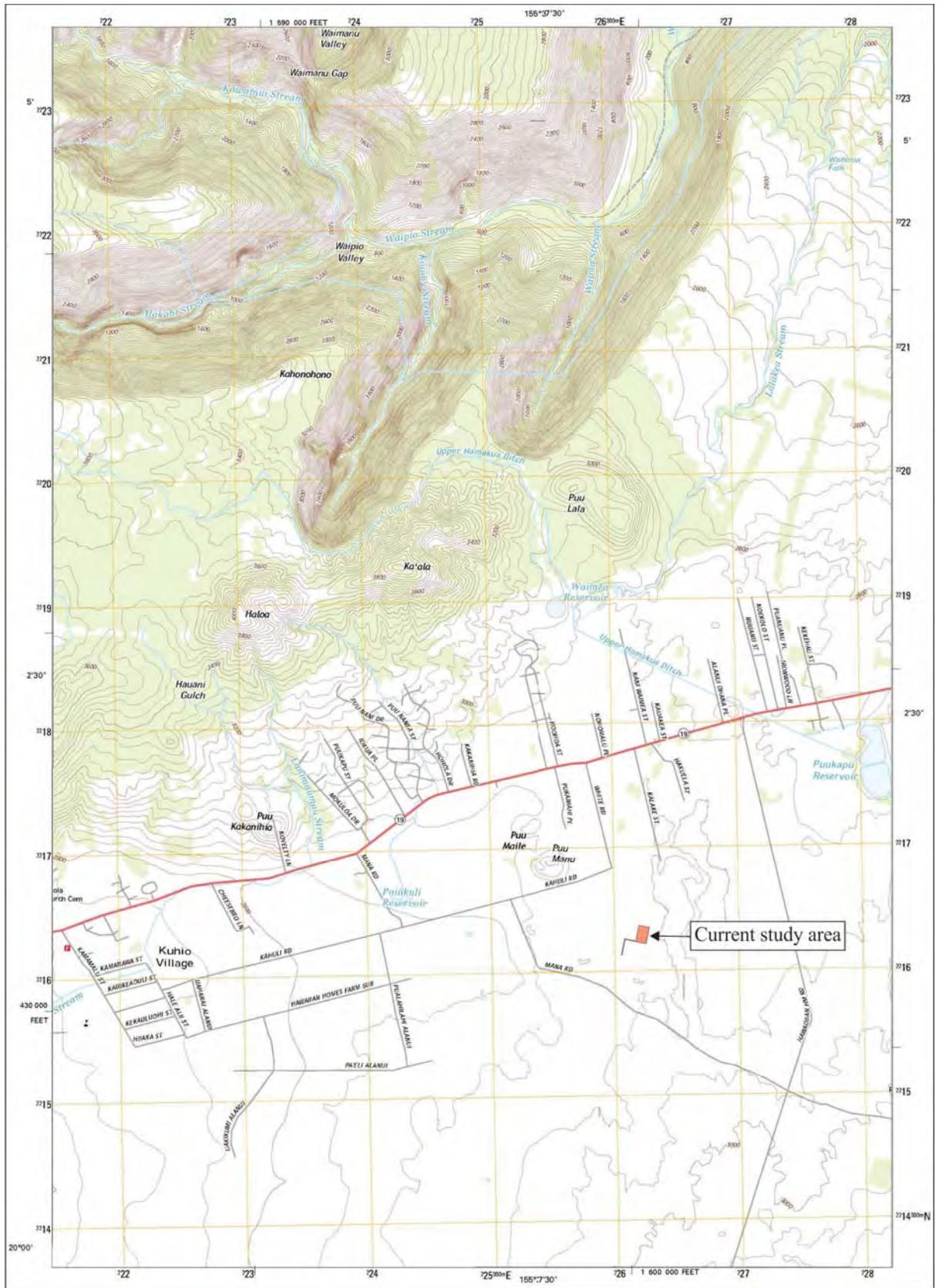


Figure 1. Study area location



Figure 2. Tax Map Key (TMK): (3) 6-5-005:017 showing the current project area location in red.



Figure 3. Google Earth™ satellite image showing current study area in red.



Figure 4. The 20 foot wide government-owned easement corridor at Wong Way, view to the north.



Figure 5. The 20 foot wide government-owned easement corridor between Parcels 015 and 016 (to the right) and Parcels 018 and 017 (to the left), view to the east.



Figure 6. The southern fenced boundary of Parcel 017, view to the west.



Figure 7. Elevated bedrock outcropping (in background) along the western boundary of Parcel 017, view to the northeast.



Figure 8. Typical vegetation cover across Parcel 018, view to the east.

2. BACKGROUND

To generate a set of expectations regarding the nature of archaeological resources that might be encountered on the study parcel, and to establish an environment within which to access the significance of any such resources, previous archaeological studies relative to the project area and a general cultural-historical background for the region are presented.

CULTURE-HISTORICAL CONTEXT

The subject parcel is located on the Island of Hawai‘i within the District of South Kohala in the *ahupua‘a* of Pu‘ukapu (Figure 9). As described by Handy and Handy:

The district of Kohala is the northernmost land area of the island of Hawaii. ‘Upolu Point, the northwesterly projection, fronts boldly out into the Alanuihaha [sic] Channel towards the southeastern coast of Maui, and is the nearest point of communication between the two islands. To the south, along Hawaii’s western coast, lies Kona; to the east the rough coast of Hamakua District unprotected from the northerly winds and sea. Kohala was the chiefdom of Kamehameha the Great, and from this feudal seat he gradually extended his power to embrace the whole of the island, eventually gaining suzerainty of all the Hawaiian Islands. (1991:528)

Handy and Handy further describe Kohala, and more specifically, Waimea:

The rugged central area of the district is formed by the mountainous remains (elevation 5,505 feet) of the Kohala dome, the oldest of the island’s volcanoes, now long regarded as extinct. The high table land between Mt. Kohala and the vast northern slopes of Mauna Kea, known as Waimea, has one of the finest and most salubrious mountain climates in the Hawaiian Islands, and also offers excellent grazing for cattle. In post-European times it became the seat of the Parker Ranch, one of the largest ranches in the world. (1991:528)

2. Background

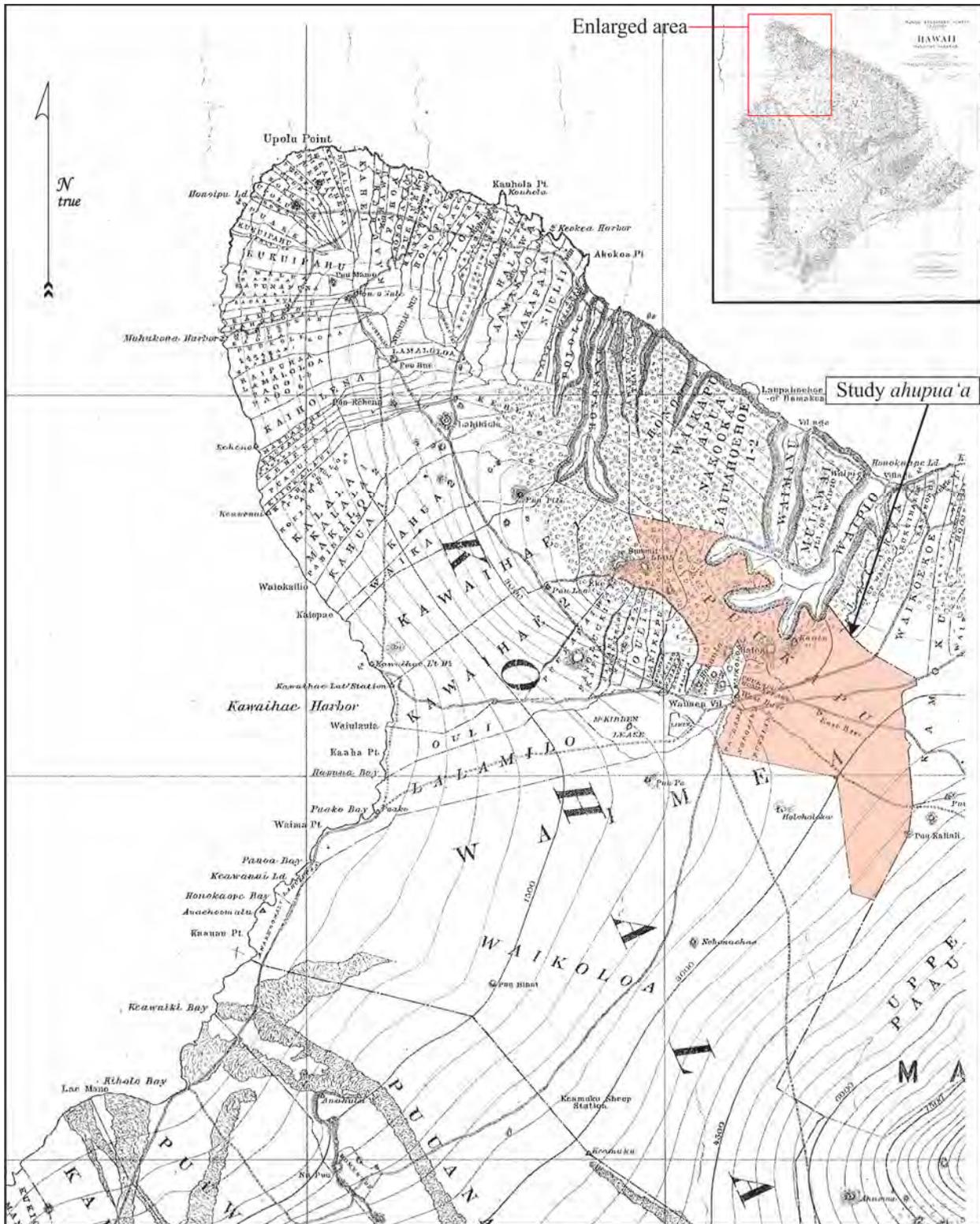


Figure 9: Map showing Pu'ukapu (shaded red).

With respect to the Precontact use of the general project area, Clark (1987) offered a regional settlement pattern model that includes four elevationally delimited environmental zones: Coastal Zone, Intermediate Zone, Kula Zone, and Wilderness Zone. The Coastal Zone extends up to about 150 feet elevation, and was used for permanent and temporary habitation, coastal resource exploitation, and limited agriculture. The Intermediate Zone extends from the Coastal Zone to about 1,900 feet elevation. This zone was used primarily for seasonal agriculture with associated short-term occupation, typically situated near intermittent drainages. The Kula Zone extends from the Intermediate Zone to about 2,700 feet elevation (and to 3,200 feet in certain areas). This was the primary agricultural and residential area, with extensive formal fields and clustered residential complexes. The Wilderness Zone extends above the Kula Zone to the mountaintops, and was a locus for the collection of wild floral and faunal resources. The current project area, situated at an elevation of roughly 2,900 feet, is perhaps at the interface of Clark's (1987) Kula and Wilderness Zones.

It is within the context of the *kula* slopes of the windward environmental zone of the political divisions of the District of South Kohala and the *ahupua'a* of Pu'ukapu, that the following discussion of the history and culture of the study area is framed. The chronological summary presented below begins with the peopling of the Hawaiian Islands and the presentation of a generalized model of Hawaiian Prehistory that includes legendary references to the study area lands and a discussion of the widely accepted settlement patterns for South Kohala. The discussion of Prehistory is followed by a summary of Historic events in the islands that begins with the arrival of foreigners and then presents a history of land use after contact. The summary includes a discussion of the changing life ways and population decline of the early Historic Period, a review of land tenure in the study *ahupua'a* during the *Māhele 'Āina* of 1848 and the subsequent division of Land Grants. A synthesis of the Precontact settlement patterns and the Historic documentation of land use will then be used to predict the type, location, and likelihood of Historic properties that may be present within the study parcels.

A Generalized Model of Hawaiian Prehistory

The generalized cultural sequence that follows is based on Kirch's (1985) model, and amended to include recent revisions offered by Kirch (2011). The conventional wisdom has been that first inhabitants of Hawai'i Island probably arrived by at least A.D. 300, and focused habitation and subsistence activity on the windward side of the island (Burtchard 1995; Kirch 1985; Hommon 1986). However, there is no archaeological evidence for occupation of Hawai'i Island (or perhaps anywhere in Hawai'i) during this initial settlement, or colonization stage of island occupation (A.D. 300 to 600). More recently, Kirch (2011) has convincingly argued that Polynesians may not have arrived to the Hawaiian Islands until at least A.D. 1000, but expanded rapidly thereafter. The implications of this on the currently accepted chronology would alter the timing of the Settlement, Developmental, and Expansion Periods, possibly shifting the Settlement Period to A.D. 1000 to 1100, the Developmental Period to A.D. 1100 to 1350, and the Expansion Period to A.D. 1350 to 1650.

The initial settlement in Hawai'i is believed to have occurred from the southern Marquesas Islands. This was a period of great exploitation and environmental modification, when early Hawaiian farmers developed new subsistence strategies by adapting their familiar patterns and traditional tools to their new environment (Kirch 1985; Pogue 1978). Their ancient and ingrained philosophy of life tied them to their environment and kept order. Order was further assured by the conical clan principle of genealogical seniority (Kirch 1984). According to Fornander (1969), the Hawaiians brought from their homeland certain universal Polynesian customs: the major gods Kāne, Kū, and Lono; the *kapu* system of law and order; cities of refuge; the *'aumakua* concept; various epiphenomenal beliefs; and the concept of *mana*. Initial permanent settlements in the islands were established at sheltered bays with access to fresh water and marine resources. Communities shared extended familial relations and there was an occupational focus on the collection of marine resources. Over a period of several centuries the areas with the richest natural resources became populated and perhaps even crowded, and there was an increasing separation of the chiefly class from the common people. As the environment reached its maximum carrying capacity, the result was social stress, hostility, and war between neighboring groups (Kirch 1985). Soon, large areas of Hawai'i were controlled by a few powerful chiefs.

The Development Period (A.D. 1100 to 1350) brought about a uniquely Hawaiian culture. The portable artifacts found in archaeological sites of this period reflect not only an evolution of the traditional tools, but some distinctly Hawaiian inventions. The adze (*ko'i*) evolved from the typical Polynesian variations of plano-convex, trapezoidal, and reverse-triangular cross-section to a very standard Hawaiian rectangular quadrangular tanged adze. A few areas in Hawai'i produced quality basalt for adze production. Mauna Kea, on the island of Hawai'i, possessed a well-known adze quarry. The two-piece fishhook and the octopus-lure breadloaf sinker are Hawaiian inventions of this

period, as are *'ulu maika* stones and *lei niho palaoa*. The latter was a status item worn by those of high rank, indicating a trend toward greater status differentiation (Kirch 1985).

The first settlers of Kohala likely established a few small communities near sheltered bays with access to fresh water primarily in the windward valleys and gulches. The communities would have shared extended familial relations, and had an occupational focus on the collection of marine resources. Evidence for early occupation of Kohala has been collected from Kapa'anui, where Dunn and Rosendahl (1989) recovered radiocarbon samples that potentially date to as early as A.D. 461 (Site 12444). This early date should be viewed with suspicion (see Kirch 2011), but may be related to the establishment of small, short-term camps to exploit seasonal, coastal resources. Other early dates from windward Kohala were reported by Cordy (2000); these sites are believed to have been utilized in the early 1200s. Data recovered from Māhukona, along the leeward coast, suggest initial occupation there by about A.D. 1280 (Burgett and Rosendahl 1993:36). Permanent settlement in Kohala has been reported as early as A.D. 1300 at Koai'e, a coastal settlement, where subsistence primarily derived from marine resources, but was probably supplemented by small-scale agriculture as well (Tomonari-Tuggle 1988).

The Expansion Period (A.D. 1350 to 1650) is characterized by the greatest social stratification, major socioeconomic changes, and intensive land modification. Most of the ecologically favorable zones of the windward and coastal regions of all major islands were settled and the more marginal leeward areas were being developed. The greatest population growth occurred during the Expansion Period. It was during the Expansion Period that a second major migration settled in Hawai'i, this time from Tahiti in the Society Islands. According to Kamakau (1976), the *kahuna* Pā'ao settled in the islands during the 13th century. Pā'ao was the keeper of the god Kū'kā'ilimoku, who had fought bitterly with his older brother, the high priest Lonopele. After much tragedy on both sides, Pā'ao was expelled from his homeland by Lonopele. He prepared for a long voyage, and set out across the ocean in search of a new land. On board Pā'ao's canoes were thirty-eight men (*kānaka*), two stewards (*kānaka 'ā'īpu'upu'u*), the chief Pilika'aiea (Pili) and his wife Hina'aukekele, Nāmau'u o Malaia, the sister of Pā'ao, and the prophet Makuaka'ūmana (Kamakau 1991). In 1866, Kamakau told the following story of their arrival in Hawai'i:

Puna on Hawai'i Island was the first land reached by Pā'ao, and here in Puna he built his first *heiau* for his god Aha'ula and named it Aha'ula [Waha'ula]. It was a *luakini*. From Puna, Pā'ao went on to land in Kohala, at Pu'uepa. He built a *heiau* there called Mo'okini, a *luakini*.

It is thought that Pā'ao came to Hawai'i in the time of the *ali'i* La'au because Pili ruled as *mo'i* after La'au. You will see Pili there in the line of succession, the *mo'o kā'auhau*, of Hanala'anui. It was said that Hawai'i Island was without a chief, and so a chief was brought from Kahiki; this is according to chiefly genealogies. Hawai'i Island had been without a chief for a long time, and the chiefs of Hawai'i were *ali'i maka'āinana* or just commoners, *maka'āinana*, during this time.

. . . There were seventeen generations during which Hawai'i Island was without chiefs—some eight hundred years. . . . The lack of a high chief was the reason for seeking a chief in Kahiki, and that is perhaps how Pili became the chief of Hawai'i. He was a chief from Kahiki and became the ancestor of chiefs and people of Hawai'i Island. (1991:100–102)

There are several versions of this story that are discussed by Beckwith (1976), including the version where Mo'okini and Kaluawilinau, two *kāhuna* of Moikeha, decide to stay on at Kohala. The bones of the *kahuna* Pā'ao are said to be deposited in a burial cave in Kohala in Pu'uwepa [possibly Pu'uepa?] (Kamakau 1964:41). The Pili line's initial ruling center was likely in Kohala too, but Cartwright (1933) suggests that Pili later resided in and ruled from Waipi'o Valley in the Hāmākua District.

The period from A.D. 1300–1500 was characterized by population growth and expanded efforts to increase upland agriculture. Rosendahl (1972) has proposed that settlement at this time was related to seasonal, recurrent occupation in which coastal sites were occupied in the summer to exploit marine resources, and upland sites were occupied during the winter months, with a focus on agriculture. An increasing reliance on agricultural products may have caused a shift in social networks as well, according to Hommon (1976). Hommon argues that kinship links between coastal settlements disintegrated as those links within the *mauka-makai* settlements expanded to accommodate exchange of agricultural products for marine resources. This shift is believed to have resulted in the establishment of the *ahupua'a* system. The implications of this model include a shift in residential patterns from seasonal, temporary occupation, to permanent dispersed occupation of both coastal and upland areas.

According to Kirch's (1985) model, the concept of the *ahupua'a* was established sometime during the A.D. 1400s, adding another component to a then well-stratified society. This land unit became the equivalent of a local community, with its own social, economic, and political significance. *Ahupua'a* were ruled by *ali'i 'ai ahupua'a* or

lesser chiefs; who, for the most part, had complete autonomy over this generally economically self-supporting piece of land, which was managed by a *konohiki*. *Ahupua'a* were usually wedge or pie-shaped, incorporating all of the eco-zones from the mountains to the sea and for several hundred yards beyond the shore, assuring a diverse subsistence resource base (Hommon 1986). This form of district subdividing was integral to Hawaiian life and was the product of strictly adhered to resource management planning. In this system, the land provided fruits and vegetables and some meat for the diet, and the ocean provided a wealth of protein resources (Rechtman and Maly 2003).

The name of an *ahupua'a* sometimes indicates its importance, records its history, or reveals something about its resources or population. "Pu'ukapu, meaning 'sacred hill', is both the name of a traditional land division and a homestead community (Pukui et al. 1974:198). Burtchard and Tomonari-Tuggle (2003:20) describe it as a 'low knoll.' As a land unit, Pu'ukapu incorporates one of the largest traditional land parcels in the District of South Kohala. Although early maps do not show a *pu'u* or hill by the name Pu'u Kapu, the name clearly demonstrates traditional significance for native Hawaiians. Proceedings of the Boundary Commission and *Māhele* records provide a little more history about the area. Most importantly, they record oral testimonies from the primary land users—the Native Hawaiians. The following proceedings (taken from Maly 1999:82-91) provide Native testimonies about the cultural landscape of Pu'ukapu and Waimea.

Volume B, the Ahupuaa of Kawaihae 2nd, District of South Kohala, Island of Hawaii 3d. J.C. November 15, 1873.

(Kalualukea) The land of Puukapu does not cut Kawaihae off. It is about one and a half miles from Kahialepo to the boundary of Waipio, at a pool of water called Ulu, at the foot of the water fall, but the boundary runs along on the top of the *pali* above the falls, leaving the *pali* at the head of Waipio valley.

(Kalua) I know the place called Kalualepo, it is a hole with yellow soil, it is near the Waihoolana. Puukapu an *ili* of Waimea bounds Kawaihae 2nd Thence to Waihoolana, a gulch of standing water. This gulch runs to Waipio. I lived there one month. Thence along the gulch to Kaapeape a place where there used to be a settlement. I do not know that the boundary line is on Kawaihae 2nd, but I do know that the land comes to Kalualepo, which is the only *mauka* boundary of Kawaihae that I know of. This boundary given is the boundary of Puukapu.

Volume B, Ouli an Ili aina of Waimea in the District of South Kohala, Island of Hawaii 3d. J.C. November 14, 1873.

(Pupuka) ...Thence up to Lua Meki Halukuwailani, a deep hole with some small ones near to it, thence to the gulch Keanui o manu where Ouli is cut off by the land of Puukapu. There is a deep water hole and ancient crossing at the corner of Momoualoha [Mamalaho] and Ouli and the boundary of Puukapu, this point is marked X....

Volume A—1, No.2, Rex vs. George Davis, Boundary Dispute, Waikoloa nui Ili of Waimea—Hawaii. Testimony taken August 8th and 9th 1865 at Waimea—Hawaii.

(Ehu) I am kamaaina of Puukapu. I was born in Waimea. I know the boundary from my own and my father's knowledge...I knew Kahanapilo w. wife of George Davis—she was not konohiki of the ilis on Waikoloa—nor of Waimea—I was in Kona when she died...I am kamaaina of Puukapu only—Kainea was the Konohiki when I lived there. There was no pili grass on that land—my father was not a bird catcher, he used to mahiai [farm].

(Cross) "Kainea was Konohiki in the time of Kalaimoku—Kainea is dead. Waikoloa is an ahupuaa of Waimea, which is a Kalana, with eight divisions. I only know about Waikoloa. I have been to Pukalani—Nonoaina and Paulama—they join Waikoloa, but do not run far out. Pukalani joins Puukapu...Puukapu is a division of Waimea...Puukapu belonged to Kalaimoku (I do not know the present owners).

(Wahahee) I am kamaaina of the King's land Puukapu—I was born there. Puulepo is close to Pukalani, which land joins Puukapu. My parents showed me the boundary. My mother belonged at Puukapu...Pukalani belonged to Kamehameha fourth. Nohoaina and Paulama to the same; also Puukapu; and I suppose they descended to Kamehameha V.

(Mi 1st) I live on Waikoloa—I am kamaaina of the lands in dispute. The name of the large land is Waimea—I am a witness for George Davis and also for the Rex. Waimea is a Kalana—which is

the same as an island divided into districts—there are eight Okana in Waimea. In those Okana are those lands said to extend out (*hele mawaho*). These lands came in to the possession of Kamehameha I who said to Kupapaulu, go and look out to of the large lands running to the sea, for John Young and Isaac Davis. Kupapaulu went to Keawekuloa, the *haku aina*, who said if we give Waikoloa to the foreigners they will get Kalahuipua [Kalahuipuaa] and Anaionalu [Anaohomalulu] (two lands at the beach) then your master will have no fish. So they kept the sea lands and gave Waikoloa to Isaac Davis...They kept all the valuable part of the lands, and gave the poor land outside to Isaac Davis. They kept Puukapu, Pukalani, Nohoaina, Kukuuiula (above the church), and Paulama; and gave Waikoloa to Isaac Davis. The other Waikoloa, this side of the stream dividing them, was the King's."

Volume A No.1 No.2, For the King

(Cross) ...Puuhuluhulu is the land makai of Waikoloa; and also Kaleikumikiau; Puupili; Pahoa; Kekio; 2 Puuokaa; and Waikoloa are King's lands adjoining. I know about the wall; I could carry stones then; in the time of Kamehameha I. I know the boundary of Waimea. Commence at Puukapu, the head of the land.

While Pu'ukapu is referred to today as an *ahupua'a*, traditionally it was an 'ili of the *kalana* (or 'okana) of Waimea, a land division that in ancient times was treated as a sub-district, smaller than a district (*moku o loko*), but comprised of several other land divisions that contributed to its wealth (Maly and Maly 2002) (Figure 10). The lands subject to the *kalana* of Waimea were those that form the southern limits of the present day South Kohala District including 'Öuli, Wai'aka, Lälänilo, Puakō, Kalähuihua'a, 'Anaeho'omalulu, Kanakanaka, Ala'öhi'a, Paulama, Pu'ukalani, Pu'ukapu, and Waikōloa.

At least two of the testimonies [above] describe the traditional use and the value of Pu'ukapu lands. According to Ehu, his father farmed (*mahi'ai*) the lands on which they lived. Testimony by Mi indicates the value of Pu'ukapu lands, "They [overseers for Kamehameha I] kept all the valuable part of the lands, and gave the poor land outside to Isaac Davis. They kept Pu'ukapu . . ." After his victory on Hawai'i, Kamehameha is said to have given Waimea to his warrior brother Kalaimamahū, whose son Kahalai'a then inherited it (Anon. 1893 in Barrère 1983:28).

The *ali'i* and the *maka'āinana* (commoners) were not confined to the boundaries of the *ahupua'a*; when there was a perceived need, they also shared with their neighbor *ahupua'a ohana* (Hono-ko-hau 1974). The *ahupua'a* were further divided into smaller sections such as the 'ili, *mo'o'aina*, *pauku'aina*, *kihapai*, *koele*, *hakuone*, and *kuakua* (Hommon 1986, Pogue 1978). The chiefs of these land units gave their allegiance to a territorial chief or *mo'i* (king). *Heiau* building flourished during this period as religion became more complex and embedded in a sociopolitical climate of territorial competition. Monumental architecture, such as *heiau*, "played a key role as visual markers of chiefly dominance" (Kirch 1990:206). This pattern continued to intensify from A.D. 1500 to Contact (A.D. 1778), and there is evidence that suggests that there were substantial changes to the political system as well. Within Kohala, the Great Wall complex at Koai'e is organized with platforms in the complex apart from contemporaneous features. Griffin et al. (1971) interpret this as symbolizing class stratification.

There are two noteworthy events associated with early Hawaiian settlement and use of Waimea. The first is the invasion of Hawai'i Island by Kama-lälä-walu, ruler of Maui Island. According to Kamakau (1961), Kama-lälä-walu's men landed at Puakō and went up to the grass-covered plains of Waimea:

After Kama-lala-walu's warriors reached the grassy plain, they looked seaward on the left and beheld the men of Kona advancing toward them. The lava bed of Kaniku and all the land up to Hu'ehu'e was covered with the men of Kona. Those of Kau and Puna were coming down from Mauna Kea, and those of Waimea and Kohala were on the level plain of Waimea. The men covered the whole of the grassy plain of Waimea like locusts. Kama-lala-walu with his warriors dared to fight. The battle of Puoaoka was outside of the grassy plain of Waimea, but the men of Hawaii were afraid of being taken captive by Kama, so they led to the waterless plain lest Maui's warriors find water and hard, waterworn pebbles. The men of Hawaii feared that the Maui warriors would find water to drink and become stronger for the slinging of stones that would fall like raindrops from the sky. The stones would fall about with a force like lightning, breaking the bones into pieces and causing sudden death as if by bullets.

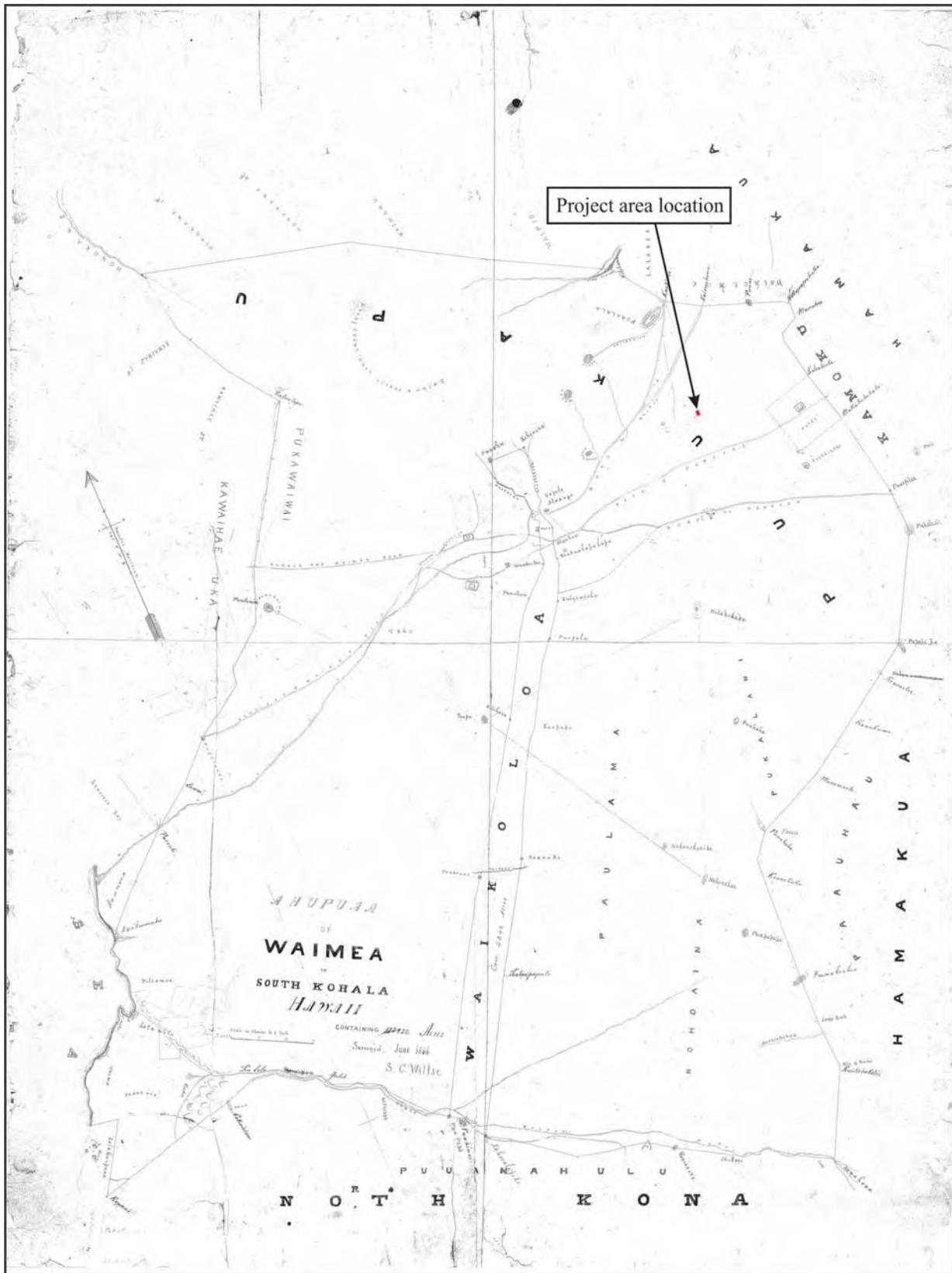


Figure 10. Hawai'i Registered Map No. 712 prepared by S. C. Willse in June of 1866 showing Pu'ukapu within the ahupua'a of Waimea, current study area location indicated in red.

Maui almost won in the first battle because of Hawaii's lack of a strong champion. Maka-ku-i-ka-lani [representing Maui] was first on the field and defied any man on Hawaii to match strength with him. Maka-ku-i-ka-lani tore Hawaii's champion apart. When Puapua-kea arrived later by way of Mauna Kea, those of Hawaii rejoiced at having their champion. Maka-ku-i-ka-lani and Puapua-kea matched their strength in club fighting on the battle site before the two sides plunged into the fight. (Kamakau 1961:58-59)

Once he reached Waimea, Kama-lālā-walu positioned himself on Hōkū'ula, the hill that he was told would serve as a refuge for him and his men (Fornander 1959). In Fornander's description, the battlefield would have extended to Pu'u Kakanihia:

Kamalalawalu, upon arrival thereon, found on reconnoitering that there were neither stones nor trees, but only dirt [on Hōkū'ula]. While they were engaged in a conversation with Kumaieau together with Kumakaia¹, at that time messengers were sent to summon Lonoikamakahiki and Pupuakea. At Kealakekua, in Kona, was the place where Lonoikamakahiki lived. When the messenger appeared before him, he said to Lonoikamakahiki: "Kamalalawalu and Makakuikalani have come to give battle to you both...When Lonoikamakahiki heard these things, he questioned the messenger: "Where is the battle to take place?" The messenger replied: "There, at Waimea, on top of that hill, Hokuula, where Kamalalawalu and all Maui are stationed." (Fornander 1959:188)

During that night and including the following morning the Kona men arrived and were assigned to occupy a position from Puupa to Haleapala. The Kau and Puna warriors were stationed from Holoholoku to Waikoloa. Those of Hilo and Hamakua were located from Mahiki to Puukanianihiia [Puukakanihia], while those of Kohala guarded from Momoualua to Waihaka. (Fornander 1959:229)

Puapua-kea was the eventual victor of this fight, and the warriors of Maui were put to flight (Kamakau 1961:60). After Kama-lālā-walu was defeated, Hawai'i was invaded by Alapa'i-nui, also of Maui. Alapa'i-nui was the only chief recorded as having lived in Waimea.

Alapa'i dwelt in Hilo for a year and then went to live in Waipi'o. Shortly after, he and the chiefs moved to Waimea and others went by canoe to Kawaihae. From Waimea, he went to Lanimaomao, where he fell ill. (Kamakau 1961:77)

A second traditional native Hawaiian event or activity that is significantly associated with Waimea is the Waimea Field System. This agricultural complex was one of three large-scale Precontact agricultural systems on the leeward side of Hawai'i Island. The other two were located at Kona and Kohala. According to Burchard and Tomonari-Tuggle (2002), the Waimea Agricultural System is best known for: 1) spatially limited residential sites; 2) linear, low earthen ridges; and 3) irrigation ditches located along [Waikoloa Stream] on the eastern margins of the system. Cultivated crops included *wauke*, *mamaki*, plantains, bananas, sugarcane, coconuts, *hala*, taro, and sweet potato (Haun et al. 2003). Rechtman and Prasad (2006) suggest that the area was exploited for forest resources possibly as early as the 13th and 14th centuries, followed by agriculture and prolonged residence in the 16th century. According to Barrère, "the cultivating places at Waimea were first expanded to supply the chiefs' needs while sojourned there and at Kawaihae" (Barrère 1983:27).

By the seventeenth century, large areas of Hawai'i Island (*moku 'aina* – districts) were controlled by a few powerful *ali'i 'ai moku*. There is island-wide evidence to suggest that growing conflicts between independent chiefdoms were resolved through warfare, culminating in a unified political structure at the district level. The legend of Kapunohu (set about A.D. 1600), relates that in North Kohala, the chiefs of Kukuipahu ruled the leeward *ahupua'a* of the district, and the chiefs of Niuli'i ruled the windward *ahupua'a* of the district, and that Wainia Gulch was the boundary between the two domains (Erkelens and Athens 1994). In about A.D. 1600, the armies of the two polities met on the battlefield of Hinakahua at Kapa'au (east of the present day town of Kapa'au), and the forces of Kukuipahu were defeated, thus control of the district was united under the chiefs of Niuli'i (Fornander 1916:215-220).

'Umi-a-Līloa was a renowned Pili line *ali'i* who ruled from Waipi'o Valley, son of high ranking *ali'i* Līloa. 'Umi's fame stemmed from his successful unification of all the districts of Hawai'i Island (Kamakau 1992), and his reign lasted until around ca. A.D. 1620 (Cordy 1994). It has been suggested that the unification of the island resulted in a partial abandonment of portions of leeward Hawai'i, with people moving to more favorable agricultural areas

¹ Kumaieau and Kumakaia, two men from Kawaihae, served as advisors to kama-lālā-walu. They deliberately deceived Kama into thinking that Hōkū'ula hill would serve as a refuge.

(Barrera 1971; Schilt and Sinoto 1980). Near the end of 'Umi's rule, he relocated to Kona where the weather was more favorable (Kamakau 1992).

One of 'Umi-a-Līloa's heirs to the Hawaiian kingdom was his son, Keawe-nui-a-'Umi, who presided over Hilo. Lono-i-ka-makahiki was Keawe-nui-a-'Umi's son, and was a ruler of Ka'ū and Puna (Kamakau 1992). Following the death of his father, Lono-i-ka-makahiki waged a war for the supremacy of Hawai'i Island against rebel forces in Kohala. After a battle in leeward North Kohala, Lono-i-ka-makahiki pursued his rivals to Hinakahua at Kapa'au, where they prepared to fight once again before retreating to the east and being defeated at Pololū Valley in windward North Kohala (Erkelens and Athens 1994). Upon achieving this final victory, Lono-i-ka-makahiki celebrated at the *heiau* of Mulei'ula at Apuakaohau (Fornander 1916:324). Neither of Lono-i-ka-makahiki's two sons were heirs to the government, and in the wake of his death, rule of Kohala, Kona, and Ka'ū was instead split between the descendants of his brother, Kanaloa-kua'ana.

The Proto-Historic Period (A.D. 1650–1795) was marked by both political intensification and stress. Wars occurred regularly between intra-island and inter-island polities, and this period was one of continual conquest by the reigning *ali'i*. At the beginning of this period, Hawai'i Island was not united under one rule, but was split amongst the chiefs of Kona and Hilo (Kamakau 1992). Keawe, the son of Kanaloakapulehu, was the ruler of Kohala, Kona, and Ka'ū. When Keawe died he split the rule of his lands between two of his sons; Kalaninui'iamamao became the ruling chief of Ka'ū, and Ke'eaumoku became the ruling chief of Kona and Kohala (Kamakau 1992). Wars between the *ali'i* continued unabated through this transition.

After Keawe's death, Alapa'inui, the son of former Kona war chief Kauauanui a Mahi, a former war chief of Kona, desired to wrest control of Hawai'i Island from the other chiefs (Kamakau 1992). Alapa'inui, who had been living on Maui since the death of his father, returned to Hawai'i Island and waged war against the chiefs of Kona and Kohala. Alapa'inui was eventually victorious and took the chiefs of those districts captive, proclaiming Kona and Kohala his own. Kekaulike, the ruler of Maui, however, preferred the former chiefs and wished to help them reclaim their lands. The Maui forces attacked Alapa'inui, but were unable to defeat him. Although Alapa'inui's forces were never beaten, the frequent attacks by Kekaulike did prevent him from taking the chiefs of Hilo and Ka'ū captive (Alapa'inui did eventually take control of these districts however). Alapa'inui later fought and defeated the forces of O'ahu on Moloka'i, and after Kekaulike's death he fought Kauhi, his rival's oldest son, on Maui where he was also victorious. Alapa'inui ruled for many years, but at the end of his reign, after moving to Kikiako'i in Kawaihae, he became seriously ill, and there at the *heiau* of Mailekini, he appointed his son Keawe'opala ruler of the island (Kamakau 1992).

It was during this time of warfare, following the death of Keawe, that Kamehameha was born in the North Kohala District in the *ahupua'a* of Kokoiki, near the Mo'okini Heiau (Kamakau 1992). There is some controversy about the year of his birth, but Kamakau (1992:66–68) places the birth event sometime between A.D. 1736 and 1758, and probably nearer to the later date. The birth event is said to have occurred on a stormy night of rain, thunder, and lightning, signified the night before by a very bright, ominous star, thought by some to be Halley's Comet (this is also controversial). Kamehameha's ancestral homeland was in Halawa, North Kohala (Williams 1919).

It was in 1754 that Keawe'opala became the ruler of Hawai'i, but many of the chiefs who were deprived of their lands fought against him. Keawe'opala was soon defeated in South Kona by Kalani'ōpu'u, who then became the ruler of Hawai'i Island (Kamakau 1992). Kalani'ōpu'u was a clever and able chief, and a famous athlete in all games of strength, but according to Kamakau (1992), he possessed one great fault: he loved war and had no regard for others' land rights. Although Kalani'ōpu'u would maintain his rule over the island for nearly thirty years, his reign was not free of turmoil and strife.

About A.D. 1759, Kalani'ōpu'u conquered East Maui, defeating his wife's brother, the Maui king Kamehamehanui, by using Hāna's prominent Pu'u Kau'iki as his fortress. He appointed one of his Hawai'i chiefs, Puna, as governor of Hāna and Kīpahulu. Following this victory, Ke'eaumoku, the son of Keawepoepoe who had originally supported Kalani'ōpu'u against Keawe'opala, rebelled against the Hawai'i chief. He set up a fort on a hill between Pololū and Honokāne Valleys in windward North Kohala, but Kalani'ōpu'u attacked him there and was victorious. Using ropes, Ke'eaumoku escaped to the sea and fled in a canoe to Maui where he lived under the protection of the Maui chiefs.

In A.D. 1766, Kamehamehanui, the king of Maui, died following an illness and Kahekili became the new ruler of that island. Ke'eaumoku took Kamehamehanui's widow, Namahana, a cousin of Kamehameha I, as his wife, and their daughter, Ka'ahumanu, the future favorite wife of Kamehameha I, was born in a cave at the base of Pu'u Kau'iki, Hāna, Maui in A.D. 1768 (Kamakau 1992). In A.D. 1775, Kalani'ōpu'u and his Hāna forces raided and destroyed the neighboring district of Kaupō in Maui, and then launched several more raids on Moloka'i, Lāna'i,

Kaho'olawe, and parts of West Maui. It was at the battle of Kalaeoka'ilio that Kamehameha, a favorite of Kalani'ōpu'u, was first recognized as a great warrior and given the name of Pai'ea (hard-shelled crab) by the Maui chiefs and warriors (Kamakau 1992). During the battles between Kalani'ōpu'u and Kahekili (1777–1779), Ka'ahumanu and her parents left Maui to live on the island of Hawai'i (Kamakau 1992). Kalani'ōpu'u was fighting on Maui when the British explorer Captain James Cook first arrived in the islands.

With the arrival of foreigners in the islands, Hawai'i's culture and economy underwent drastic changes. Demographic trends during the early part of the nineteenth century indicate population reduction in some areas, due to war and disease, yet increase in others, with relatively little change in material culture. At first there was a continued trend toward craft and status specialization, intensification of agriculture, *ali'i* controlled aquaculture, upland residential sites, and the enhancement of traditional oral history (Kirch 1985; Kent 1983). Later, as the Historic Period progressed, Kamehameha I died, the *kapu* system was abolished, Christianity established a firm foothold in the islands, and introduced diseases and global economic forces had a devastating impact on traditional life-ways. Some of the work of the commoners shifted from subsistence agriculture to the production of foods and goods that they could trade with early Western visitors. Introduced foods often grown for trade with Westerners included yams, coffee, melons, Irish potatoes, Indian corn, beans, figs, oranges, guavas, and grapes (Wilkes 1845). The arrival of foreigners in Hawai'i signified the end of the Precontact Period, and the beginning of the Historic Period.

History After Contact

Captain James Cook and his crew on board the ships the H.M.S. *Resolution* and *Discovery* first arrived in the Hawaiian Islands on January 18, 1778. Ten months later, on a return trip to Hawaiian waters, Kalani'ōpu'u, who was still at war with Kahekili, visited Cook on board the *Resolution* off the East coast of Maui. Kamehameha observed this meeting, but chose not to participate. It was during this visit to the islands that Lt. King of the Cook expedition explored the North Kohala countryside and reported:

As far as the eye could reach, seemed fruitful and well inhabited. [Three and four miles inland, plantations of taro and potatoes and *wauke*] neatly set out in rows. The walls that separate them are made of the loose burnt stone, which are got in clearing the ground; and being entirely concealed by sugar-canecan planted close on each side, make the most beautiful fences that can be conceived. [The exploring party stopped six or seven miles from the sea.] To the left a continuous range of villages, interspersed with groves of coconut trees spreading along the sea-shore; a thick wood behind this; and to the right, an extent of ground laid out in regular and well-cultivated plantations . . . as they passed, they did not observe a single foot of ground, that was capable of improvement, left unplanted. (Handy and Handy 1972:528)

In January [1779], Cook and Kalani'ōpu'u met again at Kealakekua Bay and exchanged gifts. The following month, Cook set sail for Maui; however, a severe storm off the coast of Kohala damaged a mast of one of the ships and they were forced to return to Kealakekua Bay. While back at the bay a skirmish broke out on the shores of Ka'awaloa over a stolen skiff and Captain Cook was killed (Kuykendall and Day 1976; Sahlins 1985).

After the death of Captain Cook and the departure of H.M.S. *Resolution* and *Discovery*, Kalani'ōpu'u moved to Kona, where he surfed and amused himself with the pleasures of dance (Kamakau 1992). While he was living in Kona, famine struck the district. Kalani'ōpu'u ordered that all the cultivated products of that district be seized, before setting out on a circuit of the island. Kalani'ōpu'u then went to Hinakahua in Kapa'au where he amused himself with "sports and games such as hula dancing, *kilu* spinning, *maika* rolling, and sliding sticks" (Kamakau 1991:106). During his stay in Kohala, Kalani'ōpu'u proclaimed that his son Kiwala'ō would be his successor, and he gave the guardianship of the war god Kūka'ilimoku to Kamehameha. However, Kamehameha and a few other chiefs were concerned about their land claims, which Kiwala'ō did not seem to honor (Fornander 1996; Kamakau 1992). The *heiau* of Moa'ula was erected in Waipi'o at this time (ca. A.D. 1781), and after its dedication, Kalani'ōpu'u set out for Hilo to quell a rebellion by a Puna chief named Imakakolo'a.

Imakakolo'a was defeated in Puna by Kalani'ōpu'u's superior forces, but he managed to avoid capture and hide from detection for the better part of a year. While the rebel chief was sought, Kalani'ōpu'u "went to Ka-'u and stayed first at Punalu'u, then at Waiohinu, then at Kama'oa in the southern part of Ka-'u, and erected a heiau called Pakini, or Halauwailua, near Kama'oa" (Kamakau 1992:108). Imakakolo'a was eventually captured and brought to the *heiau*, where Kiwala'ō was to sacrifice him as an offering. "The routine of the sacrifice required that the presiding chief should first offer up the pigs prepared for the occasion, then bananas, fruit, and lastly the captive chief" (Fornander 1996:202). However, before Kiwala'ō could finish the first offerings, Kamehameha, "grasped the

body of Imakakolo‘a and offered it up to the god, and the freeing of the tabu for the *heiau* was completed” (Kamakau 1992:109). Upon observing this single act of insubordination, many of the chiefs believed that Kamehameha would eventually rule over all of Hawai‘i. After usurping Kiwalao’s authority with a sacrificial ritual in Ka‘ū, Kamehameha retreated to his home district of Kohala. While in Kohala, Kamehameha farmed the land, growing taro and sweet potatoes (Handy and Handy 1972). Kalani‘ōpu‘u died in April of 1782 and was succeeded by his son Kiwala‘ō.

The Rule of Kamehameha I (1782-1819)

After Kalani‘ōpu‘u died, several chiefs were unhappy with Kiwala‘ō’s division of the island’s lands, and civil war broke out. Kiwala‘ō, Kalani‘ōpu‘u’s son and appointed heir, was killed at the battle of Moku‘ōhai, South Kona in July of 1782. Supporters of Kiwala‘ō, including his half brother Keōua and his uncle Keawemauhili, escaped the battle of Moku‘ōhai with their lives and laid claim to the Hilo, Puna, and Ka‘ū Districts. According to I‘i (1963), nearly ten years of almost continuous warfare followed the death of Kiwala‘ō, as Kamehameha endeavored to unite the island of Hawai‘i under one rule and conquer the islands of Maui and O‘ahu. Keōua became Kamehameha’s main rival on the island of Hawai‘i, and he proved difficult to defeat (Kamakau 1992). Keawemauhili would eventually give his support to Kamehameha, but Keōua never stopped resisting. Around 1790, in an effort to secure his rule, Kamehameha began building the *heiau* of Pu‘ukohola in Kawaihae, which was to be dedicated to the war god Kūka‘ilimoku (Fornander 1996).

When Pu‘ukoholā Heiau was completed in the summer of 1791, Kamehameha sent his two counselors, Keaweheulu and Kamanawa, to Keōua to offer peace. Keōua was enticed to the dedication of the Pu‘ukoholā Heiau by this ruse, and when he arrived at Kawaihae, he and his party were sacrificed to complete the dedication (Kamakau 1992). The assassination of Keōua gave Kamehameha undisputed control of Hawai‘i Island by A.D. 1792 (Greene 1993).

In 1790, two Western ships, the *Eleanora* and *Fair American*, were trading in Hawaiian waters. As retribution for the theft of a skiff and the murder of one of the sailors, the crew of the *Eleanora* massacred more than 100 natives at Olowalu [Maui]. The *Eleanora* then sailed to Hawai‘i Island, and one of its crew, John Young, went ashore where he was detained by Kamehameha. The other vessel, the *Fair American*, was captured by the forces of Kamehameha off the Kekaha coast and its crew was killed except for one member, Isaac Davis. Guns, and a cannon later named “Lopaka,” were recovered from the *Fair American*, which Kamehameha kept as part of his fleet (Kamakau 1992). Kamehameha made Young and Davis his advisors, and aided by them and his newly acquired ships and foreign arms, had succeeded in conquering all the island kingdoms except Kaua‘i by 1796. It wasn’t until 1810, when Kaumuali‘i of Kaua‘i gave his allegiance to Kamehameha, that the Hawaiian Islands were unified under one ruler (Kuykendall and Day 1976).

Demographic trends during this period indicate population reduction in some areas due to war and disease, yet increases in others, with relatively little change in material culture. However, there was a continued trend toward craft and status specialization, intensification of agriculture, *ali‘i* controlled aquaculture, upland residential sites, and the enhancement of traditional oral history. The Kū cult, *luakini heiau*, and the *kapu* system were at their peaks, although western influence was already altering the cultural fabric of the Islands (Kirch 1985; Kent 1983). Foreigners had introduced the concept of trade for profit, and by the time Kamehameha I had conquered O‘ahu, Maui and Moloka‘i in 1795, Hawai‘i saw the beginnings of a market system economy (Kent 1983). This marked the end of the Proto-Historic Period and the end of an era of uniquely Hawaiian culture.

Hawai‘i’s culture and economy continued to change drastically as capitalism and industry established a firm foothold. The sandalwood (*Santalum ellipticum*) trade, established by Euro-Americans in 1790 and turned into a viable commercial enterprise by 1805 (Oliver 1961), was flourishing by 1810. This added to the breakdown of the traditional subsistence system, as farmers and fishermen were ordered to spend most of their time logging, resulting in food shortages and famine that led to a population decline. Kamehameha, who resided on the Island of O‘ahu at this time, did manage to maintain some control over the trade (Kuykendall and Day 1976; Kent 1983).

Upon returning to Kailua in 1812, Kamehameha ordered men into the mountains of Kona to cut sandalwood and carry it to the coast, paying them in cloth, *tapa* material, food and fish (Kamakau 1992). This new burden added to the breakdown of the traditional subsistence system. Farmers and fishermen were ordered to spend most of their time logging, resulting in food shortages and famine that led to a population decline. Kamakau indicates that, “this rush of labor to the mountains brought about a scarcity of cultivated food . . . The people were forced to eat herbs and tree ferns, thus the famine [was] called Hi-laulele, Haha-pilau, Laulele, Pualele, ‘Ama‘u, or Hapu‘u, from the wild plants resorted to” (1992:204). Once Kamehameha realized that his people were suffering, he “declared all the sandalwood the property of the government and ordered the people to devote only part of their time to its cutting and

return to the cultivation of the land” (ibid.:204). In the uplands of Kailua, a vast plantation named Kuahewa was established where Kamehameha himself worked as a farmer. Kamehameha enacted the law that anyone who took one taro or one stalk of sugarcane must plant one cutting of the same in its place (Handy and Handy 1972). While in Kailua, Kamehameha resided at Kamakahonu, from where he continued to rule the islands for another nine years. He and his high chiefs participated in foreign trade, but also continued to enforce the rigid *kapu* system.

The Death of Kamehameha I and the Abolition of the Kapu System

Kamehameha I died on May 8, 1819 at Kamakahonu in Kailua-Kona, and the changes that had been affecting the Hawaiian culture since the arrival of Captain Cook in the Islands began to accelerate. Following the death of a prominent chief, it was customary to remove all of the regular *kapu* that maintained social order and the separation of men and women and elite and commoner. Thus, following Kamehameha’s death, a period of ‘*ai noa* (free eating) was observed, along with the relaxation of other traditional *kapu*. It was for the new ruler and *kahuna* to re-establish *kapu* and restore social order, but at this point in history traditional customs were altered:

The death of Kamehameha was the first step in the ending of the tabus; the second was the modifying of the mourning ceremonies; the third, the ending of the tabu of the chief; the fourth, the ending of carrying the tabu chiefs in the arms and feeding them; the fifth, the ruling chief’s decision to introduce free eating (‘*ainoa*) after the death of Kamehameha; the sixth, the cooperation of his aunts, Ka-ahu-manu and Ka-heihei-malie; the seventh, the joint action of the chiefs in eating together at the suggestion of the ruling chief, so that free eating became an established fact and the credit of establishing the custom went to the ruling chief. This custom was not so much of an innovation as might be supposed. In old days the period of mourning at the death of a ruling chief who had been greatly beloved was a time of license. The women were allowed to enter the heiau, to eat bananas, coconuts, and pork, and to climb over the sacred places. You will find record of this in the history of Ka-ula-hea-nui-o-ka-moku, in that of Ku-ali’i, and in most of the histories of ancient rulers. Free eating followed the death of the ruling chief; after the period of mourning was over the new ruler placed the land under a new tabu following old lines (Kamakau 1992: 222).

Immediately upon the death of Kamehameha I, Liholiho (his son and to be successor) was sent away to Kawaihae to keep him safe from the impurities of Kamakahonu brought about from the death of Kamehameha. After the purification ceremonies, Liholiho returned to Kamakahonu:

Then Liholiho on this first night of his arrival ate some of the tabu dog meat free only to the chiefesses; he entered the *lauhala* house free only to them; whatever he desired he reached out for; everything was supplied, even those things generally to be found only in a tabu house. The people saw the men drinking rum with the women *kahu* and smoking tobacco, and thought it was to mark the ending of the tabu of a chief. The chiefs saw with satisfaction the ending of the chief’s tabu and the freeing of the eating tabu. The *kahu* said to the chief, “Make eating free over the whole kingdom from Hawaii to Oahu and let it be extended to Kauai!” and Liholiho consented. Then pork to be eaten free was taken to the country districts and given to commoners, both men and women, and free eating was introduced all over the group. Messengers were sent to Maui, Molokai, Oahu and all the way to Kauai, Ka-umu-ali’i consented to the free eating and it was accepted on Kauai (Kamakau 1992: 225).

When Liholiho, Kamehameha II, ate the *kapu* dog meat, entered the *lauhala* house and did whatever he desired it was still during a time when he had not reinstated the eating *kapu* but others appear to have thought otherwise. Kekuaokalani, caretaker of the war god Kū-Ka’ilimoku, was dismayed by his cousin’s (Liholiho) actions and revolted against him, but was defeated.

With an indefinite period of free-eating and the lack of the reinstatement of other *kapu* extending from Hawai’i to Kaua’i, and the arrival of the Christian missionaries shortly thereafter, the traditional religion had been officially replaced by Christianity within a year following the death of Kamehameha I. By December of 1819, Kamehameha II had sent edicts throughout the kingdom renouncing the ancient state religion, ordering the destruction of the *heiau* images, and ordering that the *heiau* structures be destroyed or abandoned and left to deteriorate. He did, however, allow the personal family religion, the ‘*aumakua* worship, to continue (Oliver 1961; Kamakau 1992).

With the end of the *kapu* system, changes in the social and economic patterns began to affect the lives of the common people. Liholiho moved his court to O’ahu, lessening the burden of resource procurement for the chiefly class on the residents of Hawai’i Island. Some of the work of the commoners shifted from subsistence agriculture to

the production of foods and goods that they could trade with early Western visitors. Introduced foods grown for trade included yams, coffee, melons, Irish potatoes, corn, beans, figs, oranges, guavas, and grapes (Wilkes 1845).

Waimea and Pu'ukapu: A Land in Transition

In October of 1819, seventeen Protestant missionaries set sail from Boston to Hawai'i. They arrived in Kailua-Kona on March 30, 1820 to a society with a religious void to fill. Many of the *ali'i*, who were already exposed to western material culture, welcomed the opportunity to become educated in a western style and adopted their dress and religion. Soon they were rewarding their teachers with land and positions in the Hawaiian government. During this period, the sandalwood trade was wreaking havoc on the commoners, who were weakening with the heavy production, exposure, and famine just to fill the coffers of the *ali'i* who were no longer under any traditional constraints (Oliver 1961; Kuykendall and Day 1976). The lack of control of the sandalwood trade was to soon lead to the first Hawaiian national debt, as promissory notes and levies were initiated by American traders and enforced by American warships (Oliver 1961). The Hawaiian culture was well on its way towards Western assimilation as industry in Hawai'i went from the sandalwood trade, to a short-lived whaling industry, to the more lucrative, but environmentally destructive sugar industry.

Soon after the arrival of foreigners, the landscape of Waimea began to change dramatically; initially through deforestation from the collection of sandalwood, followed by the introduction of cattle to these lands (Rechtman and Prasad 2006). Foraging cattle wreaked havoc on the agricultural fields and were responsible for a flurry of wall building as people tried to keep the feral cattle out of their fields and homes. From the 1820s until the 1840s a sugar mill operated in the Waimea area.

Taro is one of the foods that the Waimea lands were known for. According to Handy and Handy (1972), dry taro was planted along the lower slopes of the Kohala Mountains on the Waimea side, and on the plains south and west of Kamuela (Handy and Handy 1972:532). On his second visit to Waimea town and Pu'ukapu (the last village) William Ellis made the following observation:

to Waikoloa, Waikala, Pukalani and to Puukapu, 16 or 18 miles from the sea-shore, and the last village in the district of Waimea...the soil over which he [Mr. Thurston] had passed, was fertile, well watered, and capable of sustaining many thousand inhabitants. He had numbered 220 houses, and the present population is probably between eleven and twelve hundred. (Ellis 1825:217 in Handy and Handy 1972:532)

New crops, such as Irish potatoes, watermelons, cabbage, onions, tomatoes, mulberries, figs, and beans were introduced in Historic times. For a while, agricultural products from Waimea replenished the cargo ships at Kawaihae Harbor, and in the late 1840s many of the potatoes grown in the Waimea area were shipped to California to help feed the gold rush (Haun et al. 2003). However, commercial ventures soon replaced traditional agricultural practices, and the Waimea landscape was substantially altered as a result of this post-contact change.

The written history from the late 19th to the early 20th century largely reflects news of new settlers, religious endeavors, and commercial pursuits in the region. McEldowney (1983) discusses changes in land use and land ownership before and after the *Māhele*, with the eventual displacement of the Hawaiian community as cattle ranching became fully established in Waimea (Parker Ranch began operating in 1830). An 1848 description of the Waimea population is as follows: "it can scarcely be said that there is any native population at all" (McEldowney 1983:432). By this time, the native population of Waimea had been severely reduced by disease, displacement, and the ongoing changes in land tenure (McEldowney 1983).

Early missionaries described Pu'ukapu Village as one of the three population centers in the Waimea area. Maps, some dating to the early 1800s, provide a temporal history of the changes that occurred around Pu'ukapu and Waimea. In 1853, Coulter estimated that the population of Hawai'i Island totaled 24,450 (Coulter 1931:3-4). His map (Figure 11) indicates that settlement was primarily along the coastal areas; as shown by the 'absence' of dots, there were very few inhabitants in the Waimea area by the time that Coulter arrived.

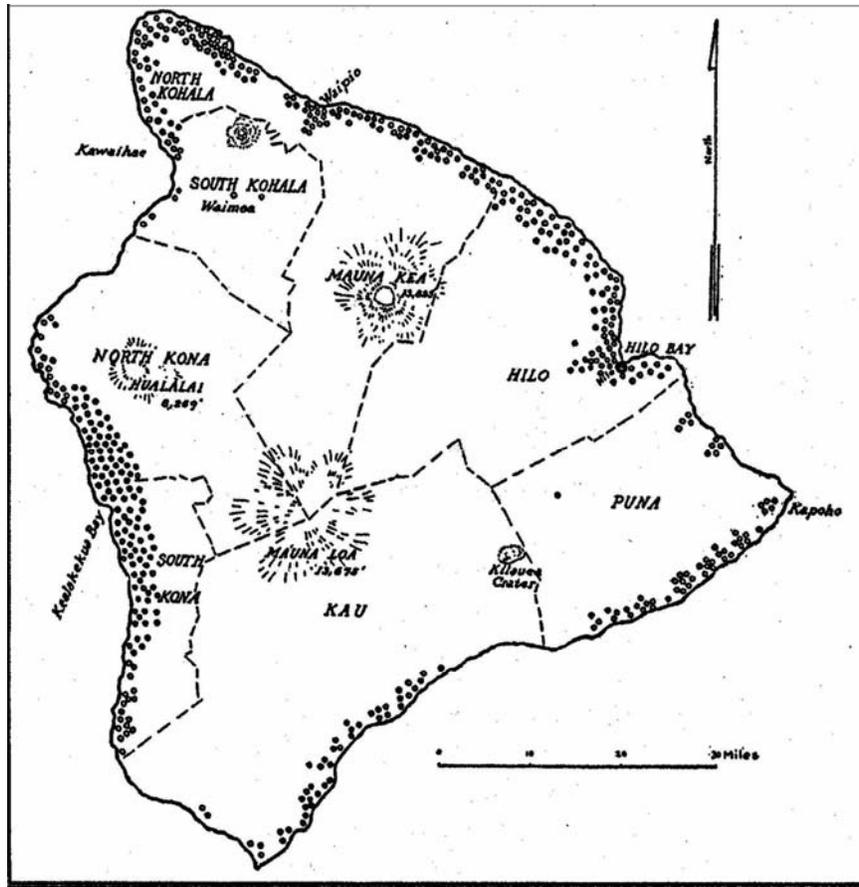


Figure 11. Population of the Island of Hawai'i in 1853 (Coulter 1931:28).

The Ahupua'a of Pu'ukapu during the Māhele 'Āina of 1848

In 1848, the Hawaiian system of land tenure was radically altered by the *Māhele 'Āina*. The *Māhele* (division) defined the land interests of Kamehameha III (the King), the high-ranking chiefs, and the *konohiki*. As a result of the *Māhele*, all land in the Kingdom of Hawai'i came to be placed in one of three categories: (a) Crown Lands (for the occupant of the throne); (b) Government Lands; and (c) Konohiki Lands. Laws in the period of the *Māhele* record that ownership rights to all lands in the kingdom were “subject to the rights of the native tenants;” those individuals who lived on the land and worked it for their subsistence and the welfare of the chiefs. During the *Māhele* Kamehameha III retained Waimea as personal property (Crown Lands), and as a result, limited written recordation is available pertaining to previous land use and cultural history.

The Board of Commissioners oversaw the program and administered the *kuleana* as Land Commission Awards (LCAw.). Claims for *kuleana* had to be submitted during a two year period that expired on February 14, 1848 to be considered. All of the land claimants were required to provide proof of land use and occupation, which took the form of volumes of native registry and testimony. The claims and awards were numbered, and the LCAw. numbers, in conjunction with the volumes of documentation, remain in use today to identify the original owners and their use of the *kuleana* lands. The work of hearing, adjudicating, and surveying the claims required more time than was prescribed by the two year term, and the deadline was extended several times, not for new claims, but for the Land Commission to finish its work (Maly 2002). As the new owners of the lands on which the *kuleana* were located began selling parcels to foreigners, questions arose concerning the rights of the native tenants and their ability to access and collect the resources necessary for sustaining life. The “Enabling” or “*Kuleana Act*,” passed by the King and Privy Council on December 21, 1849, clarified the native tenant’s rights to the land and its resources, and also the process by which they could apply for, and be granted fee-simple interest in their *kuleana*.

The volumes of native registry and testimony collected for the *kuleana* claims provide a snap-shot of life in Hawai'i during the middle part of the nineteenth century. Information recorded in the these volumes contains the

names of smaller land divisions (*'ili, mo'o*, etc.) within the *ahupua'a*, ties individual claimants and their families to specific locations within those land divisions, provides background information about when and from whom, the claimants received their lands, and gives accounts of the land use at that certain time and place. Rev. Elias Bond served the Land Commission as the Land Agent in Kohala during the *Māhele* period. Bond was at first unwilling to accept this position, but was convinced that “he must, in order to protect the interests of the Hawaiians against foreigners coming in” (Damon 1927:180). As the Kohala Land Agent, he actively encouraged Hawaiians to make land claims (Erkelens and Athens 1994), and in a few cases he even wrote letters to the Land Commission in support of various claims that were contested.

At the time of the *Māhele* in 1848, Kekauonohi gave up Pu'ukapu, and it became Crown Land (Lyons in Maly and Maly 2002). The fact that Pu'ukapu was Crown Land likely limited the number of land commission claims made for the area; it seems as though only 24 *kuleana* claims were made within Pu'ukapu with 20 of those claims awarded, 18 of which are within the immediate project area.

Within the general Waimea area, over 140 claims for *kuleana* parcels were made. Nearly all of these claims were for house lots or cultivated sections (Haun et al. 2003). Of the land commission awards reviewed by Kelly and Nakamura (1975:30), over 20% were issued to persons with non-Hawaiian surnames, such as James Hall (LCAw. 672), John Davis (LCAw. 989), Edmund Bright (LCAw. 986), and William French (LCAw. 4885 and 4886). And of six *kuleana* awarded in the area bordering Pu'ukapu (Figure 12) to the west (in Paulama and Pukalani *'ili*) four (67%) were to individuals with non-Hawaiian surnames (A. D. Allen, John Collins, William Hughes, and John Thomas).

In contrast to the situation within greater Waimea, the current study area is a portion of a concentrated set of *kuleana* that were awarded to eighteen Hawaiian individuals (Table 1 and Appendix A). The Parcel 017 portion of the current study area is the northeastern-most of eighteen 3 acre rectangular lots that are laid out in a 3 (north/south) by 6 (east/west) grid pattern (see Figure 12); and the easement portion of the current study area are sections of two named roads/trails that were part of network of such pathways that appear to have provided access within and around the subdivision-like concentration of *kuleana* parcels. Twelve smaller (0.25-acre) lots span the southern perimeter of the subdivision, abutting LCAws. 3685:1, 4227:1, 4210:1, and 4130:1 to the north (see Figure 2). *Kuleana* awardee-ship of these twelve lots directly corresponds to twelve of the eighteen larger 3-acre parcels (Mahoe, Paukumoku, Kalua, Kaohimaunu, Naihe to Mauae, Kualehelehe, Imoehalau to Nakuala, Mahuka to Kalua, Mana, Kanakaole, Kaina to Kanekuapuu, and James Hanehane) (Figure 13). Based on the *Māhele* testimony, the small lots appear to have been awarded as house lots and the large parcels as agricultural fields.

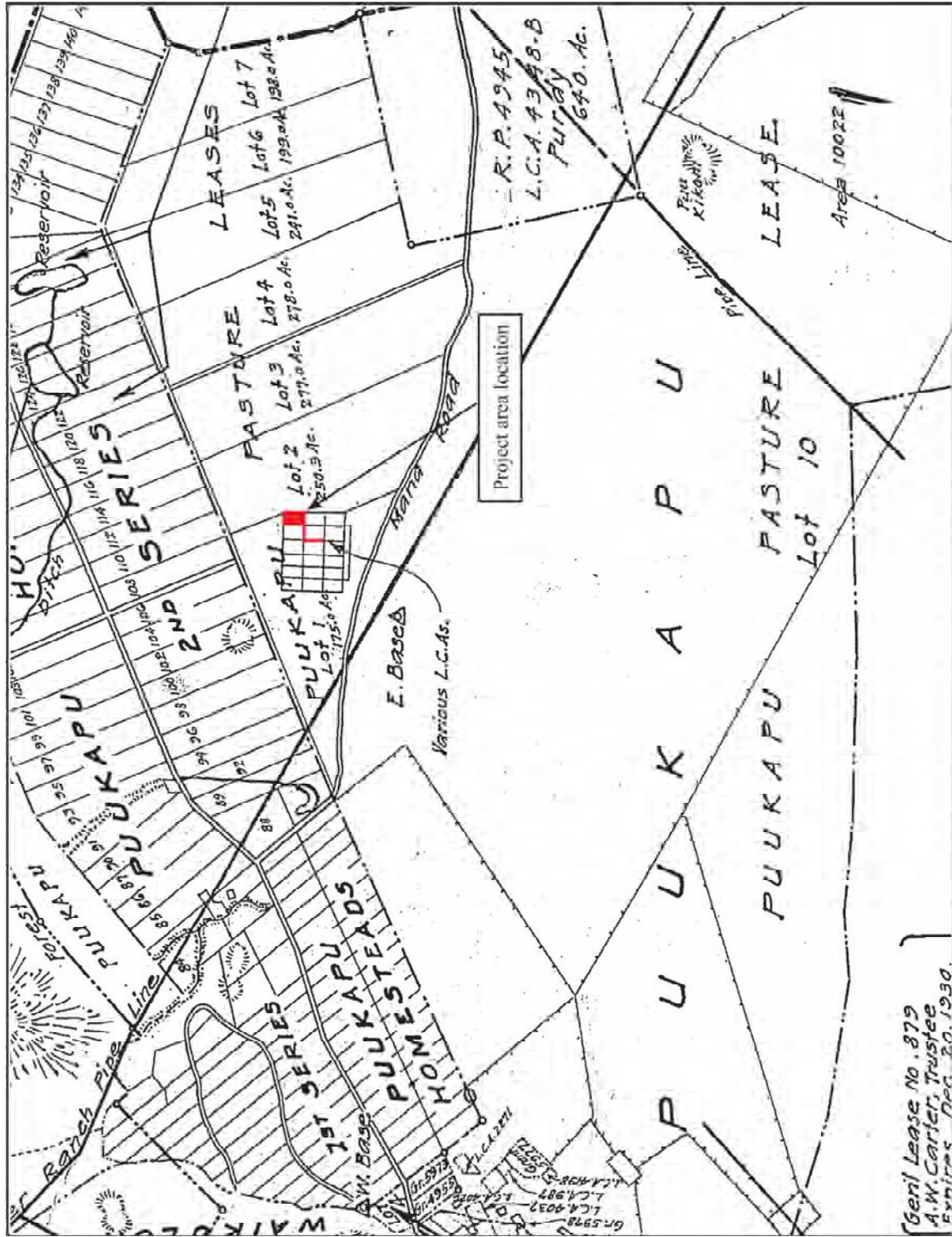


Figure 12. Plat Map 404 (by R. Lane, April 1928) showing current project area in red.

Table 1. Land Commission Awards in immediate vicinity of project area.

<i>LCAw. #</i>	<i>Claimant</i>	<i># of Apana</i>	<i>Acreage</i>	<i>House Lots</i>	<i>Houses</i>	<i>Crops Grown</i>
4230	Kukahekahe**	2	5.25	1	1	Taro
3686	Moluhi**	2	5.94	1	2	—
3923	Naihe to Mauae*	2	3.23	1	—	Banana
4212	Kualehelehe*	2	3.24	1	1	Taro
3733	Imoehalau to Nakuala*	2	3.23	1	1	Taro, banana, <i>māmaki</i>
3672	Mana*	2	3.23	1	2	Taro
4183	Kaluahinenui and Kanaue**	2	4.87	1	2	<i>Kou</i> , sugarcane
3842	Paukumoku*	2	3.24	1	2	Taro, <i>māmaki</i>
4218	Kaohimaunu*	2	3.23	1	-	Taro
3675	Mahuka to Kalua*	2	3.24	1	1	Taro, banana
4210-B	Wawaeluhi to Mokuhia	1	3.0	0	0	Sugarcane, <i>Māmaki</i> , Taro, banana
4214	Hanehane, James*	2	3.24	1	1	Taro
4183-B	Kanaue	1	3.0	0	0	Taro, banana, potato, sugarcane
3685	Mahoe*	2	3.24	1	1	Taro, banana, Irish potato, sugarcane
4227	Kaulunui**	2	5.8	1	2	Taro
4210	Kalua*	2	3.247	1	1	Sugarcane, <i>Māmaki</i> , Taro, banana
4130	Kanakaole*	2	3.24	1	2	Taro, potato, sweet potato
4132	Kaina to Kanekuapuu*	2	3.24	1	1	Taro, sugarcane, potato

* Awardees with corresponding 0.25 acre lots.

** House lot awarded at different location.

— Not specified in testimony.

2. Background

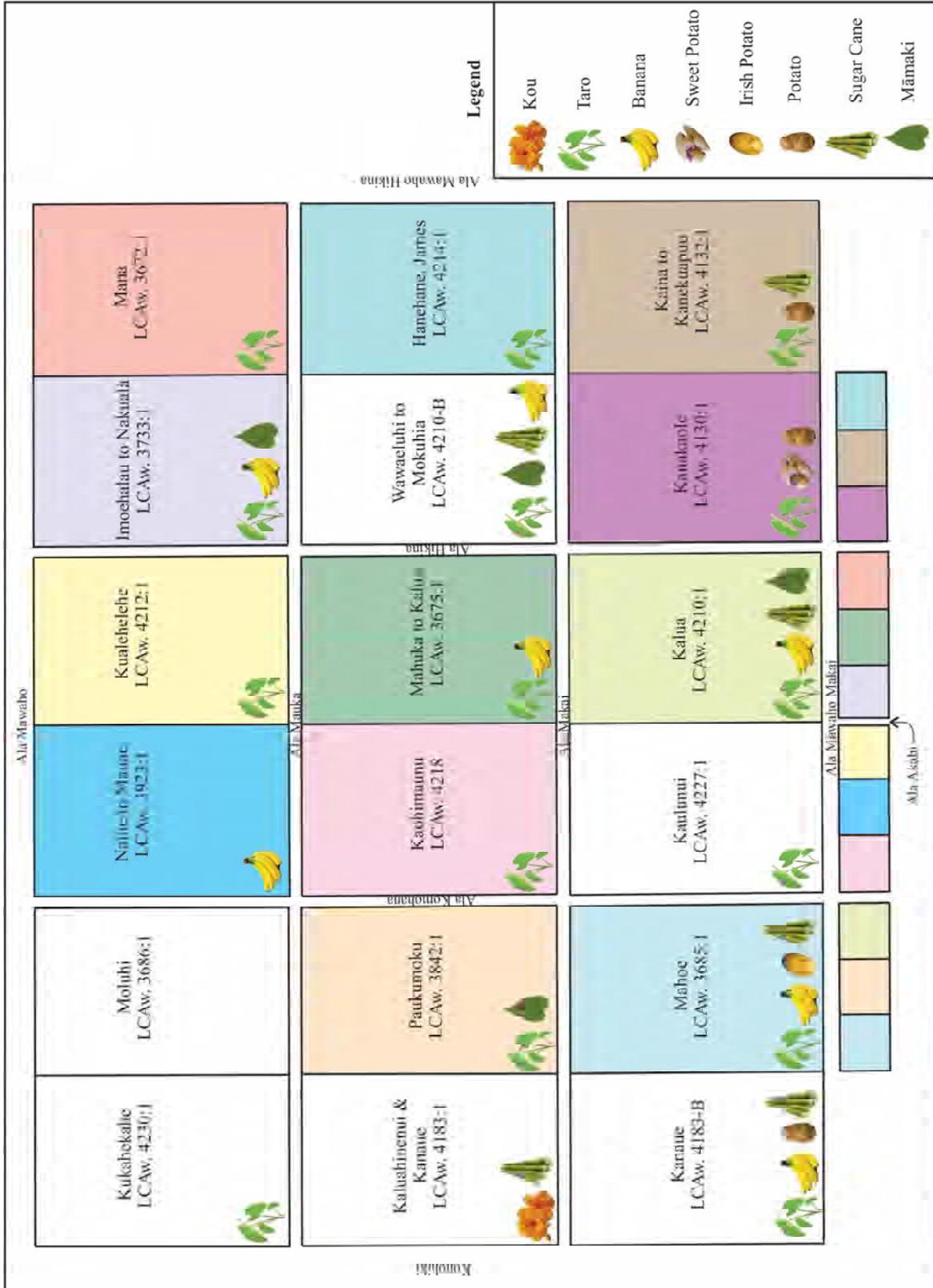


Figure 13..Map showing corresponding agricultural and house lot *kaleana* parcels.

A review of the *Māhele* testimony provides information about land use activities as well as land tenure. Of the eighteen awarded *kuleana*, only two did not include a house lot *apana*. Of the sixteen awards that included house lots, four were at location other than the immediate study area (not part of the clustered set of LCAw.). Of the twelve house lots that do correspond with a proximate agricultural lot, six of them were identified as enclosed, partially enclosed, or in the process of being enclosed. Three of those house lots contained two houses, seven included a single house, and one testimony failed to clarify whether or not a house was present. The information contained within the testimony about cultivation indicates that taro was the most prevalent of the crops, having been farmed on fifteen of the lots. Aside from taro, seven claimants farmed banana, four grew *māmaki*, six cultivated sugarcane, three raised an unspecified variety of potato, one produced sweet potato, one propagated the Irish potato, one stated growing *kou*, and two of the testimonies mention the cultivation of an unspecified crop (see Figure 13). This variety of farming activity is not surprising, considering that a great deal of Waimea’s history is extensively rooted in agricultural activities, encouraged by an ideal *kula* growing environment.

Four of the claimants specify that they had acquired the claimed lands during Keōpūolani’s reign (1795-1819), one after the death of Keōpūolani (after 1823), and one received their land during the time when Ka’ahumanu was the Prime Minister (1824-1832). Ten of the claimants had received their lands from Mōluhi (the *konohiki* at the time of the *Māhele*) and two from Kainea (a former *konohiki* of Pu’ukapu during the time of Kalaimoku ca. 1824-1833).

The Parcel 017 portion of the current study area is one of two *apana* (LCAw. 3692:1) that were awarded to Mana, whose claim to the Land Commission was for a house lot measuring 40 fathoms by 40 fathoms and for an agricultural area in the forest containing 12 *kihapai* belonging to himself and another men within which *kalo* was farmed. Mana referred to the location of his house lot as being at “Kaohia muli” [possibly kaohiaula c.f. Imoehalau testimony for LCAw. 3733] (Appendix B). *Apana* 1 of Mana’s awarded (a portion of the current project area) was a rectangular 3.0 acre agricultural lot, and then second was a ¼ acre house lot. A map of LCAw. 3672 (Figure 14) shows Mana’s *Apana* 1 being bordered by Imoehalau’s property to the west, and by a road “Ala Mawaho [Hikina]” to the east. Another road, “Ala Mawaho” is shown extending along the northern boundary of the *apana*, and a third road, “Ala Mauka,” is depicted along the southern boundary of the *apana*. *Apana* 2 was a smaller, square, 0.25 acre house lot situated at the southern boundary of the larger, agricultural lots, being bordered to the north by “Ala Mawaho Makai,” to the east by “Ala Hikina,” and to the west by another *kuleana* house lot which was awarded to Mahuka [to Kalua] (see Figure 14). According to the testimony, *Apana* 2 was entirely enclosed, and contained two houses for Mana (see Appendix B). Mōluhi claimed to have given this land to Mana in 1833.

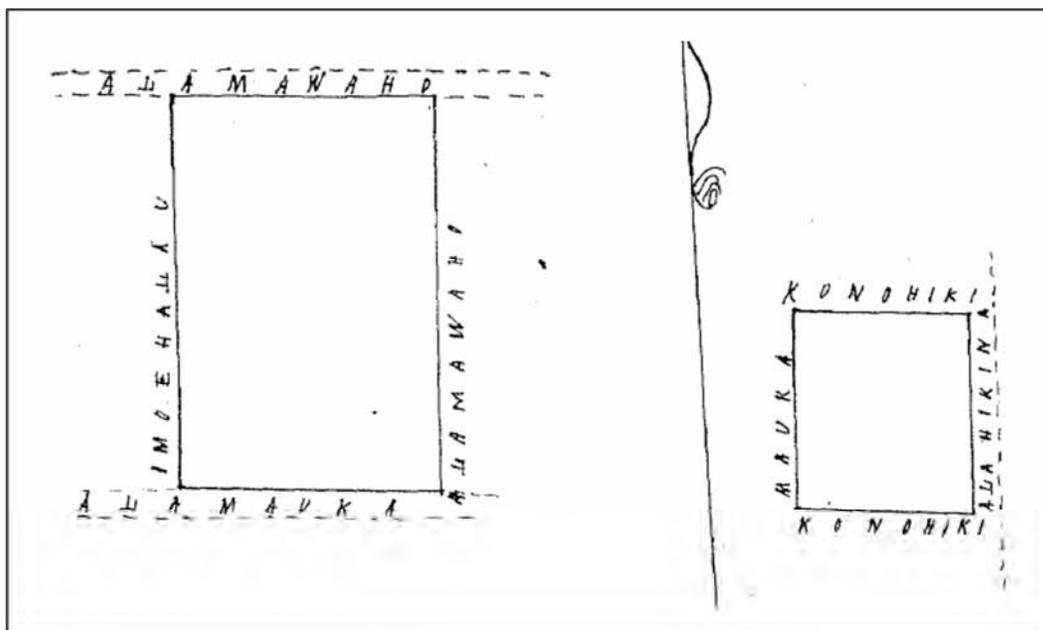


Figure 14. Map of LCAw. 3672 to Mana showing house lot *Apana* 2 (on right) and agricultural lot *Apana* 1 (on left) with adjacent named roadways (portions of current study area).

2. Background

This concentration of the eighteen agricultural *apana* and twelve residential *apana* represents 18 of the 20 awarded *kuleana* within Pu‘ukapu. Upon reviewing all of the *Māhele* testimony there are enough discrepancies and potential place name inconsistencies to raise suspicion as to whether the awarded lots were the actual lands that the awardees had been living on, or whether the awarded lots represent an attempt on the part of the *konohiki* and others to consolidate the population. The highly structured grid network of agricultural plots and house lots with interconnected roadway is not typical of a Hawaiian settlement area, but rather may be an example of an early attempt at community planning. In either case, this is a seemingly unique set of *kuleana* awards and ultimately reflects the spatial organization of, if not older, a middle nineteenth century Hawaiian community.

According to boundary commission documents (taken from Maly and Maly 2004), the *konohiki* Moluhi [Mooluhi] was born and raised in Pu‘ukapu, as were his parents and uncles. Moluhi indicated that “Puukapu is a kupono of Waimea Ahupuaa, my father had charge of it, the present King owns it...” He had become the *konohiki* of Pu‘ukapu during the time of the missionaries [1820] upon his father’s death. Moluhi specified that the boundaries of Pu‘ukapu that he had described during his 1866 testimony were the same boundaries he had always known from the time of his ancestors.

To the southeast of the current project area lies a 640 square foot parcel of land, LCAw. 4348-B, issued to Harry Purdy, one of the first cowboys in Hawai‘i, and a close cohort of John Parker of Parker Ranch. Harry Purdy hailed from Ireland and was a man of many names, including Jack Purdy, William Warren, and William Wallace. Eventually Purdy migrated to Hawai‘i Island, where he became a skilled bullock hunter (Bergin 2004). Initially, Purdy was supposed to lease over a thousand acres of land from Leleiohoku, however, in 1851 the King compromised Purdy’s claim, issuing him 640 acres (one square mile) around his existing house, Po‘o Kanaka (see Figure 10).

One year later, John Palmer Parker, the founder of the legendary Parker Ranch, purchased 640 acres of land right next to Purdy’s lot. This became the nucleus of early ranching operations for Parker Ranch. A family home, dubbed “Hale Mānā” was constructed not long after the purchase was complete. According to Bergin (2004), Parker’s entire ranching staff was comprised of Hawaiians. Parker’s homestead expanded, and a “saddle house/blacksmith shop, a barn for bullock wagons and plows, and a stone-enclosed meat house adjacent to a small household dairy” were constructed, as was an “outdoor cooking *hale* combined *imu* and smokehouse,” and two cisterns composed of stone and mortar (Bergin 2004:152). Upon John Parker’s death in 1868, the spacious homestead was divided between his son, John Palmer Parker II, and his grandson, Samuel Parker Sr., who retained Hale Mānā. Later, Samuel purchased Jack Purdy’s 640 acre lot and graciously left five acres of it to the Purdy family so they could maintain their homestead at Po‘o Kanaka. This lot eventually became a part of Parker Ranch. Harry Purdy passed away in 1886, and was buried on his property.

By the 1870s, Waimea had five stores and a hotel (Haun et al. 2003). The economy became cash based and taxes were collected. Foreigners controlled much of the land and most of the businesses, and the native population was largely dependent on these foreigners for food and money (Haun et al. 2003). In 1867 the population of Waimea was estimated to be only four hundred people (Haun et al. 2003). By the early 1900s, Parker Ranch, which had begun operations in the 1830s, was under the direction of Alfred W. Carter, and it had expanded to include over 100,000 acres, acquiring most of the land around Waimea where the ranch headquarters were located (Haun et al. 2003). Cattle ranching was now the major industry in Waimea. Also in the early 1900s the Waimea Homesteads (located within Pu‘ukapu to the north of the current project area) were created by the Territory of Hawai‘i and sold as house lots (Soehren 1981) and other Pu‘ukapu lands under the jurisdiction of the newly formed (in 1920) Hawaiian Home Commission were leased as pasture lots. By 1928 the area surrounding the current study area was leased as Pasture Lot 1 (see Figure 12).

Beginning in 1941, months before the bombing of Pearl Harbor, the U.S. Army established an infantry headquarters in the Pu‘ukapu area of Waimea (Bergin 2006). After the United States formally entered WWII, the earlier Army presence in Waimea expanded into one of the largest multi-force (adding the Navy and Marines) U.S. military camps (Camp Tarawa) and training bases in the Pacific. Large areas of the town and the surrounding pastures were turned over to the U.S. Government for campsites that housed approximately 20,000 soldiers and as firing ranges for the training U.S. Marines (Brundage 1971). By 1945, the U.S. Military had begun to leave the town and life in Waimea soon returned to its small pre-war population that was largely dependent upon the cattle industry.

Following the war, in 1950, many of the pasture leases reverted back to the Hawaiian Home Commission and by 1952 with the assistance of Parker Ranch beneficiaries moved onto large pasture lots (Bergin 2006:68). It was not until 1964 that the post-statehood Department of Hawaiian Home Lands (DHHL) further divided the pasture lots into smaller parcels.

PREVIOUS ARCHAEOLOGICAL STUDIES

Only a small number of archaeological surveys have been previously conducted in the immediate vicinity of the current project area. Carson (2006), Rechtman and Prasad (2006), Rechtman (2009 and 2013b) conducted archaeological inventory surveys within Pu'ukapu Ahupua'a, and Soehren (1981) conducted an archaeological reconnaissance survey within the Waimea Homesteads. None of these studies identified any archaeological resources (Figure 15, Table 2).

Other archaeological work within the Waimea area has included several studies of the Lālāmilo agricultural fields, a large complex of Precontact agricultural features and associated habitations that were used into Historic times (c.f. Barrera 1993; Clark 1981; Clark et al. 1990, Clark and Kirch 1983; Erkelens 1993; Haun et al. 2003; Rechtman 2000) (see Figure 16 and Table 2). These studies were all located to the south and west of the current project area, outside of downtown Waimea. Feature types identified within the field system include terraces, mounds, enclosures, field boundaries (*kuaiwi*), irrigation ditches (*'auwai*), stone walls, platforms, walled terraces, C-shapes, U-shapes, modified outcrops, surface hearths, L-shapes, cairns, pond fields, and various other miscellaneous types (Haun et al. 2003). The area of the agricultural fields was later used for military training and cattle ranching. Sites and features related to those uses are interspersed with the Precontact agricultural fields and habitations (Haun et al. 2003).

Thompson and Rosendahl (1992) conducted an archaeological inventory survey of seven parcels for the potential location of the North Hawai'i Community Hospital. All of these parcels were located to the west of the current project area on TMK: (3) 6-7-02. Four of the parcels examined contained the remains of a Precontact *'auwai* system (Site 16095) and one of the parcels contained the remains of an agricultural complex (Site 18054). Both sites were interpreted as part of the Lālāmilo Field System. Subsurface testing conducted at Site 16095 revealed no cultural material, but produced a radiocarbon sample from the base of one of the *'auwai* with a calibrated age range of A.D. 770 to 1020.

In 1998, International Archaeological Research Institute (Erkelens 1998) conducted an archaeological survey and subsurface testing of the 385-acre Waimea Town Center property for Parker Ranch (located to the southwest of the current project area on TMK: (3) 6-7-02). They located five sites including three nineteenth century house lots (including two LCAw. parcels and a Grant parcel) covering an area of 26.6 acres (Site 8812), a Historic cemetery (Site 19416), and four Historic structures grouped into three sites (Sites 19417, 19418, 19419). Twenty-four backhoe trenches were excavated at the five recorded sites. The skeletal remains of two individuals and a large number of Historic artifacts were discovered during the subsurface excavations. This led the researchers to suggest that there was the likelihood of encountering more unmarked burials within the study area during ground disturbing activities and further monitoring and burial testing was recommended for the study area. The additional work did not result in any additional findings (Magnuson and Athens 2001).

Wolforth (1999) later conducted archaeological data recovery excavations at Site 16095 on TMK: (3) 6-7-02:013, located to the southwest of the current project area. The primary focus of the excavations was to establish a date of construction and use of the *'auwai*. The system was also mapped in detail. Based on five radiocarbon dates, pollen and macrobotanical analysis, stratigraphic contexts, and historical documentary research, Wolforth (1999) concluded that the earliest use of the *'auwai* was likely sometime after A.D. 1175, and that it continued to be used into the Historic Period.

Clark and Rechtman (2004) conducted an archaeological inventory survey of a 9.18 acre property within the Waimea Homesteads located to the west of the current project area on TMK (3) 6-5-04:29, 30, and 50. This property was previously the subject of an archaeological reconnaissance survey conducted by Scientific Consultant Services in 2000 (Wolforth 2000). All cultural features that were previously located during the Wolforth study (2000) were relocated and evaluated by Clark and Rechtman (2004), and two additional cultural features were observed and documented as well. As a result of the inventory survey, Clark and Rechtman (2004) identified a single archaeological site (SIHP Site 24168) on Parcel 30 (LCAw. 3674 to Barenaba), consisting of a Historic dwelling and several associated features. According to Wolforth (2000), several decades prior to their archaeological survey, a burial was removed from its original location in Site 24168 and reinterred at a cemetery in the nearby town of Honoka'a. In addition, a partial burial was also inadvertently discovered in Parcel 29, located just south of Parcel 30. Site 24168 was deemed significant under Criterion E, and Clark and Rechtman (2004) recommended archaeological monitoring for any future ground disturbance activities associated with the project area.

In 2005, Burtchard and Tomonari-Tuggle (2005) reported on data recovery investigations at several sites within the Waimea Town Center development area. Their work was designed in a 1995 data recovery plan (Erkelens 1995) and was focused on gathering data on the development of the agricultural systems and associated habitations within

2. Background

their project area; more specifically, assessing the antiquity of irrigated fields on the Waimea plains. Burtchard and Tomonari-Tuggle (2005) concluded that while traditional agriculture may date back to the A.D 1400s in this area, it consisted on non-irrigated fields; and the formal irrigation systems that characterize the Waimea Agricultural System are a nineteenth century development associated with commercial agriculture.

Clark and Rechtman (2006) conducted an archaeological inventory survey of a roughly 13.6 acre property consisting of two adjacent land parcels located to the west of the current project area for the proposed development of a sports field complex for Parker School in Waimea. As a result of the survey, four archaeological sites were documented; a Historic wall segment (Site 26681), two sections of a Historic wall (Site 26680), an *'auwai* (Site 26682), and a wooden Historic structure likely associated with the U.S. Military (Site 26683). Four backhoe trenches were excavated, one of which yielded Historic cultural materials including fragments of a concrete flume section in the general vicinity of the *'auwai*, and a burned layer containing equine/bovine skeletal material and an intrusive pit, likely the result of refuse disposal methods which were common in the area. Sites 26680, 26681, and 26682 were deemed significant under Criterion D, and Clark and Rechtman (2006) recommended no further preservation work. Clark and Rechtman (2006) considered Site 26683 significant under Criteria A and D, and recommended that the site be documented by an architectural historian prior to any structural or cosmetic alteration.

In 2009, Cultural Surveys Hawai'i, Inc. (Yucha et al. 2009) conducted an archaeological inventory survey of portions of several parcels comprising almost 9 acres of the Waimea Trails and Greenway Project along the banks of Waikoloa Stream. Three sites or portions thereof SIHP Site 50-10-06-26871 were identified and recorded as two remnant features (a paved roadway and a concrete stream crossing associated with WWII Camp Tarawa activities. SIHP Site 26872 was assigned to a water transport ditch known historically as Akona's *'auwai*. SIHP Site 26873 is a relatively intact concrete stream ford and associated roadway whose location matches that of the "Road to Puopleu depicted on a 1908 map. Sites 26871 and 26872 were determined significant under Criteria A and D, and Site 26873 was determined significant under Criterion D. The concrete stream crossing of Site 26871 and Site 26872 were slated for preservation, and no further work was the recommendation for the other features and sites.

International Archaeological Research Institute Inc. (Rieth and Filimoehala 2012) conducted archaeological monitoring and emergency data recovery associated with the construction of the Parker Ranch Connector Road. They documented 126 archaeological features at sixteen sites, the bulk of which were Precontact hearths at temporary habitation sites associated with dryland agricultural activities. Some historic material was encountered and believed to either be associated with nineteenth century residences or US Military Camp Tarawa. No burials were encountered. International Archaeological Research Institute Inc. also conducted archaeological monitoring for the Luala'i Subdivision located to the south of the current study area (O'Day and Rieth 2007); burials were found during that work.

Rechtman Consulting, LLC prepared a burial site component of a preservation plan for Site 29368 (Rechtman 2012). The skeletal remains of a single adolescent individual were displaced during electrical trenching activities under a corner of Parker School's Theater Building. The displaced skeletal remains were recovered from the trench, and the in situ portion of the skeleton was identified and documented. A decision was made in consultation with SHPD and the Hawai'i Island Burial Council (HBIC) to preserve the remains in place, and to install a preservation buffer around the site extending four feet beyond the location of the remains. A sign indicating the presence of culturally-sensitive resources was also to be posted at the preservation area, and the location of the burial was to be maintained by Parker School.

In 2013, Rechtman Consulting, LLC (Rechtman 2013) conducted an archaeological inventory survey of a roughly 5 acre property at TMK: (3) 6-5-03:002 for the proposed development of a commercial/retail center, located to the west of the current project area. The inventory survey identified two previously documented Historic Period sites; Remnant features associated with U.S. Military Camp Tarawa (Site 26871), and remnants of the Akona *'Auwai* and a side branching ditch (Site 26872), initially recorded during an inventory survey by Cultural Surveys Hawai'i in 2009 (Yucha et al. 2009). Based upon the likelihood of encountering future Historic properties and burial sites, both of which have been inadvertently discovered in the surrounding area, SHPD recommended an archaeological monitor be present for all ground disturbing activities.

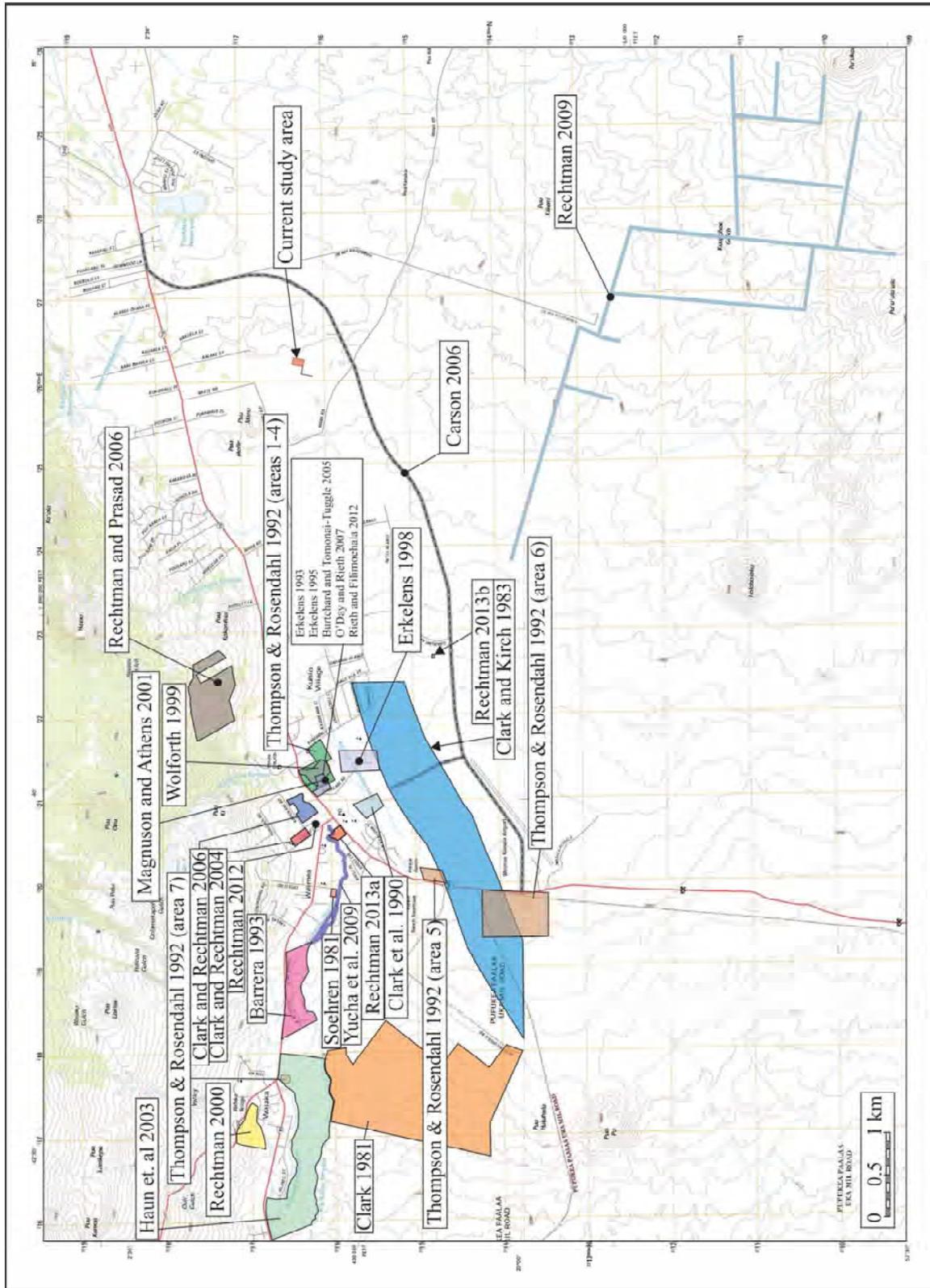


Figure 15. Previous archaeological studies conducted in the vicinity of the project area.

Table 2. Previous archaeological studies within the vicinity of the project area

<i>Year</i>	<i>Author</i>	<i>Area</i>	<i>Type of Study</i>
1981	Clark	Lālāmilo	Archaeological Survey
1981	Soehren	Waimea	Reconnaissance Survey
1983	Clark and Kirch	Waimea	Archaeological Investigation
1990	Clark et al.	Waikōloa	Testing and Data Recovery
1992	Thompson and Rosendahl	Waikōloa, Pu‘ukapu, Lālāmilo	Inventory Survey
1993	Erkelens	Waimea	Preliminary Report
1993	Barrera	Lālāmilo	Inventory Survey
1995	Erkelens	Kamuēla/Waimea	Data Recovery
1998	Erkelens	Waimea	Reconnaissance Survey
1999	Wolforth	Waikōloa	Data Recovery
2000	Rechtman	Lanikepu	Inventory Survey
2001	Magnusen and Athens	Waimea	Burial Testing/Monitoring
2003	Haun et al.	Kawaihae	Inventory Survey
2004	Clark and Rechtman	Waimea	Inventory Survey
2005	Burtchard & Tomonari-Tuggle	Kamuēla/Waimea	Data Recovery
2006	Clark and Rechtman	Waimea	Inventory Survey
2006	Carson	Waimea	Assessment
2006	Rechtman and Prasad	Pu‘ukapu	Arch/Cultural Assessment
2007	O’Day and Rieth	Kamuēla/Waimea	Monitoring
2009	Rechtman	Pu‘ukapu	Assessment
2009	Yucha, et al.	Lālāmilo	Inventory Survey
2012	Rechtman	Waimea	Burial Preservation Plan
2012	Rieth and Filimoehala	Waimea	Monitoring
2013a	Rechtman	Waimea	Inventory Survey
2013b	Rechtman	Pu‘ukapu	Archaeological Study

3. PROJECT AREA EXPECTATIONS

Based on a review of the previous archaeological research, historical documentary research, and settlement patterns for the South Kohala District, a set of general archaeological expectations for the current study area can be derived. These expectations are then refined based on the specific history of the project area’s land use, garnered from our review of the *Māhele* records. We know that the Parcel 017 portion of the current study area was claimed as agricultural fields and the easement portions of the current study area were named roadway in the middle nineteenth century. We also know that the current study area is a portion of a larger historical landscape that appears to be a somewhat unique concentration of both residential and agricultural *kuleana* lots. It is our expectation that if any archaeological features (agricultural in nature with respect to Parcel 017) are present that attest to this former land use, they would be visible on the surface as rock construction. It is possible that such features may have been buried during twentieth century pasture improvement activities as much of this area was used as pasture land by Parker Ranch. It is also remotely possible that Precontact sites, including trails, temporary habitations, and agricultural sites may have been present within the project area. However, the documented extensive land use throughout the late nineteenth and twentieth centuries would have significantly altered the Precontact landscape.

4. FIELDWORK

Fieldwork for the current project was conducted on February 20th, 2014 by Ashton Dircks Ah Sam, B.A., J. David Nelson, B.A., and Robert B. Rechtman, Ph.D.

METHODS

Fieldwork included a systematic survey of the surface of the study area and subsurface testing (mechanical trenching) at selected locations. The entire study area was accessible, and the boundary corners were clearly marked with flagging tape and lath. Field workers walked pedestrian transects spaced 5 meters apart on the access easement and spaced 10 meters apart on the 3-acre (Parcel 017) portion of the study area. The ground surface was covered with a 20 centimeter-thick mat of kikuyu grass (*Pennisetum clandestinum*) that could have potentially hid small artifacts from view, but did not hinder the ability to identify constructed features. The survey area, significant landforms, and the five test trench locations were plotted on a scaled map of the project area using a Garmin HCx handheld GPS device (set to the UTM NAD 83 datum).

FINDINGS

As a result of the surface survey and the subsurface testing, no specific archaeological features were encountered within the study area. The background research indicates that the current study area is a portion of a seemingly unique *Māhele*-era cultural landscape. The boundaries of current Parcel 017 appear to be coterminous with former LCAw. 3672:1 awarded to Mana in 1848 and the proposed access/utility corridor traverses portions of two roadways/trails that were known in the middle nineteenth century as *Ala Mauka* and *Ala Hikina*. These map features were part of a cohesive set of Land Commission Awards for twelve house lots and eighteen farm lots laid out in a grid pattern. Given the seeming uniqueness of this landscape we felt it appropriate to assign an SIHP site number (Site 50-10-07-30084) to the entire complex of parcels and the road/trail network that make up this landscape. Current Parcel 017 (Former LCAw 3672:1) and the access and utility easement (over portions of the former *Ala Mauka* and *Ala Hikina*) comprise elements of Site 30084. As no archaeological features were observed within the study area, it is the map boundaries (Figure 16) of these former nineteenth century cultural landscape features that constitute the various elements of Site 30084.

Test Trenches

Five trenches (Table 3) were mechanically excavated as a part of the current study to test for the presence of buried cultural deposits and to examine the subsurface stratigraphy. The trenches were excavated in the south (BT-1 and 2), central (BT-3), and northern (BT-4 and 5) sections of the 3-acre parcel portion of the area, and were placed on topographical undulations in an attempt to increase the chance of encountering a subsurface deposit (Figure 17). The trenches were excavated with a mini excavator equipped with a 24 inch bucket. Excavation of the trenches did not reveal the presence of any subsurface cultural material or deposits, but did exemplify the subsurface stratigraphy. All of the trenches contained similar soil profiles. The results and stratigraphic profile drawings and photographs for each of the excavated trenches are presented below.

Table 3. Backhoe trenches excavated within the current study area.

<i>Trench #</i>	<i>Location within Parcel 017</i>	<i>Length</i>	<i>Depth</i>	<i>Bedrock Present</i>
BT-1	Southeast	4 meters	1.4 meters	No
BT-2	South/central	4 meters	1.4 meters	No
BT-3	West/central	3 meters	1.65 meters	Yes
BT-4	Northwest	2.5 meters	1.3 meters	No
BT-5	Northeast	3 meters	1.4 meters	Yes

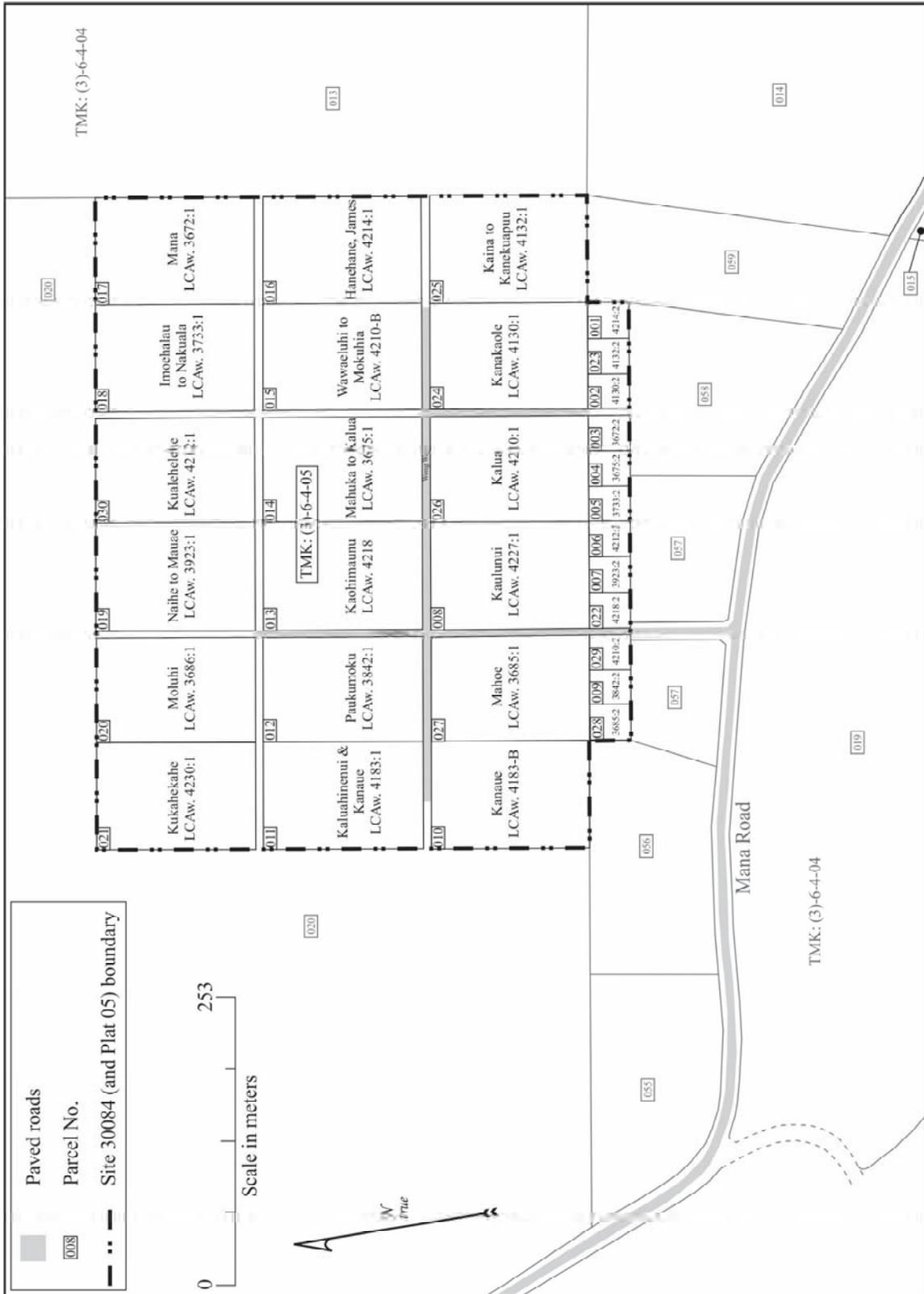


Figure 16. SIHP Site 50-10-07-30084.

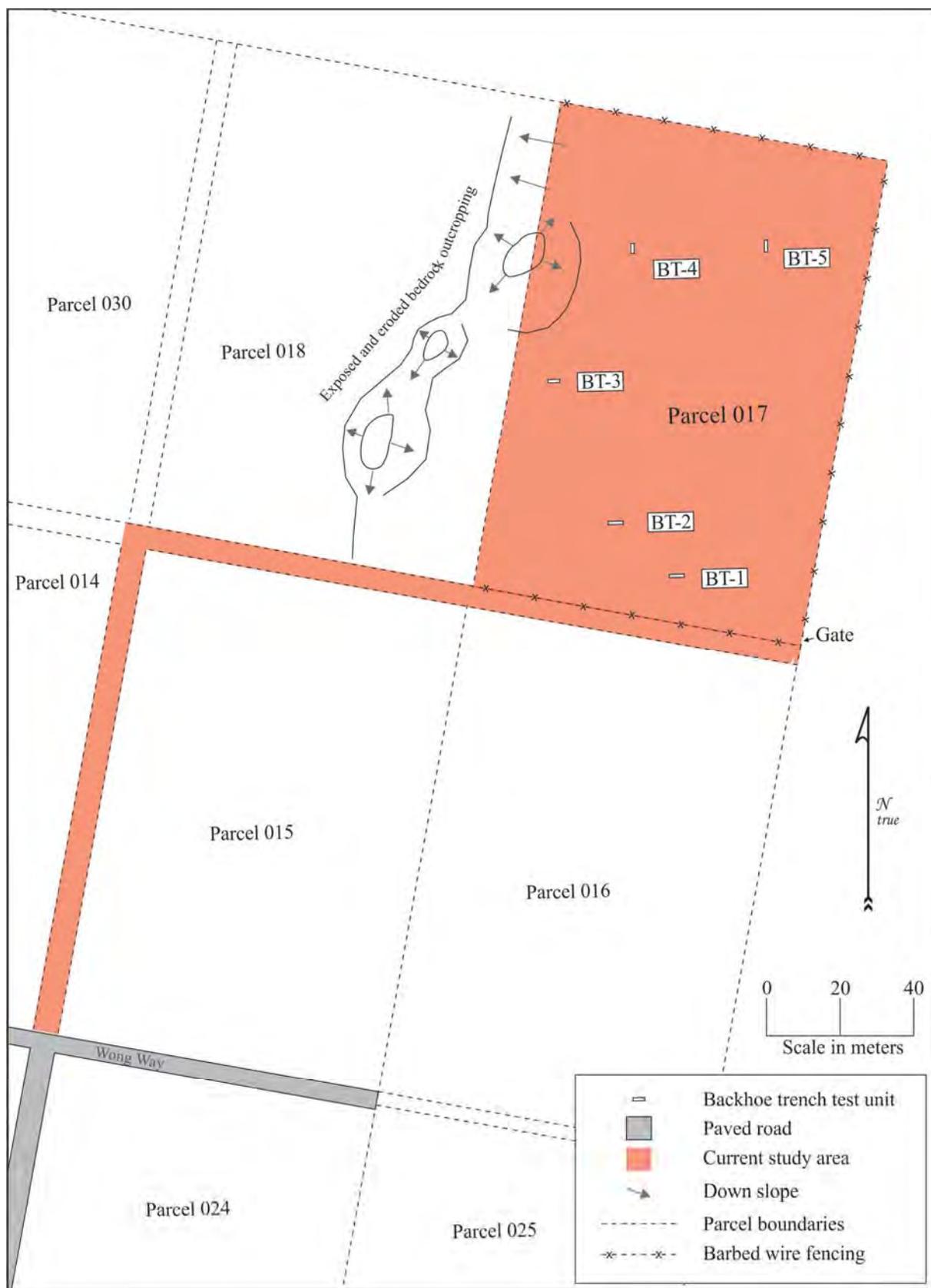


Figure 17. Project area map.

4. Fieldwork

Backhoe Trench 1 (BT-1)

BT-1 was a four meter long by 1.4-meter deep trench located in the southeastern portion of the project area; ten meters north of the southern boundary (see Figure 17). The trench was excavated east/west in the open field. Excavation of BT-1 revealed three stratigraphic layers (Figure 18). Layer I, a roughly 15 to 20 centimeter thick humus layer, consisted of very dark brown (10YR 3/3) loam with grass rootlets. Layer II, an 80 to 85 centimeter thick soil layer, consisted of dark brown (10YR 3/3) silt loam with several grass rootlets present. Layer III, a 30+ centimeter thick in-situ soil development layer, consisted of dark yellowish brown (10YR 3/4) compact clay loam. No cultural material of any kind was observed within BT-1.

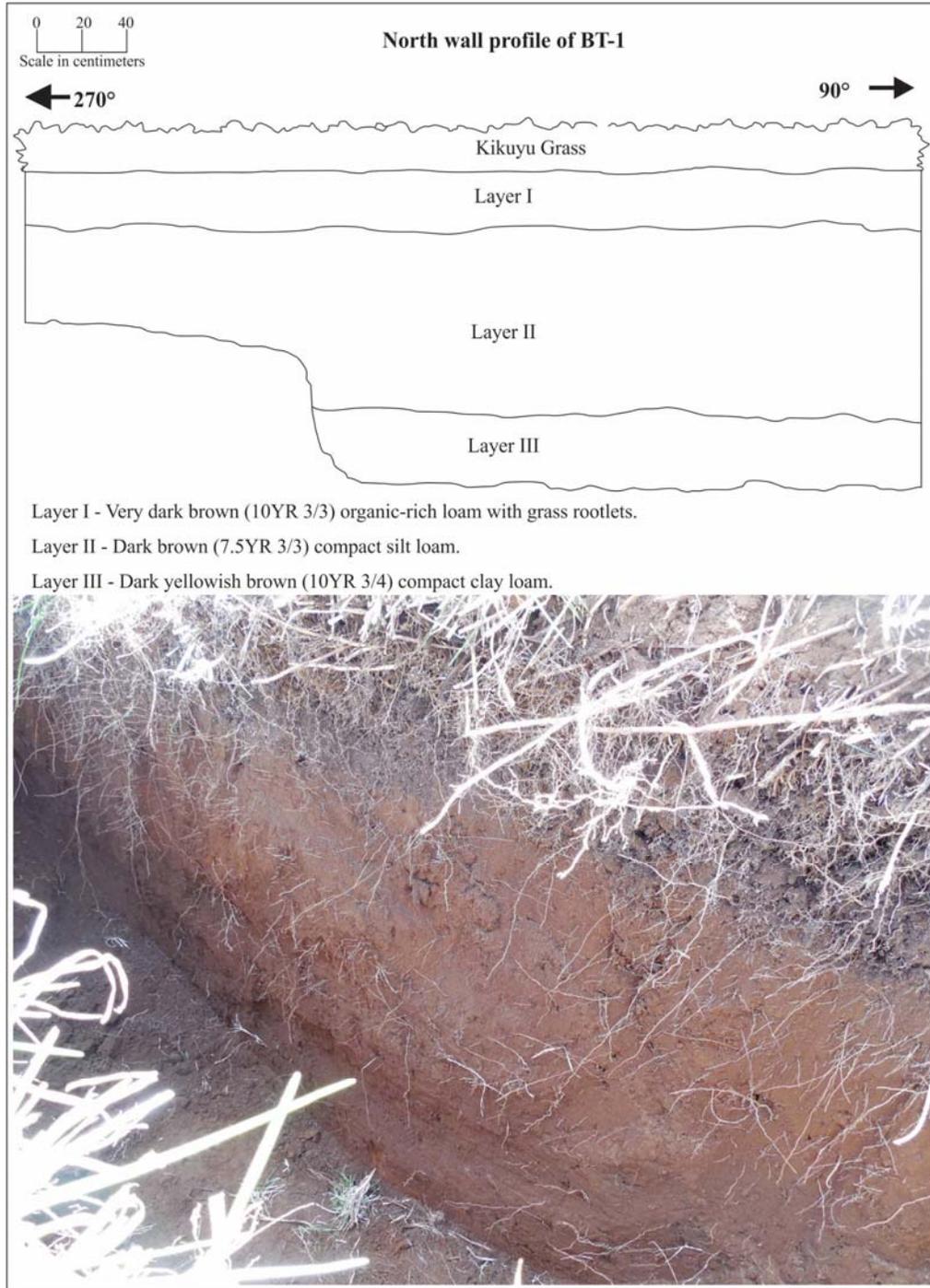


Figure 18. Stratigraphic profile drawing and photograph of BT-1, view to the northwest.

Backhoe Trench 2 (BT-2)

BT-2 was a four meter long by 1.4-meter deep trench located in the south/central portion of the project area; twenty-four meters north of the southern boundary (see Figure 17). The trench was excavated east/west in the open field. Excavation of BT-2 revealed three stratigraphic layers (Figure 19). Layer I, a roughly 15 to 20 centimeter thick humus layer, consisted of very dark brown (10YR 3/3) loam with grass rootlets. Layer II, a 60 to 70 centimeter thick soil layer, consisted of dark brown (10YR 3/3) silt loam with several grass rootlets present. Layer III, a 40+ centimeter thick in-situ soil development layer, consisted of dark yellowish brown (10YR 3/4) compact clay loam. No cultural material of any kind was observed within BT-2.

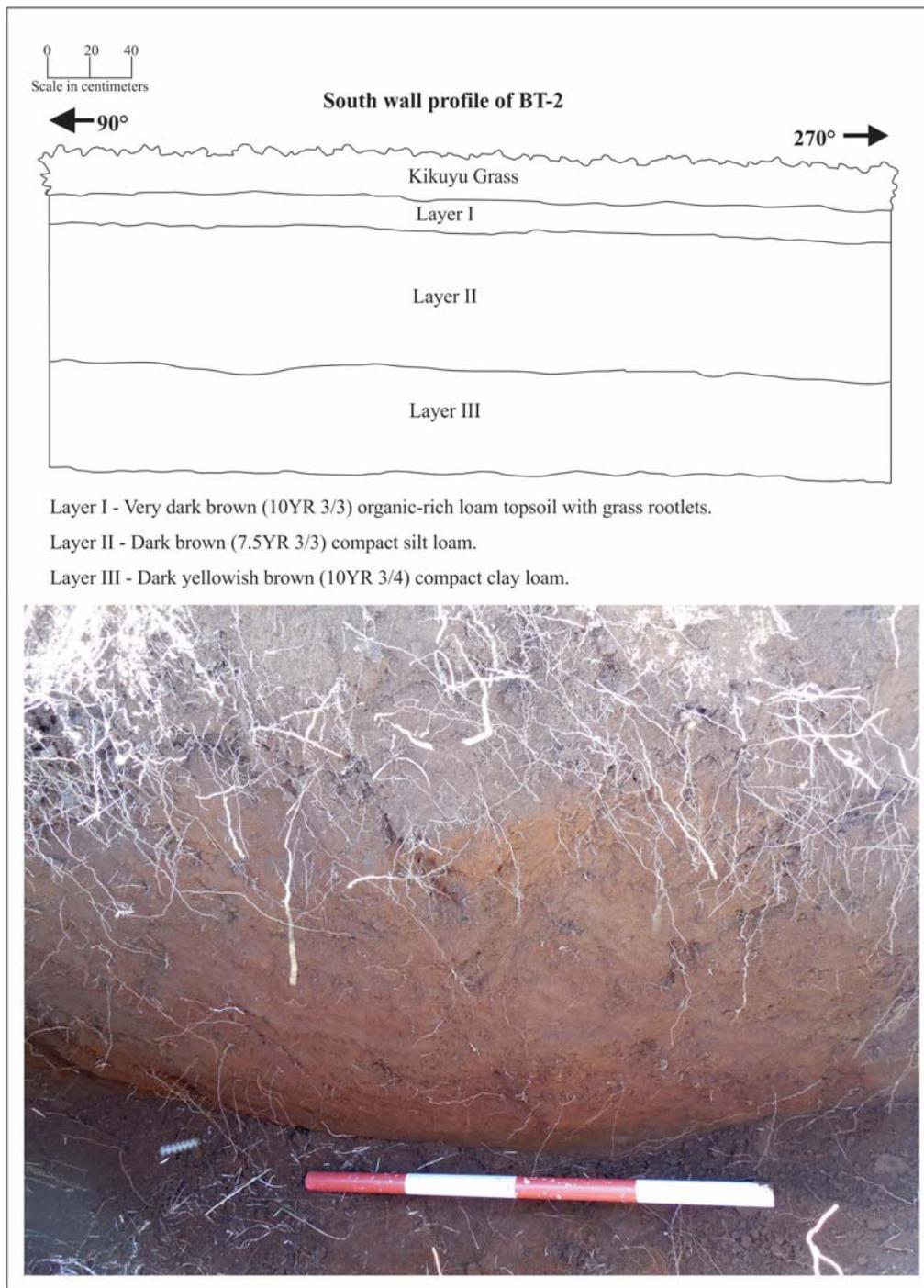


Figure 19. Stratigraphic profile drawing and photograph of BT-2, view to the south.

4. Fieldwork

Backhoe Trench 3 (BT-3)

BT-3 was a three meter long by 1.65-meter deep trench located in the west/central portion of the project area; fourteen meters east of the western boundary (see Figure 17). The trench was excavated east/west in the open field. Excavation of BT-3 revealed three stratigraphic layers (Figure 20). Layer I, a roughly 15 to 20 centimeter thick humus layer, consisted of very dark brown (10YR 3/3) loam with grass rootlets. Layer II, a roughly 50 centimeter thick soil layer, consisted of dark brown (10YR 3/3) silt loam with several grass rootlets present. Layer III, a 90+ centimeter thick in-situ soil development layer, consisted of dark yellowish brown (10YR 3/4) compact clay loam that was intermixed with broken 'a'ā bedrock at a depth of 1.15 meters below the surface. The unit terminated upon reaching bedrock, the presence of which may be due to the proximity to an elevated bedrock outcropping located a few meters to the northwest. No cultural material of any kind was observed within BT-3.

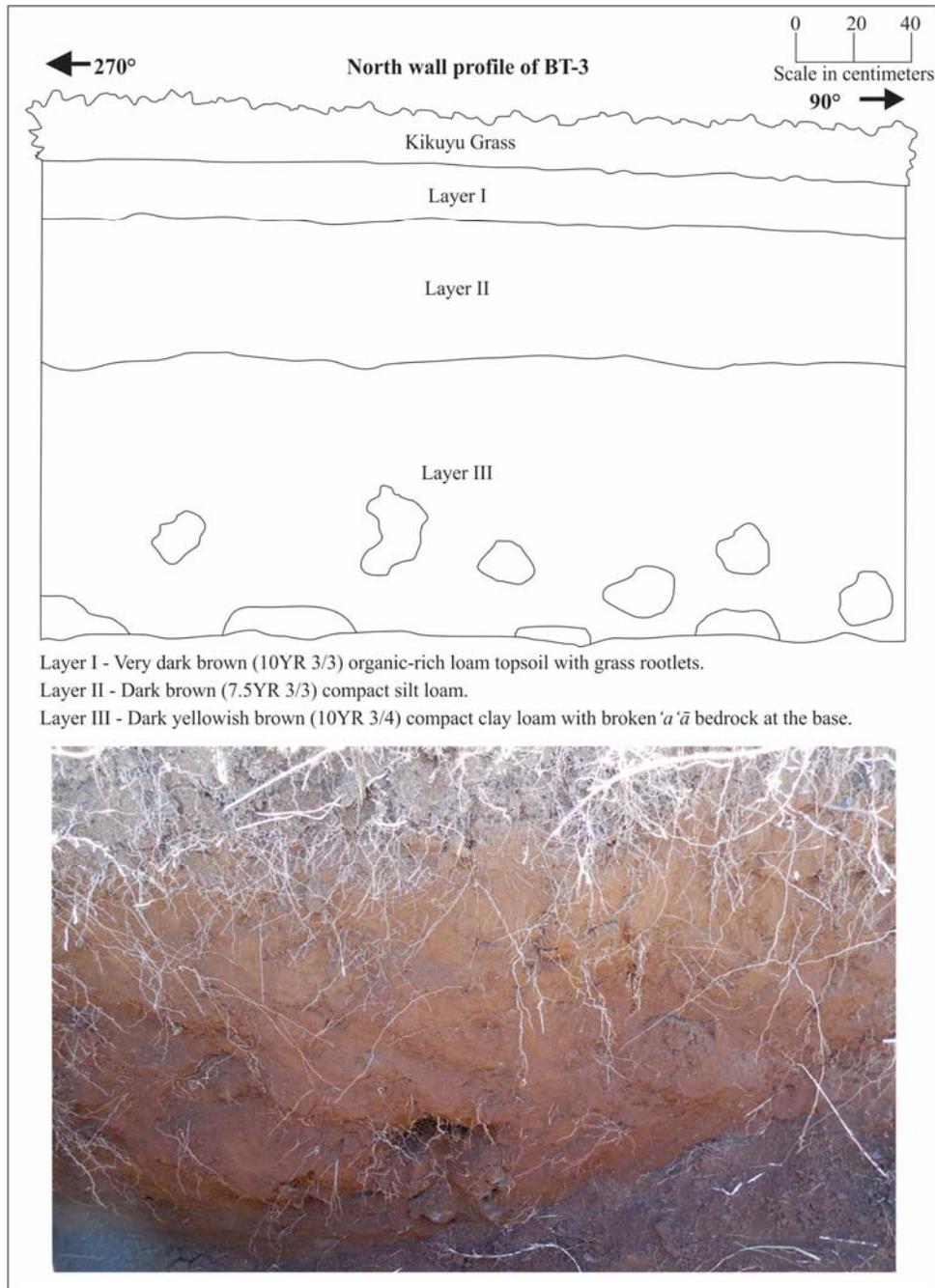


Figure 20. Stratigraphic profile drawing and photograph of BT-3, view to north.

Backhoe Trench 4 (BT-4)

BT-4 was a four meter long by 1.4-meter deep trench located in the northwestern portion of the project area; thirty meters south of the northern boundary (see Figure 17). The trench was excavated north/south in the open field. Excavation of BT-4 revealed three stratigraphic layers (Figure 21). Layer I, a roughly 15 to 20 centimeter thick humus layer, consisted of very dark brown (10YR 3/3) loam with grass rootlets. Layer II, a 60 to 65 centimeter thick soil layer, consisted of dark brown (10YR 3/3) silt loam with several grass rootlets present. Layer III, a 50+ centimeter thick in-situ soil development layer, consisted of dark yellowish brown (10YR 3/4) compact clay loam. No cultural material of any kind was observed within BT-4.

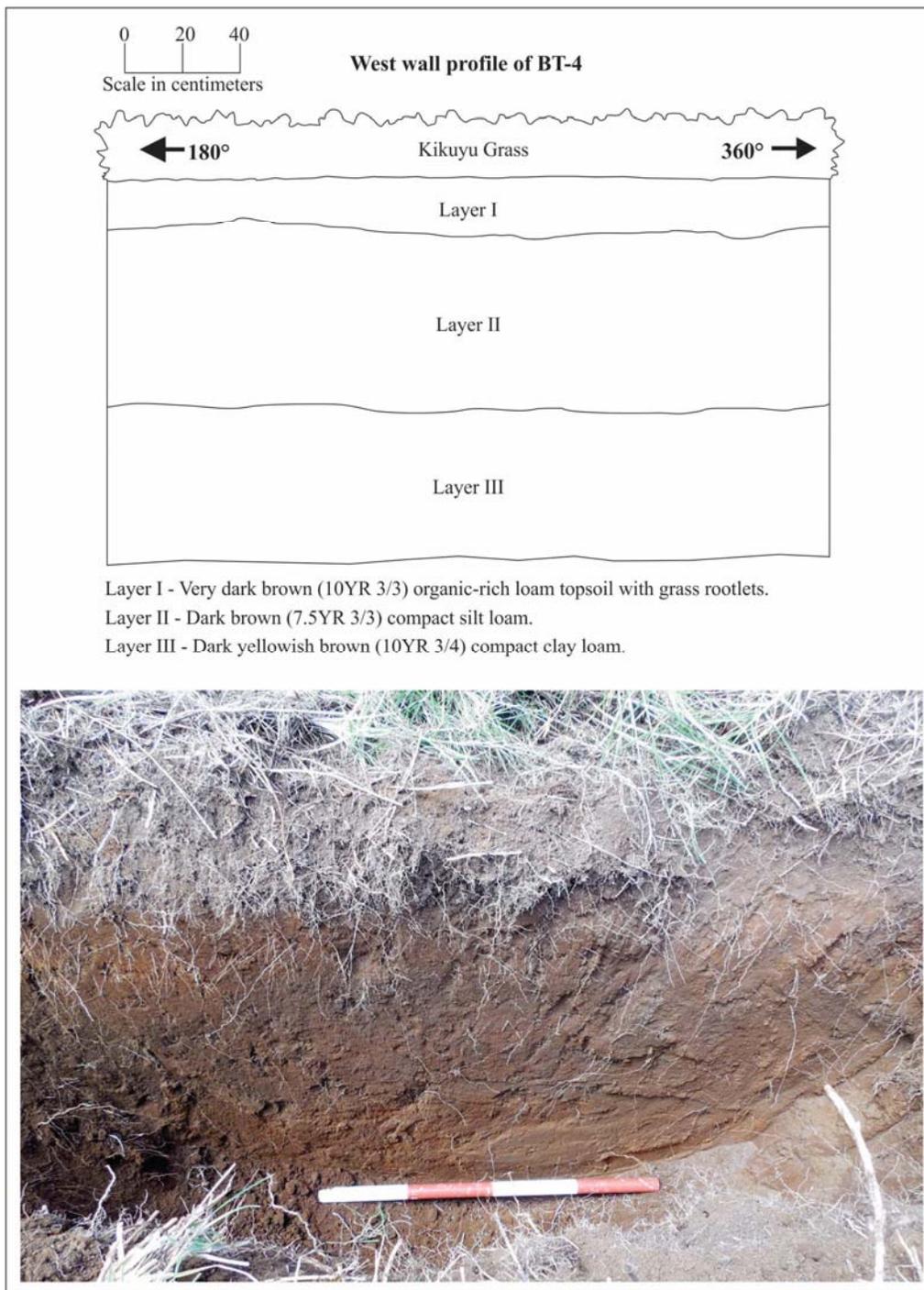


Figure 21. Stratigraphic profile drawing and photograph of BT-4, view to west.

4. Fieldwork

Backhoe Trench 5 (BT-5)

BT-5 was a three meter long by 1.65-meter deep trench located in the west/central portion of the project area; twenty-two meters west of the eastern boundary (see Figure 17). The trench was excavated north/south in the open field. Excavation of BT-5 revealed three stratigraphic layers (Figure 22). Layer I, a roughly 15 to 20 centimeter thick humus layer, consisted of very dark brown (10YR 3/3) loam with grass rootlets. Layer II, a roughly 60 centimeter thick soil layer, consisted of dark brown (10YR 3/3) silt loam with several grass rootlets present. Layer III, a 60+ centimeter thick in-situ soil development layer, consisted of dark yellowish brown (10YR 3/4) compact clay loam that was intermixed with broken 'a'ā bedrock at a depth of 1.4 meters below the surface. BT-5 is not within close proximity to the elevated bedrock outcroppings on the western portion of the project, but the presence of bedrock within the unit is representative of the undulating nature of the 'a'ā flow that lies beneath the soil.

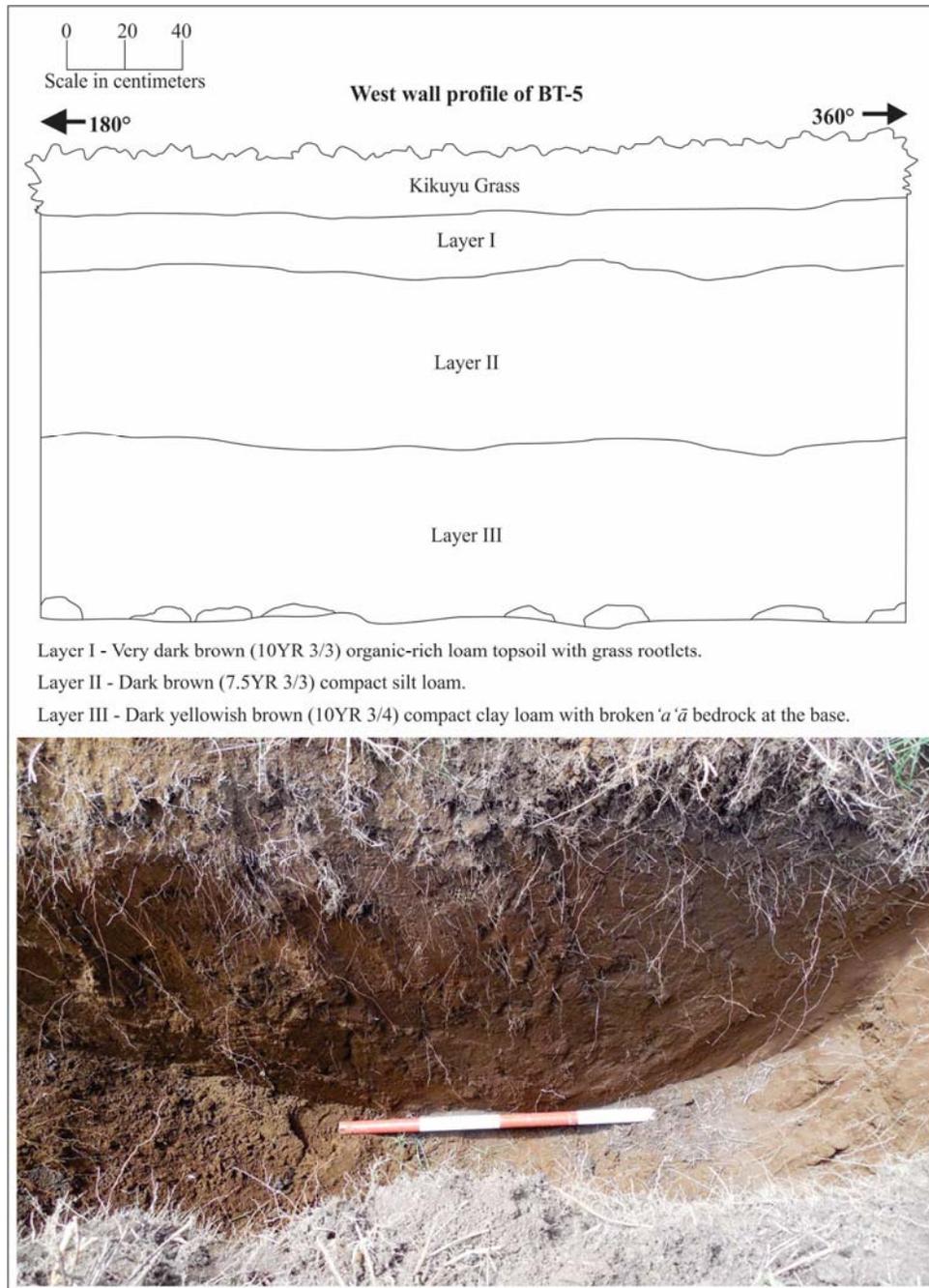


Figure 22. Stratigraphic profile drawing and photograph of BT-5, view to west.

5. CONSULTATION

To gain any further possible insights about the study area, Micah Kamohoalii, who wears many hats within Waimea's Hawaiian community (Cultural Chairman & Cultural Advisor with the Waimea Hawaiian Homesteaders' Association; Chief Executive Officer of Kihikihiniuakea Associates; Executive Director of KĪPU'UPU'U), was enlisted to consult with community members who may have genealogical ties to the *kuleana* awardees of SIHP Site 30084. The following individuals were contacted: Deirdre Bertelmann; Laua'enanuheaulula'au Bertelmann-Sanchez; Woodrow Kamohoalii Young; Kainoa Kamohoalii Hodson; and Queenie Dowsett, who shared that the bulk of the lands in the area were Parker Ranch lands and that her family, the Kauwe family also has family lands and burials in the Pu'ukapu and Mana areas. While most of those consulted (including Micah) recognized the awardee names as genealogical ancestors of theirs, no one had any specific knowledge about the seemingly unique spatial organization of the nineteenth century community within which their ancestors lived.

The members of the Bertelmann family that consulted provided names of current residents of Mana and the families that lived in the areas years ago, explaining that the land surrounding the current study area are DHHL land belong to the Kalani Schutte family. Kalani Schutte's widow Louella Spencer-Schutte is first cousins with Deirdre Bertelmann. These lands were mainly used for ranching. Parker Ranch owned and operated most of the lands in Mana area to the east, which were given to John Palmer Parker by Kamehameha I.

The Kamohoalii family members shared a section of a long *mele* (below) from their family collection that was written about Waimea, and speaks about Mana.

Kuleana i Māna ka makani Kolo 'āpu 'upu 'u
He makani kama 'aina nō Pu 'ukapu
ronmental Transect. Departmental Re 'O Maunakea i hānau i nā pu 'u kini lehu
'O Maunakea i hānau i nā pu 'u kini lehu
'O Makahalau, Pu 'u o Kale, Ka 'ali 'ali, iō Kamoku
E komo i ka 'āina o ke anu akua
I ka unu lā 'au o ke 'a 'ali 'i kū makani
Mai koi mai 'oe, he kuleana ko 'u e

They also acknowledged two awardees (Kaohimaunu and Naihe/Mauae) within the list of *kuleana* recipients within Site 30084 as ancestors of the Kamohoalii family. Woodrow shared that he traveled through this region on horseback as a child and into adulthood while getting to his family ranch, and related that the Mana area was mainly used for ranching, and that several family members worked for Parker Ranch

All of those consulted felt that the landscape that comprises Site 30084 is a culturally significant one and should somehow be kept intact. Others also related that where possible the nineteenth century street names should be used for the current roadways as they get built out within the community.

The primary author of the current report also spoke with Cynthia Spencer, (the widow of Merv Spencer) who owns and resides on the house lot awarded to Kualehelehe (LCAw. 4212:2). She also owns the adjoining house lot parcel awarded to Mauae (LCAw. 3923:2) along with both of the corresponding 3 acre lots (LCAw. 4212:1 and 3923:2). That these house lots and agricultural lots have remained linked in both cases suggests that perhaps Kualehelehe and/or Mauae was/were ancestor(s) of the Spencer family; Cynthia could not confirm this.

Mr. Steve Bowles, owner and resident of the agricultural *kuleana* lot awarded to Moluhi (the *konohiki* at the time of the *Māhele*) was also contacted. Mr. Bowles is a long time resident of Waimea and a history buff. He personally conducted research into the history of his "community" with respect to the seemingly unique nineteenth century use of residential and agricultural space as well as for roadway access and maintenance issues. Mr. Bowles felt that the orderly grid patterned organization of space did not necessarily reflect a pre-*Māhele* land use pattern, but rather was a creation of the *Māhele*.

6. SIGNIFICANCE EVALUATION AND TREATMENT RECOMMENDATIONS

The above-described archaeological site is assessed for its significance based on criteria established and promoted by the DLNR-SHPD and contained in the Hawai'i Administrative Rules 13§13-284-6. This significance evaluation should be considered as preliminary until DLNR-SHPD provides concurrence. For a resource to be considered significant it must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

- A Be associated with events that have made an important contribution to the broad patterns of our history;
- B Be associated with the lives of persons important in our past;
- C Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;
- D Have yielded, or is likely to yield, information important for research on prehistory or history;
- E Have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.

Table 3 presents a summary of the significance and proposed treatment for SIHP Site 30084, a discussion of which is found below.

Table 3. Site significance and treatment recommendations

SIHP Site No.	Function	Age	Significance	Recommended Treatment*
30084	Residential/agricultural	Historic	A,C,D,E	Preservation

SIHP Site 30084, as identified by lot boundaries and roadways, is a seemingly unique example of the organization of space within a middle nineteenth century Hawaiian community, the configuration of which may represent an attempt at intentioned community organization at a time when Hawai'i's traditional land tenure system was being radically altered. As such, this site would be considered significant under multiple criteria: A for the *Māhele* association, C for its uniqueness, D for the research value, and E for the cultural significance assigned by modern-day descendants of the *kuleana* awardees.

The current study area (Parcel 017 and the roadway easement) would be considered elements of Site 30084 as they are map features with locational integrity. As the intact nature of the map elements of this historic landscape is a key factor in this site's significance, the current study area would be considered as contributing to the overall site significance. However, as no specific archaeological resources were discovered within the current study area during the surface survey and subsurface testing, it is the conclusion of the current study that the development of Parcel 017 and the use of portions of former Ala Hikina and Ala Mauka for their intended purposes (access to a property) will have no effect on the integrity of Site 30084 as a historic property.

It is the recommendation of the current study that Site 30084 be preserved as a significant intact landscape by continuing to maintain the current parcel boundaries (prohibiting subdivision) and network of roadways. While it is recognized that preservation of the overall historic landscape is outside the scope of the current study, the following suggestions for future consideration are offered:

- 1) Use of the historic street names for newly built roads within the existing road rights-of-way and the possible renaming of existing roads,
- 2) Retention of current lot configurations, which are reflective of their nineteenth century pattern,
- 3) Nomination of Site 30084 to the both the State and National Registers of Historic Places.

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APPENDIX A —LCAW. MAPS FOR SIHP SITE 30084

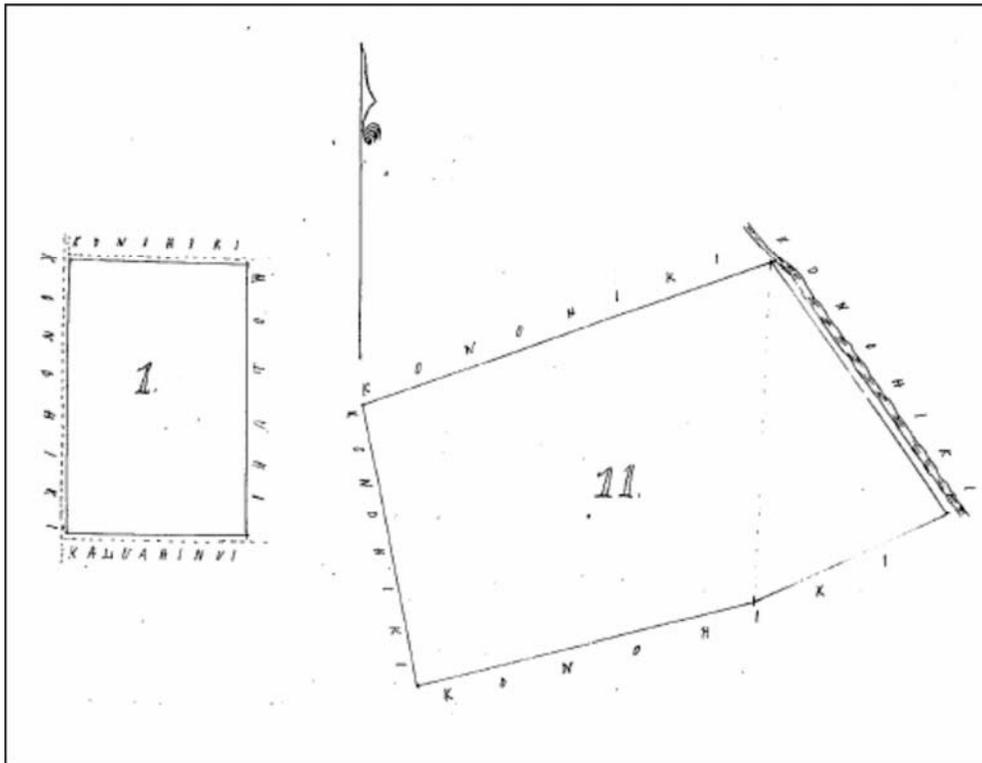


Figure A-1. LCAw. 4230:1 to Kukahekahe.

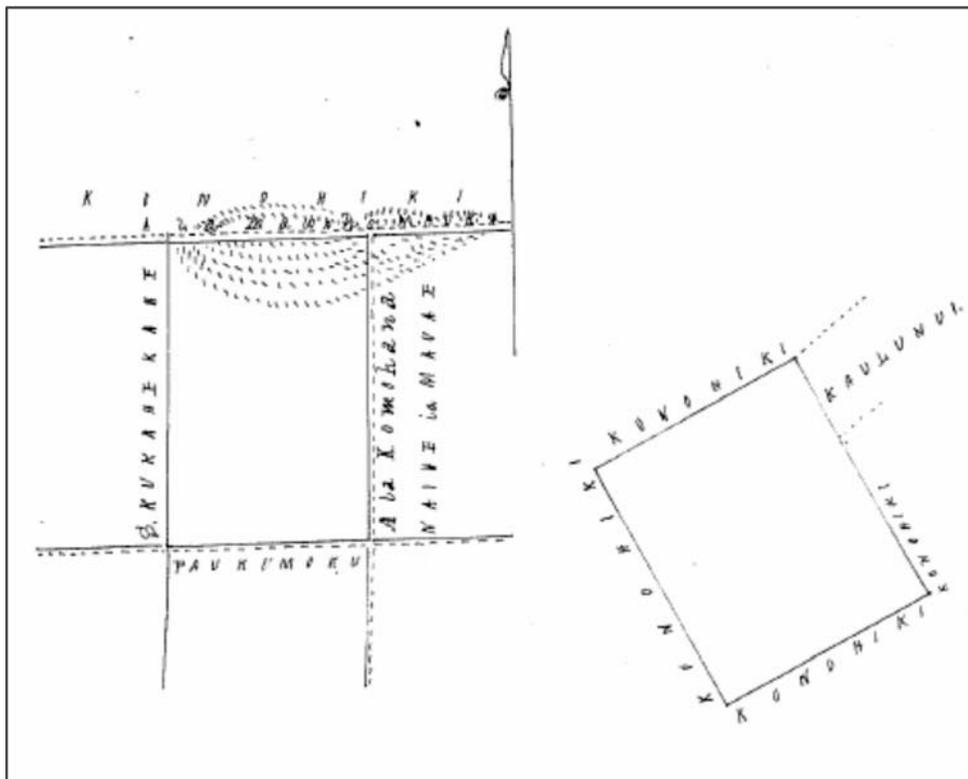


Figure A-2. LCAw. 3686:1 to Moluhi.

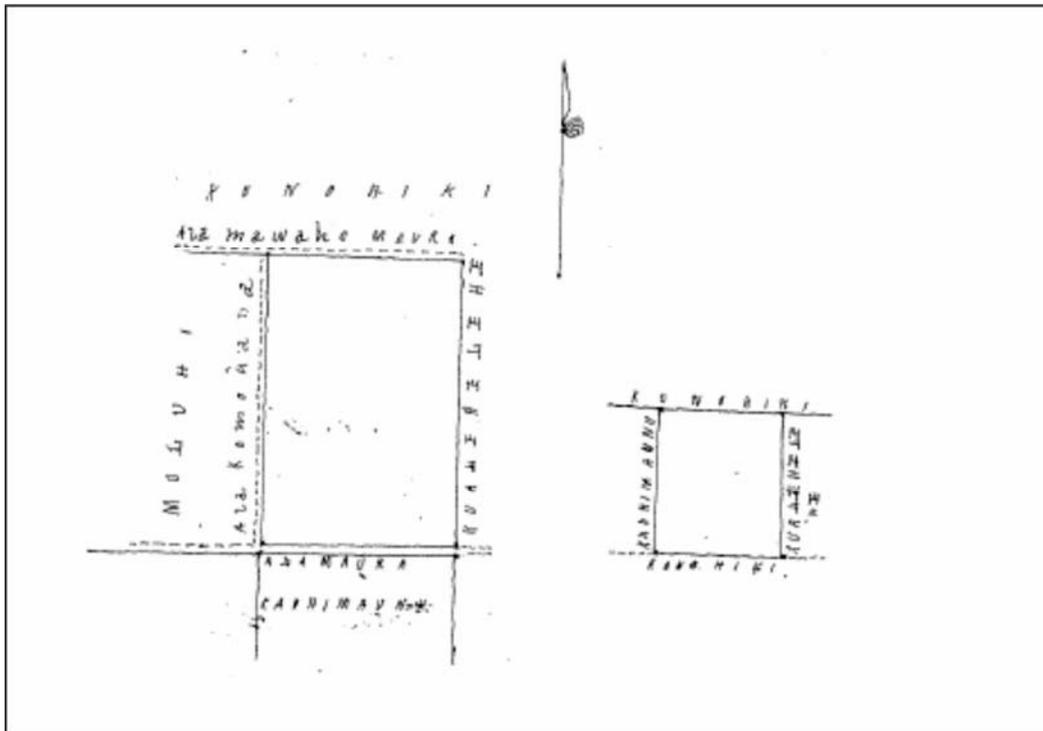


Figure A-3. LCAw. 3923:1 to Naihē to Mauae.

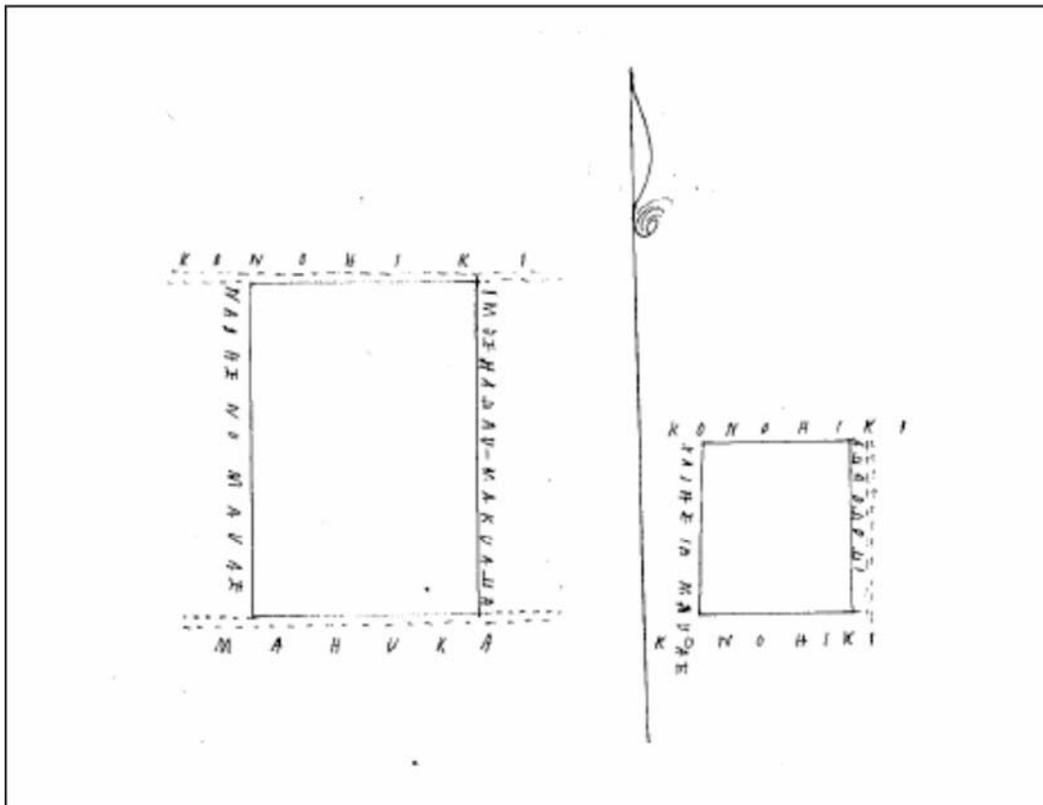


Figure A-4. LCAw. 4212:1 to Kualehelehe.

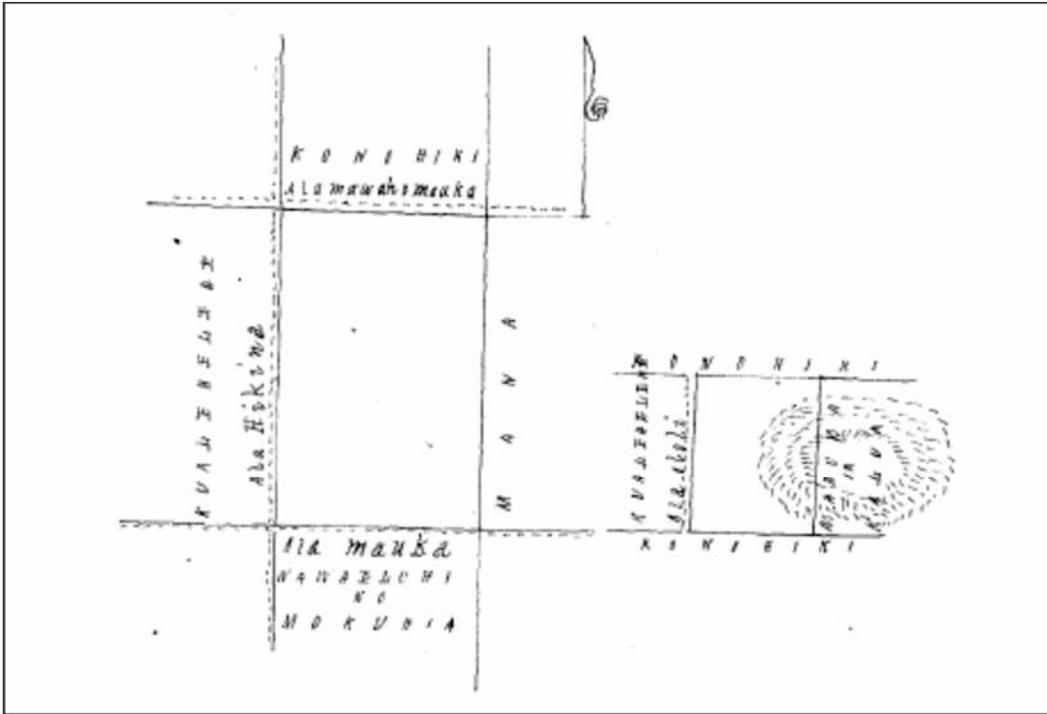


Figure A-5. LCAw. 3733:1 to Imoehalau to Nakuala.

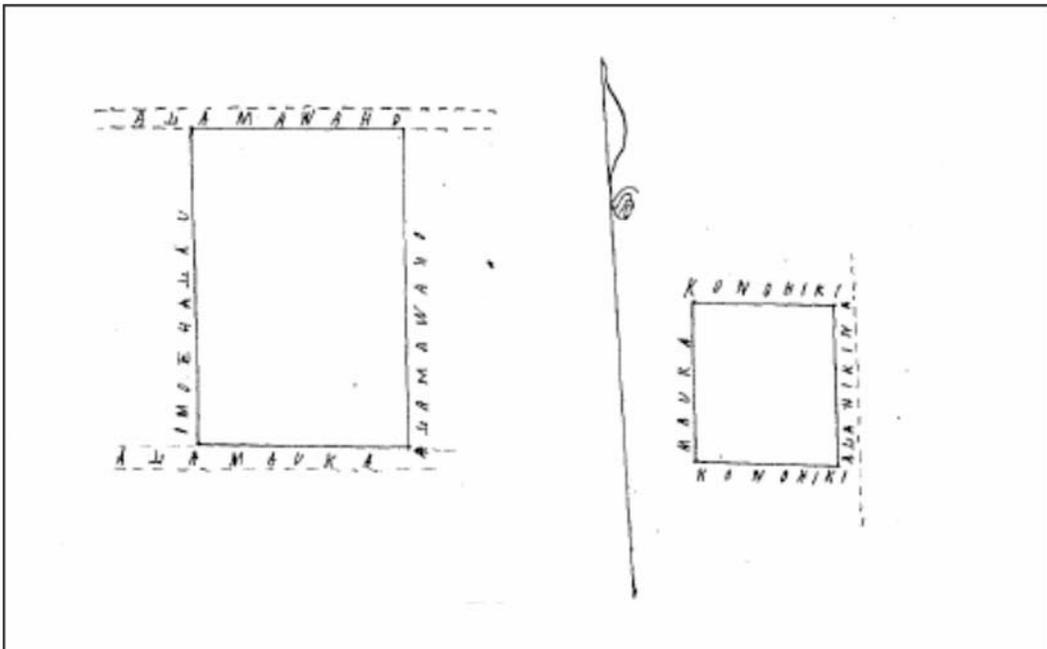


Figure A-6. LCAw. 3672:1 to Mana.

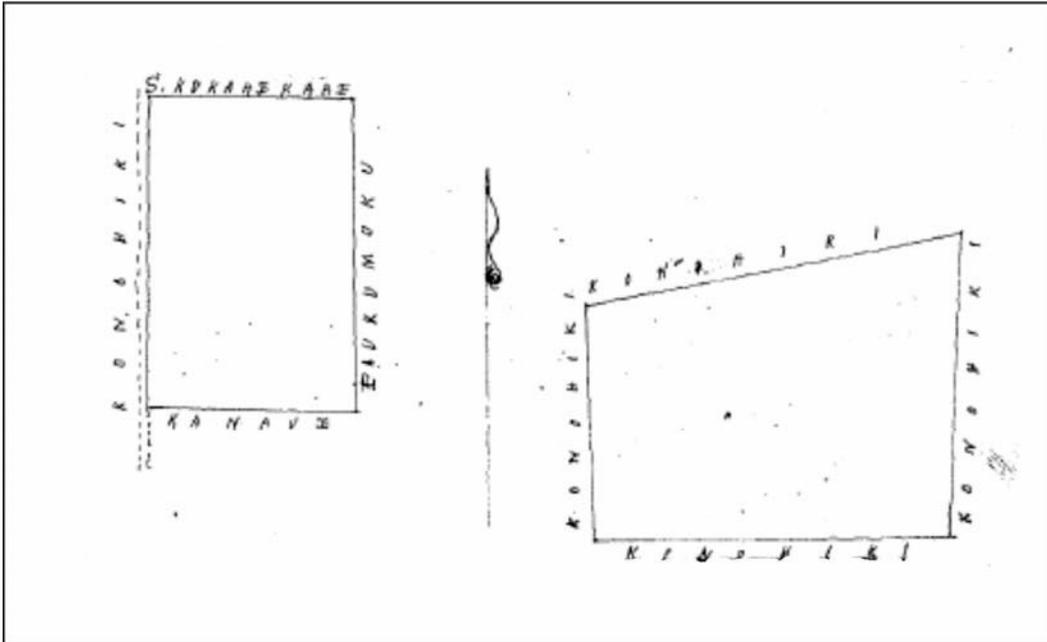


Figure A-7. LCAw. 4183:1 to Kaluahinenui & Kanaue.

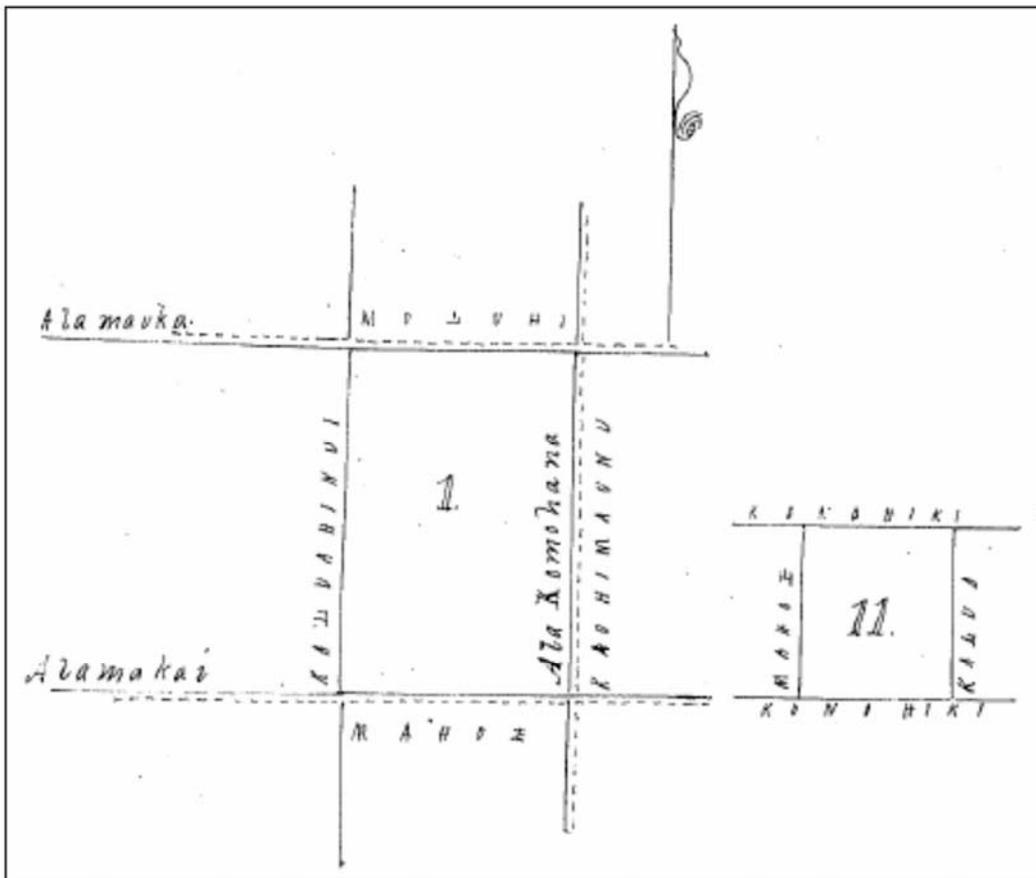


Figure A-8. LCAw. 3842:1 to Paukumoku.

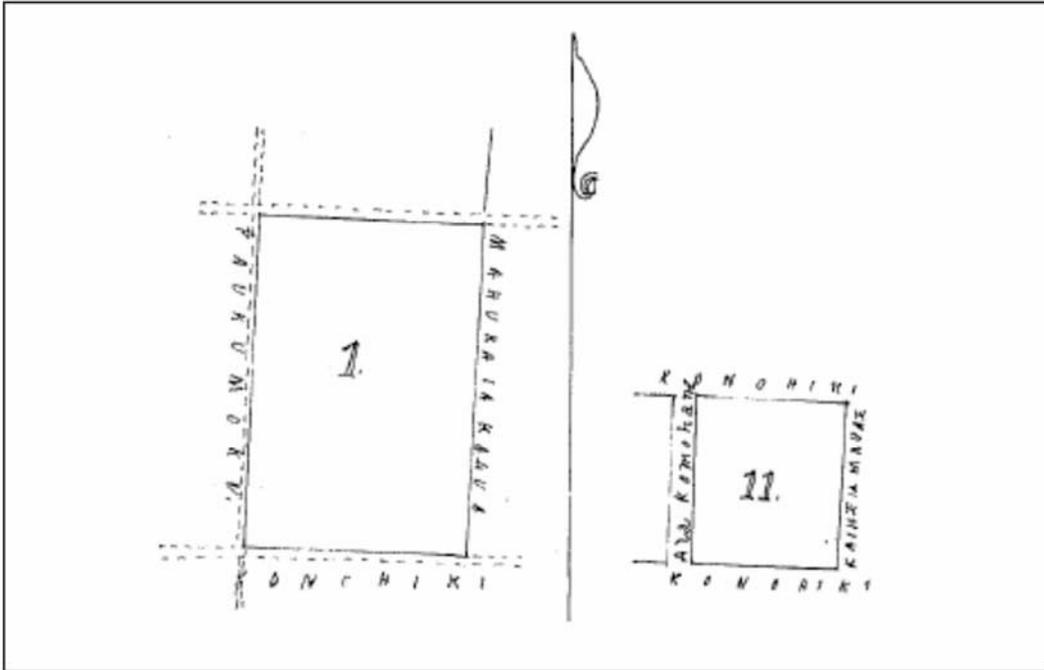


Figure A-9. LCAw. 4218:1 to Kaohimaunu.

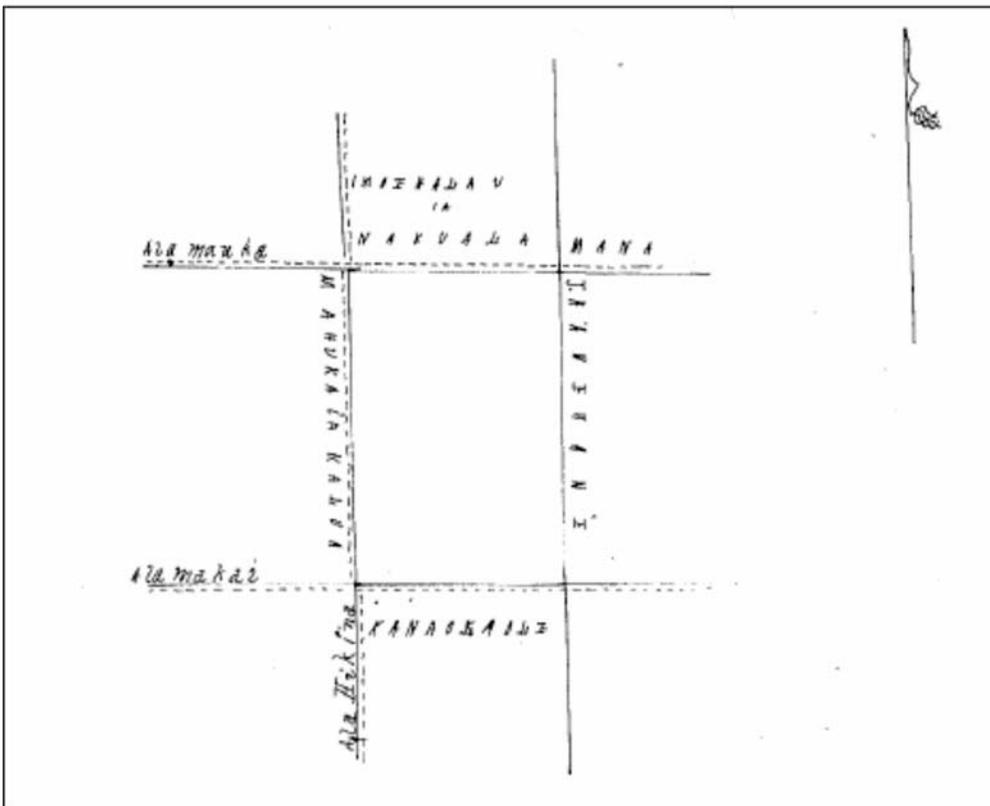


Figure A-10. LCAw. 4210-B to Wawaeluhi to Mokuhia.

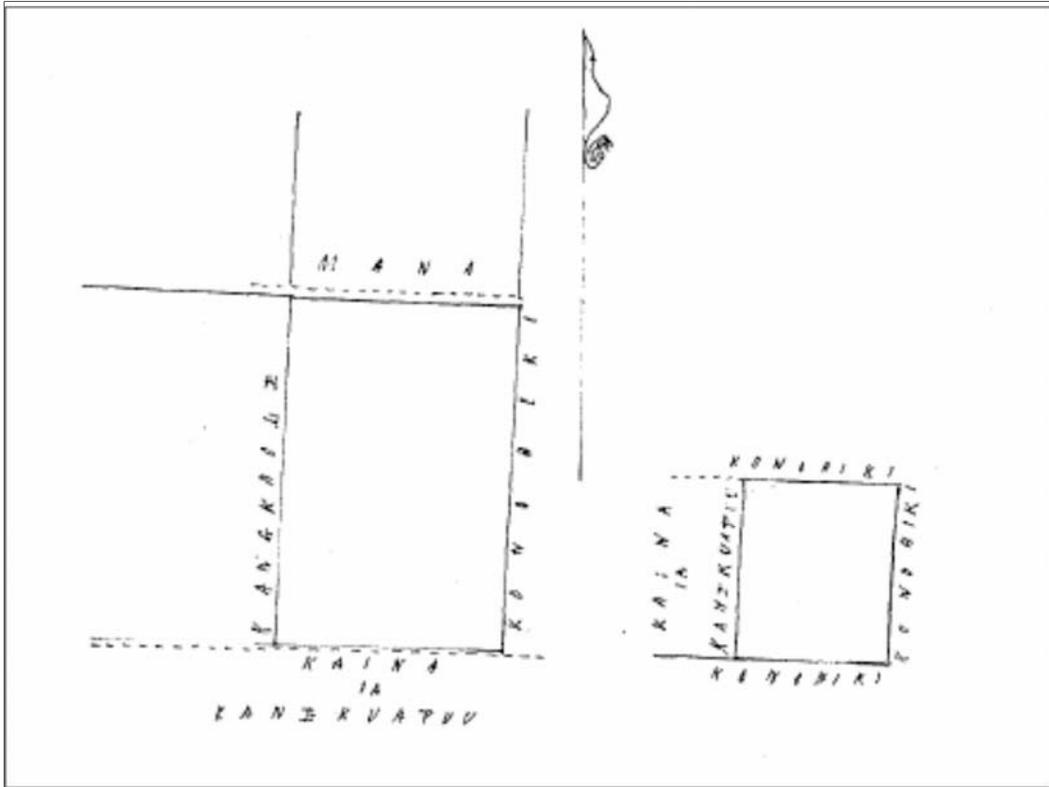


Figure A-11. LCAw. 4214:1 to Hanehane, James.

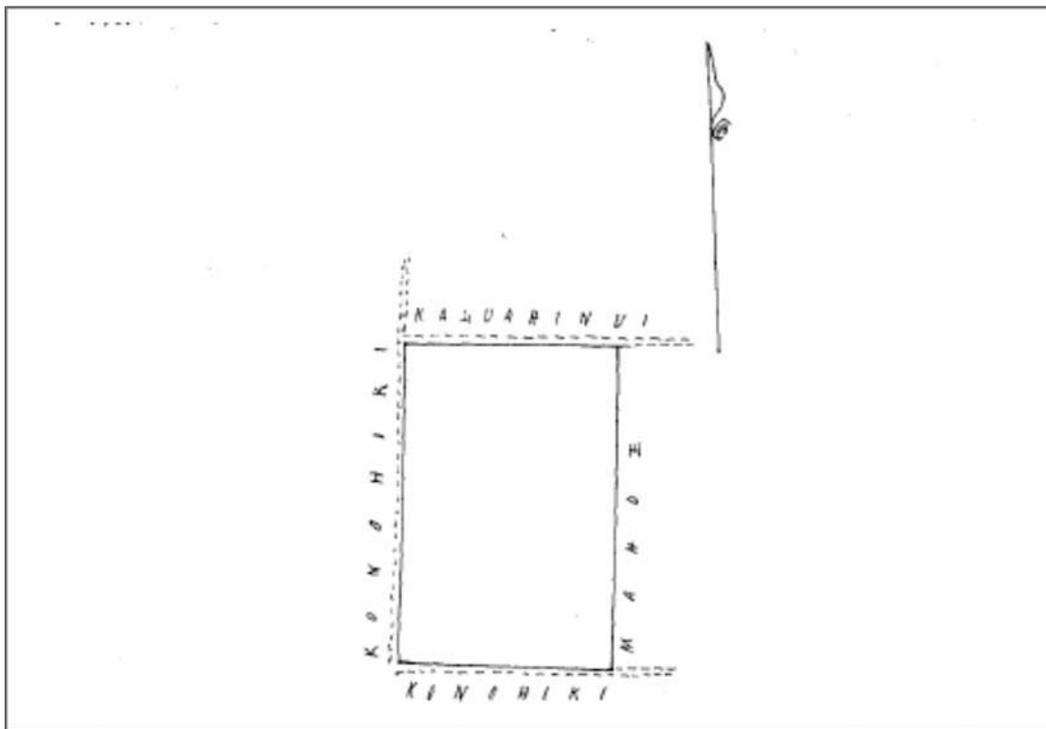


Figure A-12. LCAw. 4183-B to Kanaue.

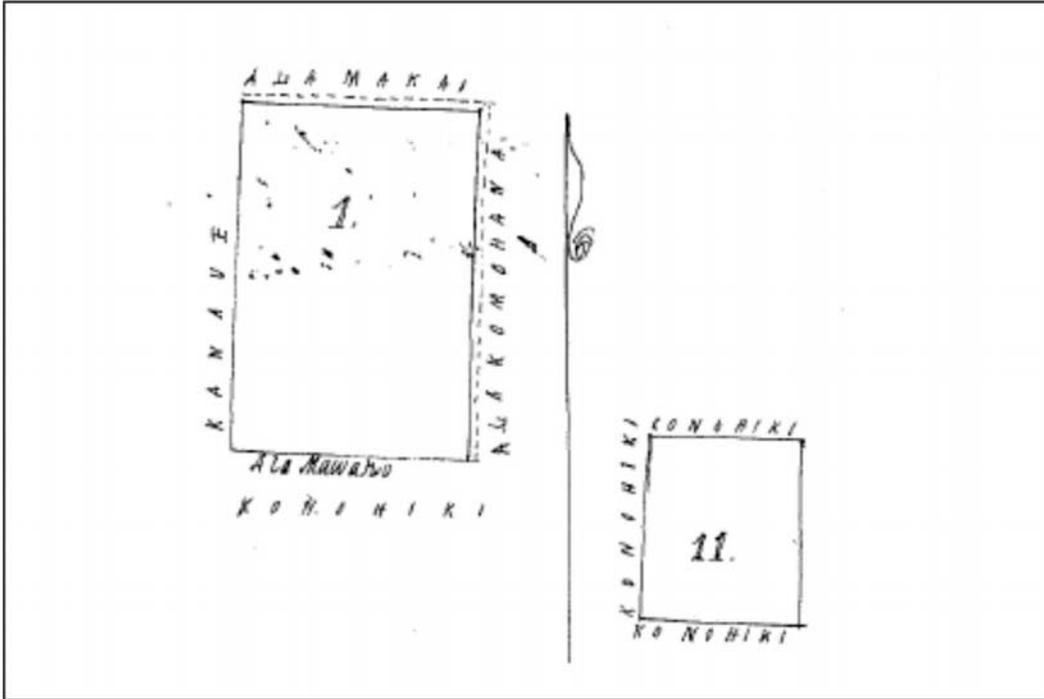


Figure A-13. LCAw. 3685:1 to Mahoe.

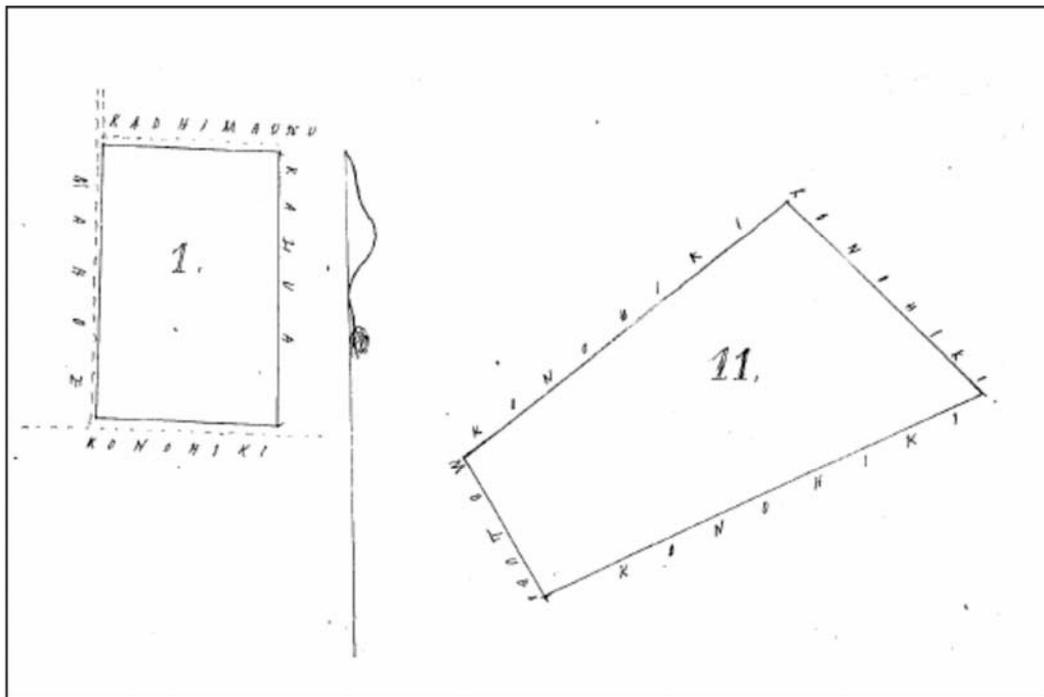


Figure A-14. LCAw. 4227:1 to Kaulunui.

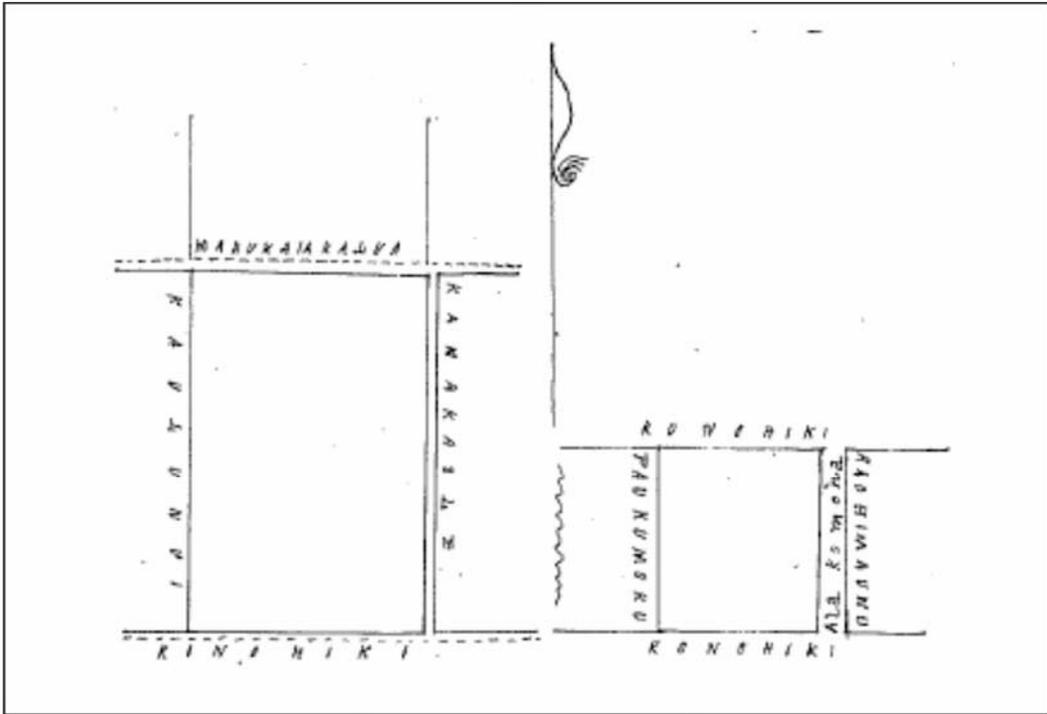


Figure A-15. LCAw. 4210:1 to Kalua.

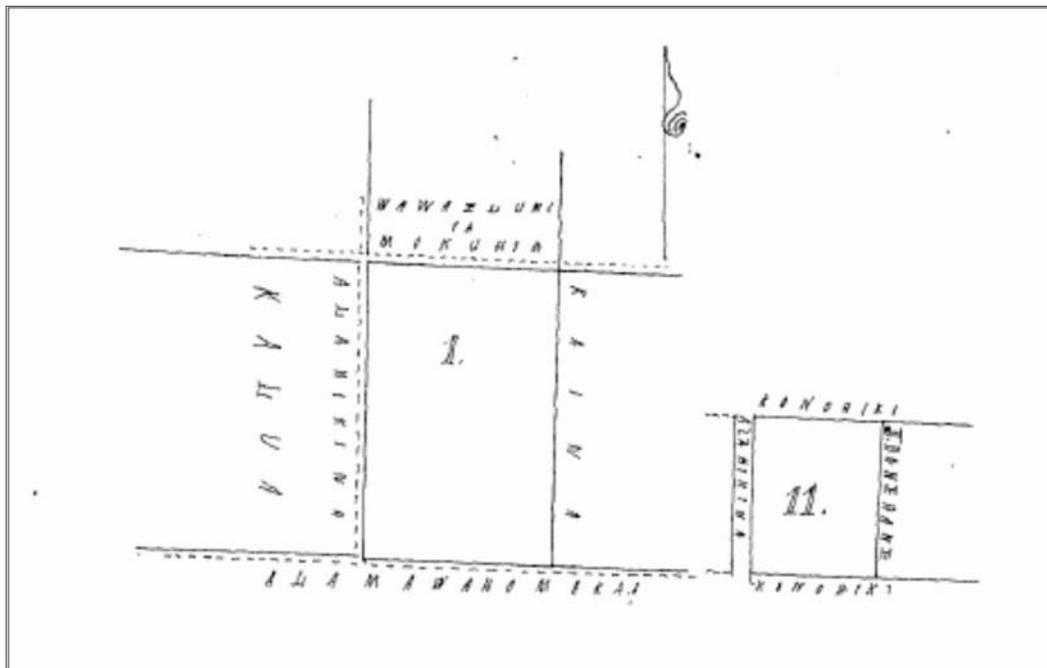


Figure A-16. LCAw. 4130:1 to Kanakaole.

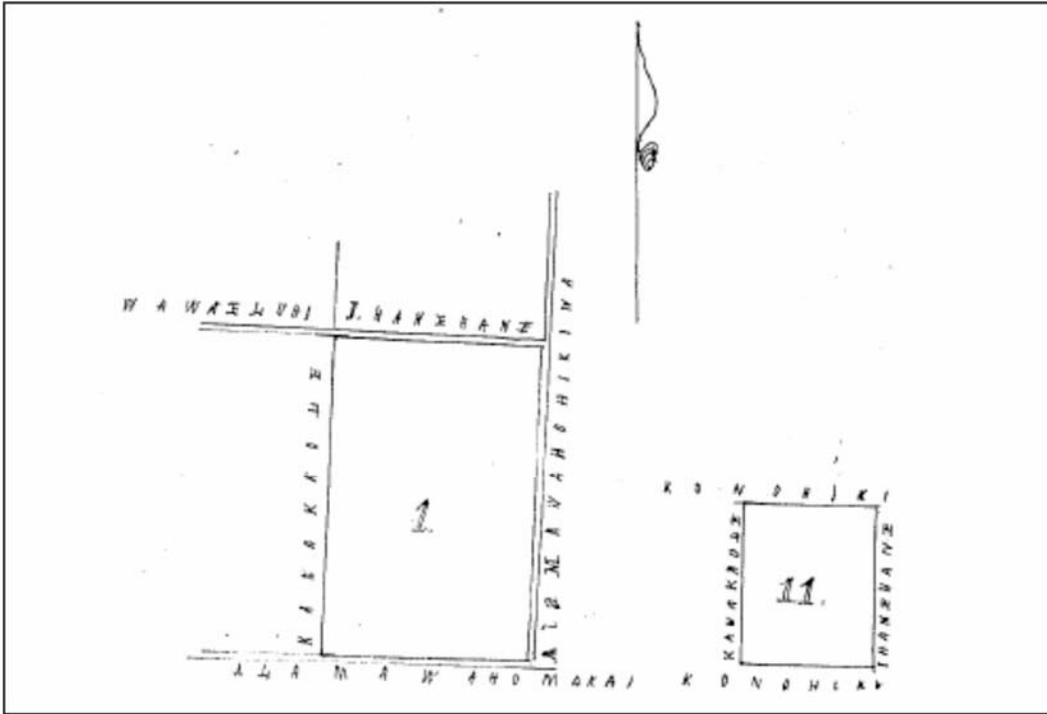


Figure A-17. LCAw. 4132:1 to Kaina to Kanekupuu.

APPENDIX B - LCAw. 3672 Testimony

N.R. 41-42v8

[No. 3672], Mana, Puukapu, January 13, 1848
[listed as No. 3692!]

To the Honorable Land Commissioners, Greetings: Here are the claims for land and a houselot, which is at Kaohia muli. It is a square lot, 40 fathoms by 40 fathoms.

Our farms are as follows: One man has six kihapais/farm/, and the second man also has six farms, within the forest. Our right of occupation was from Moluhi, and our houselot and land are at Puukapu.

MANA

N.T. 29v4

No. 3672, Mana, September 18, 1848

Opunui, sworn and stated: I have seen it in the ili land in Puukapu of seven patches.

1. House-lot: It has been enclosed and there are two houses in there for Mana. Moluhi's boundaries surround the lot.

2. Taro patch with Moluhi's boundaries only.

3, 4, 5, 6 & 7. Each is taro surrounded by Moluhi's boundaries. Moluhi is the konohiki of Puukapu and he had given Mana his interest in 1833, probably. No one has objected to him to this day.

Moluhi, sworn and stated, I have known exactly as Opunui has just stated here. The same applies to the time and I had given him his interest.

[Award 3672; R.P. 7637; Puukapu Waimea S. Kohala; 2 ap.; 3.23 Acs]