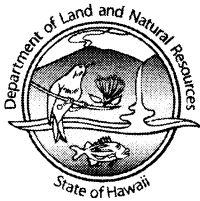

National Park Service
Cultural Landscapes Inventory
2003



Puukohola Heiau National Historic Landmark
Puukohola Heiau National Historic Site

LINDA LINGLE
GOVERNOR OF HAWAII



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DEPARTMENT OF LAND AND NATURAL RESOURCES

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601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

January 16, 2004

Stephanie Toothman, Ph.D.
Program Lead, Cultural Resources, Pacific West Region
1111 Jackson Street, Suite 700
Oakland, California 94607

LOG NO: 2004.0127
DOC NO: 0401NN03

Dear Ms. Toothman,

SUBJECT: Cultural Landscape Inventory for Pu'ukohola Heiau National Historic Landmark

Thank you for your letter of September 23, 2003 and the attached document namely the Level II Cultural Landscape Inventory (CLI) prepared for Pu'ukohola Historic Landmark, within Pu'ukohola Heiau National Historic Site.

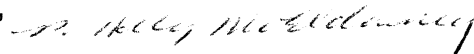
We concur with this document's new evaluation of national significance based on National Register Criteria A, B, C, and D. This new significance determination is consistent with the original NHL nomination prepared for the designation of the Pu'ukohola Heiau Historic Landmark in December of 1962.

It is our understanding that this CLI document incorporates recent and past research about cultural landscape resources within the existing historic NHL boundaries. Our office has a few minor comments pertaining to some of the new information included within this CLI. These comments will not affect our findings in the last paragraph of this letter.

On page 13 in Part 1 for the time period 1719-1819 AD you state: "Kamehameha I establishes his primary residence in Kawaihae at Pelekane." It is our understanding that Kamehameha also had a major residence at Kamakahonu in Kailua-Kona where he died in 1819. Maybe you could say **one of his** residences instead of **primary** for this sentence.

On page 1 of Part 2a, paragraph 4, you give an interpretation of Mailekini that could be one possible interpretation of the name. Because of the antiquity of the name and the nature of the Hawaiian language there could be other possible translations for Mailekini. Maybe somewhere in this CLI you could discuss how you dealt with the translation of place names from Hawaiian to English. As it stands now your translation of place names seems absolute. For example, your translation of Mailekini could be prefaced with the statement, "according to one source i.e. Place Names of Hawai'i by Elbert and Pukui."

The SHPD concurs with the NPS approval of this Level II Cultural Landscape Inventory for Pu'ukohola Heiau National Landmark, within Pu'ukohola Heiau National Historic Site.

Sincerely, 

P. Holly McEldowney, Administrator
State Historic Preservation Division

NN:jen



Daniel Kawaiaea

04/15/2003 10:58 AM

To: Stephanie Toothman/Seattle/NPS@NPS
cc: Cathy Gilbert/Seattle/NPS@NPS, Kimball Koch/OAKLAND/NPS@NPS,
Laila Tamimi/HAVO/NPS@NPS, Laura C Schuster/HAVO/NPS@NPS,
Shaun Provencher/OAKLAND/NPS@NPS, Susan
Dolan/Seattle/NPS@NPS
Subject: Re: FINAL PUHE MEMO

Aloha Stephanie and all,

I appreciate the clarification and accept the CLI recommendations with this understanding. MUCH thanks for all of your patience and help with this issue.

d.k.

Stephanie Toothman

Stephanie Toothman

04/11/2003 02:00 PM
PDT

To: Daniel Kawaiaea/PUHE/NPS@NPS
cc: Laila Tamimi/HAVO/NPS@NPS, Kimball Koch/OAKLAND/NPS@NPS,
Laura C Schuster/HAVO/NPS@NPS, Susan
Dolan/Seattle/NPS@NPS, Cathy Gilbert/Seattle/NPS@NPS, Shaun
Provencher/OAKLAND/NPS@NPS
Subject: FINAL PUHE MEMO

Daniel,

Shaun has prepared the attached memo on the how the CLI recommendations were developed. If you have further concerns, please let us know.

Stephanie

----- Forwarded by Stephanie Toothman/Seattle/NPS on 04/11/2003 02:14 PM -----



Shaun Provencher

04/11/2003 11:04 AM
PDT

To: Stephanie Toothman/Seattle/NPS@NPS
cc:
Subject: FINAL PUHE MEMO

Stephanie, thanks for the help. Attached is the final copy. In addition to Cathy, Susan, Laura and Leila, please put Kimball on the CC list when it goes out to Daniel. Thanks. See you on Sunday.



PUHE electronic memo.doc

Shaun Provencher
Coordinator, Cultural Landscape Inventory
National Park Service, Pacific Great Basin Support Office
1111 Jackson Street, Suite 700
Oakland, CA 94607

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Executive Summary

General Introduction to the CLI

The Cultural Landscapes Inventory (CLI) is a comprehensive inventory of all historically significant landscapes within the National Park System. This evaluated inventory identifies and documents each landscape's location, physical development, significance, National Register of Historic Places eligibility, condition, as well as other valuable information for park management. Inventoried landscapes are listed on, or eligible for, the National Register of Historic Places, or otherwise treated as cultural resources. To automate the inventory, the Cultural Landscapes Automated Inventory Management System (CLAIMS) database was created in 1996. CLAIMS provides an analytical tool for querying information associated with the CLI.

The CLI, like the List of Classified Structures (LCS), assists the National Park Service (NPS) in its efforts to fulfill the identification and management requirements associated with Section 110(a) of the National Historic Preservation Act, NPS Management Policies (2001), and Director's Order #28: Cultural Resource Management (1998). Since launching the CLI nationwide, the NPS, in response to the Government Performance and Results Act (GPRA), is required to report on an annual performance plan that is tied to 6-year strategic plan. The NPS strategic plan has two goals related to cultural landscapes: condition (1a7) and progress on the CLI (1b2b). Because the CLI is the baseline of cultural landscapes in the National Park System, it serves as the vehicle for tracking these goals.

For these reasons, the Park Cultural Landscapes Program considers the completion of the CLI to be a servicewide priority. The information in the CLI is useful at all levels of the park service. At the national and regional levels it is used to inform planning efforts and budget decisions. At the park level, the CLI assists managers to plan, program, and prioritize funds. It is a record of cultural landscape treatment and management decisions and the physical narrative may be used to enhance interpretation programs.

Implementation of the CLI is coordinated on the Region/Support Office level. Each Region/Support Office creates a priority list for CLI work based on park planning needs, proposed development projects, lack of landscape documentation (which adversely affects the preservation or management of the resource), baseline information needs and Region/Support office priorities. This list is updated annually to respond to changing needs and priorities. Completed CLI records are uploaded at the end of the fiscal year to the National Center for Cultural Resources, Park Cultural Landscapes Program in Washington, DC. Only data officially entered into the National Center's CLI database is considered "certified data" for GPRA reporting.

The CLI is completed in a multi-level process with each level corresponding to a specific degree of effort and detail. From Level 0: Park Reconnaissance Survey through Level II: Landscape Analysis and Evaluation, additional information is collected, prior information is refined, and decisions are made regarding if and how to proceed. The relationship between Level 0, I, and II is direct and the CLI for a landscape or component landscape inventory unit is not considered finished until Level II is complete.

A number of steps are involved in completing a Level II inventory record. The process begins when the CLI team meets with park management and staff to clarify the purpose of the CLI and is followed by historical research, documentation, and fieldwork. Information is derived from two efforts: secondary sources that are usually available in the park's or regions' files, libraries, and archives and on-site landscape investigation(s). This information is entered into CLI database as text or graphics. A park report is generated from the database and becomes the vehicle for consultation with the park and the

SHPO/TPO.

Level III: Feature Inventory and Assessment is a distinct inventory level in the CLI and is optional. This level provides an opportunity to inventory and evaluate important landscape features identified at Level II as contributing to the significance of a landscape or component landscape, not listed on the LCS. This level allows for an individual landscape feature to be assessed and the costs associated with treatment recorded.

The ultimate goal of the Park Cultural Landscapes Program is a complete inventory of landscapes, component landscapes, and where appropriate, associated landscape features in the National Park System. The end result, when combined with the LCS, will be an inventory of all physical aspects of any given property.

Relationship between the CLI and a CLR

While there are some similarities, the CLI Level II is not the same as a Cultural Landscape Report (CLR). Using secondary sources, the CLI Level II provides information to establish historic significance by determining whether there are sufficient extant features to convey the property's historic appearance and function. The CLI includes the preliminary identification and analysis to define contributing features, but does not provide the more definitive detail contained within a CLR, which involves more in-depth research, using primary rather than secondary source material.

The CLR is a treatment document and presents recommendations on how to preserve, restore, or rehabilitate the significant landscape and its contributing features based on historical documentation, analysis of existing conditions, and the Secretary of the Interior's standards and guidelines as they apply to the treatment of historic landscapes. The CLI, on the other hand, records impacts to the landscape and condition (good, fair, poor) in consultation with park management. Stabilization costs associated with mitigating impacts may be recorded in the CLI and therefore the CLI may advise on simple and appropriate stabilization measures associated with these costs if that information is not provided elsewhere.

When the park decides to manage and treat an identified cultural landscape, a CLR may be necessary to work through the treatment options and set priorities. A historical landscape architect can assist the park in deciding the appropriate scope of work and an approach for accomplishing the CLR. When minor actions are necessary, a CLI Level II park report may provide sufficient documentation to support the Section 106 compliance process.

Park Information

Park Name: Puukohola Heiau National Historic Site
Administrative Unit: Puukohola Heiau National Historic Site
Park Organization Code: 8310
Park Alpha Code: PUHE

Property Level And CLI Number

Property Level: Landscape
Name: Puukohola Heiau National Historic Landmark
CLI Identification Number: 975035
Parent Landscape CLI ID Number: 975035

Inventory Summary

Inventory Level: Level II

Completion Status:

Level 0

Date Data Collected - Level 0: 4/16/2001
Level 0 Recorder: Duwall, Tamimi
Date Level 0 Entered: 4/16/2001
Level 0 Data Entry Recorder: Duwall, Tamimi
Level 0 Site Visit: Yes

Level I

Date Level I Data Collected: 4/16/2001
Level I Data Collection: Duwall, Tamimi
Date Level I Entered: 4/16/2001
Level I Data Entry Recorder: Duwall, Tamimi
Level I Site Visit: Yes

Level II

Date Level II Data Collected: 4/16/2001
Level II Data Collection: Duwall, Tamimi
Date Level II Entered: 9/15/2003
Level II Data Entry Recorder: Duwall, Tamimi
Level II Site Visit: Yes

Date of Concurrence: 4/15/2003

Explanatory Narrative:

April 16-19, 2001 a draft Level II inventory was compiled by Pacific West Region Team on site. Other authors of this document include Cathy Gilbert, Kimball Koch, Shaun Provencher, Laura Schuster, and Mara Durst. A letter requesting SHPO concurrence with the findings of this inventory was mailed the week of September 21, 2003, and concurrence was returned from the SHPO to the PWR on January 16, 2004.

Landscape Description

Pu'ukohola Heiau National Historic Site is located on the Island of Hawai'i, the eastern most island in the chain of Hawaiian Islands. It is situated on the northwest coast of the island above Kawaihae Bay.

The period of significance for the historic site is 1790-1835 spanning the time period from Kamehameha I constructing Pu'ukohola Heiau (1790), and unifying all of Hawai'i into one political system (1810), until his death (1819), and the death of John Young, his close advisor (1835).

The most notable features associated with Pu'ukohola include Pu'ukohola Heiau and Mailekini Heiau. Pelekane, the site along Kawaihae Bay was the residence of Kamehameha I and the royal court; and the John Young Homestead. These features collectively contribute to the significance and integrity of this historic site.

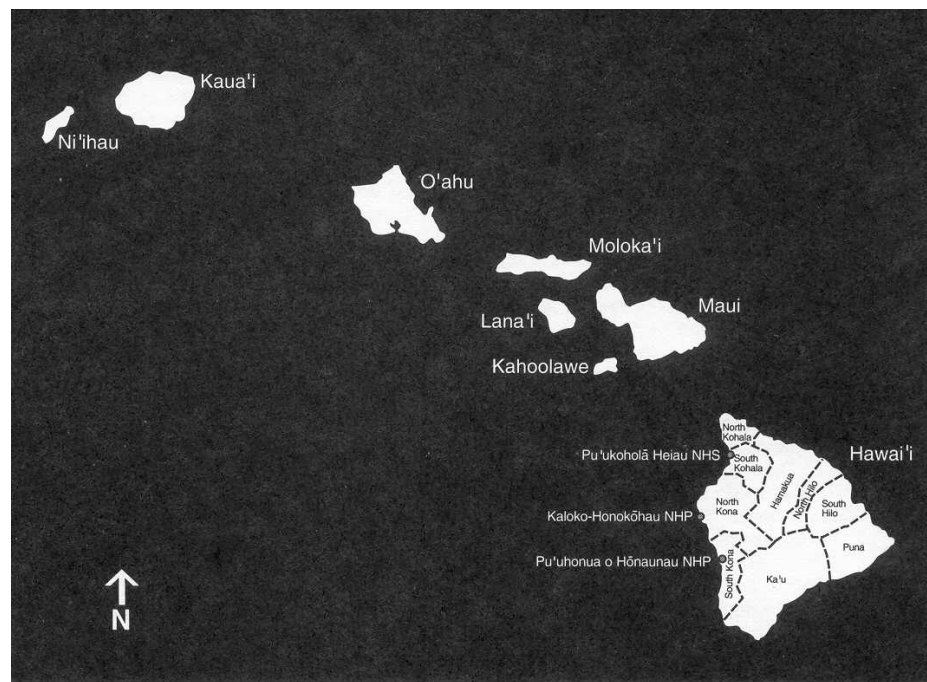
Landscape characteristics evaluated in this inventory include archeological sites, buildings and structures, cultural traditions, spatial organization, topography, vegetation and views and vistas.

All placename and Hawai'ian word translations found in this document were culled from Greene "A Cultural History of Three Traditional Hawaiian Sites on the West Coast of Hawai'i Island" (1993) and Pukui and Elbert "Hawaiian Dictionary" (1986).

Cultural Landscapes Inventory Hierarchy Description

The Pu'ukohola Heiau National Historic Landmark is a single landscape with no component landscapes.

Location Map



Hawai'i

Location map showing Pu'ukohola Heiau National Historic Site on the Island of Hawai'i (Greene 1993).

Boundary Description

The scope of the cultural landscape inventory documented for this report is consistent with the park authorized boundary (includes the entire park boundary). Currently the authorized park boundary is 86.24 acres, 63.34 acres are owned by the NPS and the 22.90 remaining acres are owned by the State of Hawai'i. The park manages the state lands under a Memorandum of Agreement.

The authorized park boundary consists of two polygons, one to the east of Highway 270 and the other to the west of Highway 270. Starting with the polygon on the east side of Highway 270, the UTM points that make up that polygon are: 204884 (e) and 2,217,532 (n), 204,771 and 2,217,541 (n), 205066 (e) and 2217127 (n), 204793 (e) and 2217378 (n). The polygon on the west side of Highway 270 consists of these UTM points: 204652 (e) and 2217162 (n), 204610 (e) and 2217498 (n), 204667 (e) and 2217521 (n), 205255 (e) and 2216927 (n), 204836 (e) and 2216619 (n), 204836 (e) and 2216729 (n), 204734 (e) and 2216734 (n).

The 1962 National Historic Landmark nomination form for the property listed Pu'ukohola Heiau as a 10-acre property and in 1966, it was listed on the register. However, no property boundary, UTM numbers or maps were provided. In 1972, the park established Pu'ukohola Heiau as a National Historic Site, and the boundary included resources associated with the John Young Homestead. In 1973, a National Landmark Nomination was prepared for Pu'ukohola Heiau incorporating Mailekini Heiau, Hale o Kapuni, and the Leaning Post used by Kamehameha I. The nomination proposed a district of 76.57 acres. However, the area delineated on the USGS map was 100 acres, much of it extending out to the sea. The current authorized park boundary is 86 acres. This off-shore boundary is not clearly defined in the metes and bounds or any known document.

Regional Context

Physiographic Context

Pu'ukohola Heiau is sited along the leeward coast of the Island of Hawai'i and on the transition zone between Kohala Mountain and Mauna Kea. The hill is the prominent land feature that rises 130 feet east, above the shoreline. Along the shoreline and at the foot of the prominent hill lies Pelekane, a small bay with white sand beach and coconut trees.

The physiographic character of the site has been altered since the historic period by environmental dynamics such as hurricanes, tsunamis, and the establishment of non-native vegetation. Modern development including the harbor construction (which altered the morphology of the shoreline), road construction, and physical manipulation of the gulches has altered the character of the site.

Cultural Context

Pu'ukohola Heiau is the most prominent structure on the crest of the hill (see topography section). Mailekini Heiau is located just below Pu'ukohola Heiau and Hale o Kapuni Heiau is submerged off shore to the west of Mailekini and Pu'ukohola heiau, however, it's exact location is unknown. These temples were sacred to ancient Hawaii and are still considered sacred by some Hawaiian communities. Pelekane area contains architectural and archeological remnants from the royal courtyard and residences but has not been investigated. The John Young Homestead also contains architectural and archeological remnants from the first European influenced architectural complex built in the Hawaiian Islands.

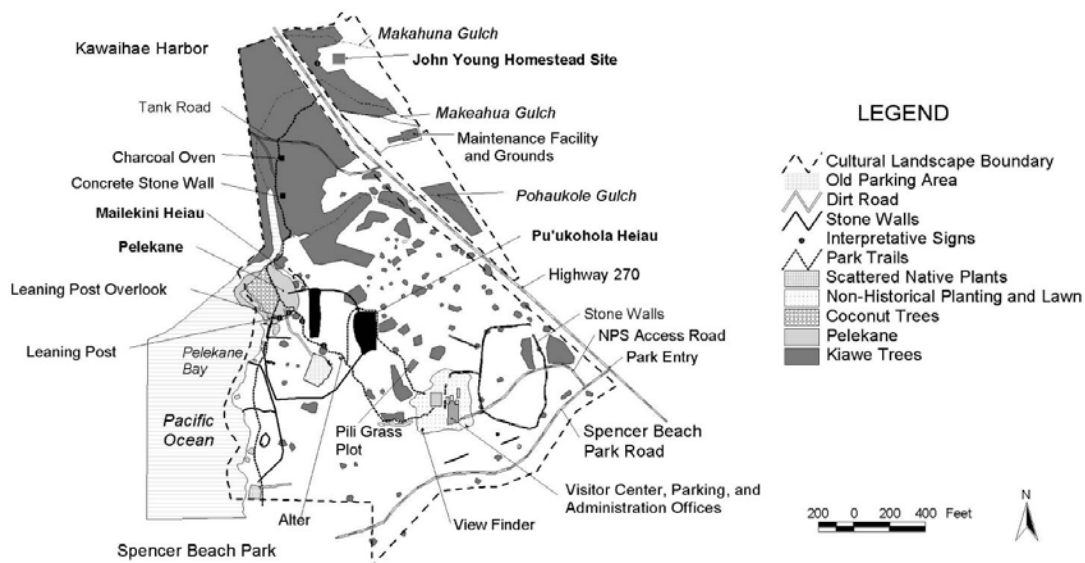
Today the site is used by the community for ceremonial, recreational (fishing) and cultural events.

Political Context

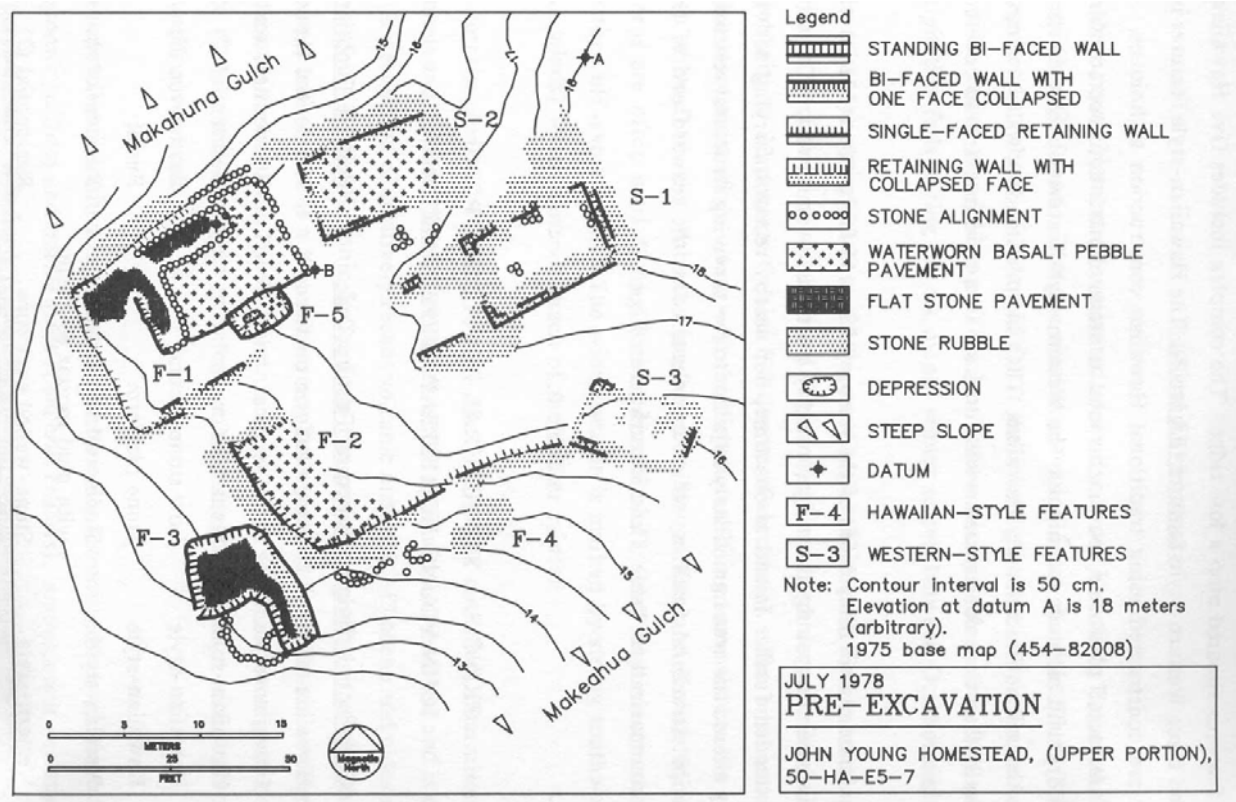
Kamehameha I, with the help of many people including himself, built Pu'ukohola Heiau, and was the first to unite all the Hawaiian Islands. Pelekane was the royal residence where Kamehameha I resided during building of the Heiau. The area surrounding Pelekane and the heiau were kapu or taboo to commoners. Both Kamehameha I and his closest advisor John Young built and defended the Kingdom of Hawai'i while living here. John Young provided technical military assistance, used Mailekini Heiau as a fortification, and propelled Hawai'i into the international economic and political arena.

Site Plan

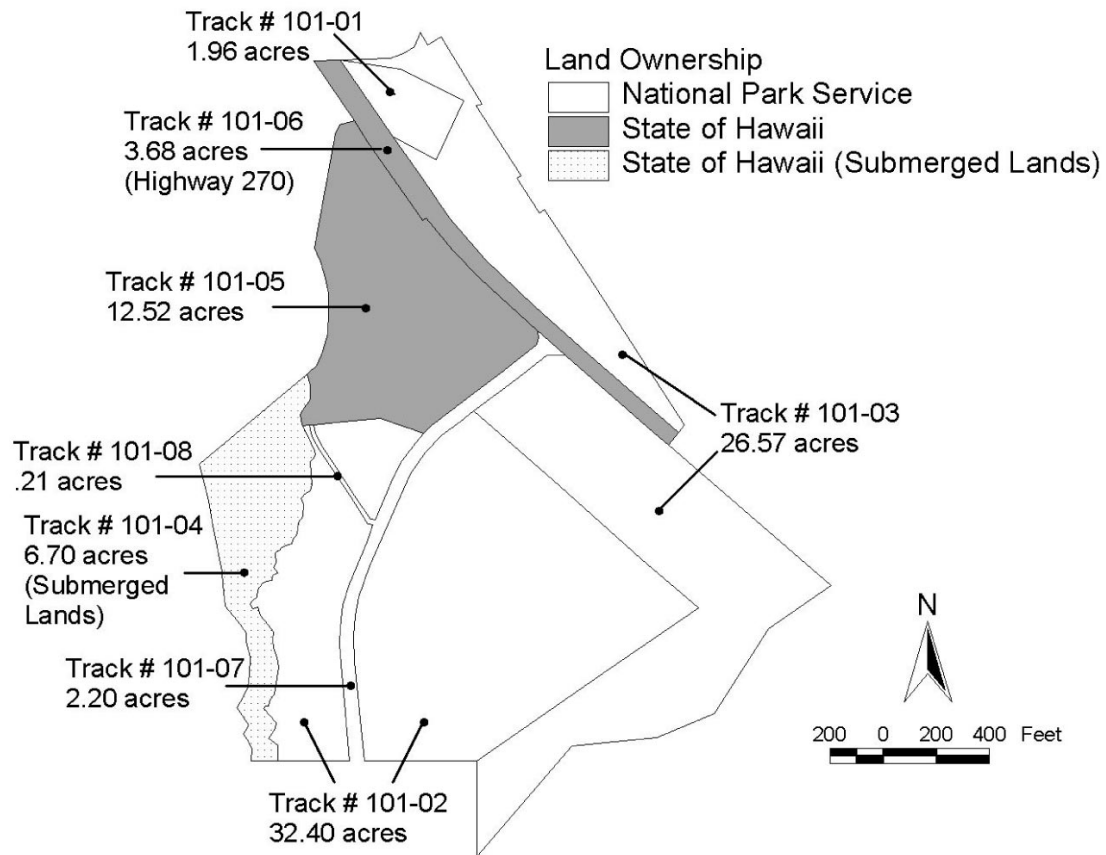
Site plan identifying major features at Pu'u'ukohola Heiau National Historic Site. See Supplemental Information at the end of this document for a full-scale image (CLI Team/PISO/2003).



Map of the ruins of the John Young Homestead Site (Rosendahl and Carter 1988).



Map showing land ownership for the Pu'ukohola Heiau National Historic Site (CLI Team/PISO/2003).



Chronology

Year	Event	Description
300 - 400 AD	Settled	The first of the Polynesian colonizers, believed to be the Marquesans, arrive in the Hawaiian Islands bringing the first Polynesian introduced plants to Hawai'i.
600 - 1100 AD	Colonized	The developmental period of pre-Hawaiian culture which eventually evolved into completely distinct Hawaiian material culture, characterized in part by small round-ended thatched housing structures with internal stone-outlined hearths.
1580 AD	Built	Oral tradition suggests that a heiau was built on the same site of Pu'ukohola Heiau.
1760 AD	Built	Mailekini Heiau was built by a district chief, on the slopes directly below Pu'ukohola Heiau.
1790 - 1791 AD	Built	Pu'ukohola Heiau was built on the top of a hill by thousands of Hawaiians including Kamehameha I.
1790 - 1819 AD	Established	Kamehameha I establishes one of his residences in Kawaihae at Pelekane.
1793 AD	Domesticated	Captain Vancouver introduces cattle to Hawai'i. Large herds of cattle roamed the island damaging residences, destroying agricultural crops and heavily impacting the natural vegetation and landscapes of the island.
1793 AD	Homesteaded	Kamehameha I gives John Young a parcel of land (the ahupua'a Kawaihae Hikina) following the ancient custom of distributing lands among loyal supporters.
1793 - 1798 AD	Built	John Young and his first wife Namuku'elua reside in a traditional Hawaiian thatch and stone structure in the lower portion of the Kawaihae homestead.

1798 - 1799 AD	Built	John Young begins construction of four buildings at his homestead at Kawaihae. Island stones are laid in mud and plastered on both interior and exterior surfaces. Thatched roofs with posts were combined with the plastered walls. Architect: John Young
1803 AD	Domesticated	Horses are introduced to Hawai'i. Existing trail systems that fell within the current park boundary are widened to accommodate horses and horse drawn wagons.
1812 AD	Altered	Mailekini Heiau is used as a fort with 21 cannons placed to protect Kawaihae Bay, Kamehameha I and the royal court and the Kingdom's arsenal now housed at Kawaihae.
1819 AD	Abandoned	Kamehameha I dies. Kamehameha II abolishes the kapu system and the heiau are abandoned.
1828 AD	Planted	Kiawe tree is introduced to O'ahu and eventually spreads throughout the Hawaiian Islands. This tree created forests so thick that the Pu'ukohola Heiau was not visible from the Spencer Beach Road (ca. 1960s).
1835 AD	Abandoned	John Young dies in Honolulu, Oahu. The homestead at Kawaihae is abandoned.
1848 AD	Land Transfer	The Land Commission awards the lands encompassing the John Young Homestead to John Young Jr.
1851 AD	Land Transfer	Land Commission awards the lower portion of the John Young Homestead to the headman Keoni Ana, directly under the chief of Kawaihae Hikina.
1857 AD	Land Transfer	Keoni Ana dies. One-third of Ana's estate including Kawaihae is bequeathed to his niece Queen Emma, granddaughter of John Young and wife to Kamehameha IV.
1900 AD	Altered	The local community uses Mailekini Heiau as a burial ground.

1920 AD	Altered	Parker Ranch constructs a wagon road through the Pelekane area. This wagon road is used as a toll road and for alternative beach access to the shoreline trail.
1928 AD	Reconstructed	Undocumented work to restore Pu'ukohola Heiau takes place (Ladd 1986).
1930 AD	Built	Fishermen and hog farmers take up residence in the Pelekane area. Temporary small fishponds are constructed.
1930 AD	Planted	Invasive buffelgrass (<i>Cenchrus ciliaris</i>) is introduced to Hawai'i as a cultivated plant.
1936 AD	Built	The Spencer Beach Park Road is constructed passing between Pu'ukohola Heiau and Mailekini Heiau.
1940 AD	Built	During World War II a military access road is constructed through the northern section of Pelekane for transporting military tanks from the harbor at Kawaihae to the U.S. Army Pohakuloa Training Area.
1958 AD	Demolished	The house lot in which the lower portion of the John Young Homestead (Pahukanilua) was situated is condemned by the Territory of Hawai'i for deep water port improvements to the Kawaihae harbor.
1959 AD	Built	The Kawaihae harbor deep-water port construction results in a loss of the lower portion of the John Young Homestead.
1960 AD	Altered	A concrete mixing plant operates immediately inland of Pelekane. The cleaning and flushing of delivery trucks washes surplus liquid concrete down the gulch into the Pelekane area.
1962 AD	Preserved	Pu'ukohola Heiau is designated a National Historic Landmark.
1966 AD	Preserved	Pu'ukohola Heiau is listed in the National Register of Historic Places.

1969 - 1970 AD	Stabilized	The Army Corps of Engineers conducts excavations of the coral reef at Kawaihae Bay to accommodate the light-draft boat harbor. Stabilization efforts for possible impacts to Pu'ukohola and Mailekini heiau are undertaken.
1972 AD	Preserved	Pu'ukohola Heiau National Historic Site is established as a unit of the National Park Service.
1972 - 1973 AD	Altered	In April, a severe earthquake causes damage to Pu'ukohola Heiau and structural features at the John Young Homestead.
1974 AD	Stabilized	A wood and metal shelter is erected over the house of John Young to provide a temporary preservation and protection measure.
1975 - 1976 AD	Stabilized	Two phases of stabilization efforts for Pu'ukohola Heiau are conducted.
1976 AD	Altered	Highway 270 is constructed and used as the official access road between Waimea and Kawaihae.
1990 AD	Expanded	The boundary for Pu'ukohola Heiau National Historic Site expands to 76.57 acres with a land donation by the Queen Emma Foundation.
1991 AD	Destroyed	During a fire suppression exercise, a bulldozer damages structural features and subsurface resources of the upper portion of the John Young Homestead.
1999 AD	Stabilized	Excavations are conducted at the John Young Homestead to assess damage. Stabilization measures conducted on several structures.
2002 AD	Removed	The Old Spencer Beach Park Road is removed in an effort to restore the historic scene.

Statement Of Significance

Pu'ukohola Heiau National Historic Site is a nationally significant cultural landscape for its association with the life Kamehameha I and the political unification of the Hawaiian Islands. The period of significance for the historic site is 1790 to 1835. The site contains: three traditional Hawaiian heiau (temples), two on the prominent hill and one off-shore; Pelekane, the area of the royal residence; and the homestead site of John Young, advisor to Kamehameha I. The landscape features collectively reflect the political, religious, and economic activities of pre-historic and historic Hawai'i. The site is significant for the National Register criteria A, B, C, and D.

Criterion A: The site is directly associated with the political unification of the Hawaiian Islands under Kamehameha I. Pu'ukohola Heiau was built in response to a religious prophecy that promised political power to Kamehameha I if the heiau was built and dedicated to the Hawaiian War God, Ku ka 'ili moku. After completion of the heiau, Kamehameha I defeated his rival thereby consolidating political power and becoming the paramount chief and ruler of Hawai'i.

Criterion B: The site is directly associated with both Kamehameha I and John Young. Kamehameha I facilitated the building of the Pu'ukohola Heiau. As the paramount chief of the Island of Hawai'i, he rose to power and consolidated the Hawaiian Islands under one rule. He built and defended the kingdom while increasing trade in international markets until his death in 1819.

John Young, one of the first Englishmen to take up residence in Hawai'i, became a close advisor to Kamehameha I. He provided the technological knowledge of firearms and fortifications that were indispensable to the military successes of Kamehameha I and the unification of Hawai'i. John Young influenced Kamehameha I to set a course that led Hawai'i into the sphere of American influence and ultimately into statehood (Apple 1969:22). Young's descendants, through his second marriage to a niece of Kamehameha I, became part of the Kamehameha dynasty. John Young assisted in the planning and building of the governmental foundation for the new Kingdom of Hawai'i. Together they promoted trade and commerce with foreign ships, establishing an economic base for the New Kingdom (Apple 1978:5).

Criterion C: The west coast of Hawai'i Island contains a number of significant heiau. Pu'ukohola Heiau is one of the most imposing of these structures and is considered the last major heiau to be constructed in the Hawaiian Islands. Pu'ukohola Heiau is one of the most important heiau in the Hawaiian Islands due to its historic connections to Hawaiian social, political, and religious systems because of its connection with Kamehameha I and his quest of uniting the Hawaiian Islands. The landscape embodies the distinctive characteristics of both pre and post-contact native Hawaiian vernacular construction methods and retains, in Mailekini and Pu'ukohola heiau, outstanding examples of both lono (agriculture) and luakini (war) temples.

The John Young Homestead exists as one of, if not the first, example of Western-style structures built in the Hawaiian Islands with local materials. The use of mortar and coral-based plasters as well as architectural details differentiated these buildings from vernacular Hawaiian construction techniques found throughout the islands.

Criterion D: Archeological features within the Pu'ukohola National Historic Site have yet to be thoroughly evaluated. During a century of rapid social change in Hawaiian history, there was a loss of knowledge about these ancient structures, especially Mailekini Heiau, and a lack of reliable means of dating archeological remains (Dye 1989:18-19). Any further archeological research and study is likely to yield further insight to the social, religious and political changes in the prehistoric and historic periods.

The research potential of the John Young Homestead includes structural and functional comparisons with other western style and Hawaiian style features on the homestead. Questions relating to the interface between Hawaiian and Western use of space and material goods may be addressed.

Physical History

Building of Pu'ukohola Heiau to the Death of John Young (1790-1835)

In the late 1780s, Kamehameha I began his quest to unify all the Hawaiian Islands under his rule as a king. A priest from the king's court received a prophecy. The guarantee was that Kamehameha I would conquer all of the Hawaiian Islands if he built a heiau (temple) in honor Ku ka 'ili moku (war god). Priests determined the site, orientation, dimensions and configuration of the heiau and performed ceremonies throughout its construction (Kuykendall 1938:37). Pu'ukohola (meaning "the hill of the whale") Heiau was constructed by thousands of Hawaiians including Kamehameha I himself.

In order to construct the heiau, a human chain spanned from Waipio Valley to the site. Stones for construction of Pu'ukohola heiau were passed from hand to hand. During the construction of the temple, human sacrifices were offered to assure Ku ka 'ili moku of the king's devotion. The heiau and its associated structures were completed in the summer of 1791. A few months later, Kamehameha I fulfilled the prophecy and was successful in defeating the rival chief, Keoua. Kamehameha I then conquered the three neighboring islands, solidifying his power.

Pu'ukohola Heiau is situated on a prominence, at the top of the hill with expansive views of Kawaihae Bay and the shoreline, the Pacific Ocean, two other heiau below, and the northwestern foothills of Mauna Kea. The heiau is a multi-platformed structure with several internal components including a massive wall and three terraces. It is a mortarless stacked stone structure believed to be the last of the large heiau built in the Hawaiian Islands.

Mailekini (meaning "many maile (native vine plant) vines") Heiau is located just below Pu'ukohola on the Hill of the Whale. It is a smaller structure and appears to have been linked with Pu'ukohola Heiau with stone walls that formed a taboo kapu area around and between the heiau. Mailekini Heiau is believed to have been constructed by a district chief during the prehistoric period of warfare.

Pelekane, a coconut shaded beach area, located just below and northwest of Pu'ukohola and Mailekini heiau, is the site where Kamehameha I established his primary residence while constructing Pu'ukohola Heiau. Pelekane was the location of the royal court of Kamehameha I and included houses for the royal family, priest, and other nobility. Pelekane was a taboo or kapu area, limited to those associated with royalty. It is the birthplace of Queen Kamamalu, the daughter of Kamehameha I and Kaheieimalie (about 1802). Later, Queen Emma, granddaughter of John Young and Kamehameha I, who became the bride of Kamehameha IV, may also have been born or resided at Pelekane (Kelly 1974:16).

Historical accounts and illustrations provide much of the story of Pelekane. A drawing from L.I. Duperrey in 1819, depicts the landscape of Pelekane with thatch and pole structures and stone alignments delineating the associated space between each structure, and a rock wall surrounding the largest of the houses and a shaded lanai. Captain Louis de Freycinet described the royal house at Pelekane as:

"A grass dwelling 10 to 12 feet long and little less in width; the flooring was padded with mats, as is the custom in the Sandwich Islands....one could not compare this royal habitation to anything better than the shepherds' huts of certain provinces in France, built for the purpose of occasional shelter" (as stated by Freycinet 1918, editor Kelly 1978:17).

Not only is Pelekane important because it was the royal court, but it is also the site where Kamehameha I assumed the kingship of all the Hawaiian Islands when his rival Keoua was killed and offered to the

sharks at the third heiau, Hale o Kapuni.

Hale o Kapuni (exact location is unknown) was located just off-shore from Pelekane and below Mailekini and Pu'ukohola heiau. It was built of stones that projected above the water surface. At the time of its dedication it was situated near the shoreline. Oral tradition indicates that Hale o Kapuni Heiau was dedicated to the shark gods (including Uukanipo and Kaaipai) in prehistoric times. In 1859, Theophilus Davies traveled over the submerged Heiau and recounts an informant's comments that "...a heap of stones in the ocean..." where "...bleeding victims were placed before the gods...". The sport of catching sharks was practiced by chiefs within Hale o Kapuni. Human flesh was sometimes used to attract them. Overlooking this bay was a tall rectangular stone known as the leaning post. Kamehameha I and his chief, Alapa'i, were known to use this leaning stone while viewing activities in the shark heiau and fishing activities within the bay (Greene 1993:261-2).

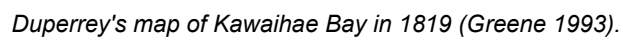
The first documented Hawaiian contact with Europeans was from Captain James Cook in 1778. In 1790, John Young and Issac Davis arrived at Kawaihae and were taken into service by Kamehameha I. Young eventually became the king's closest advisor regarding politics, trade and commerce. In 1793, John Young was presented with property from Kamehameha I following the ancient custom rewarding loyal service in victorious battle. John Young and his first wife Namoku'elua established residency in the lower portion of the Homestead in Kawaihae at the mouth of Makahuna Gulch. Oral tradition and archival research indicate that the structures within the lower portion of the homestead were of traditional Hawaiian thatch and pole construction.

In 1798, John Young began building structures at the upper portion of the Homestead, situated on a knoll above two gulches. Eventually the homestead included several buildings including a cook house, storage, animal pens and a whitewashed picket fence. Island stones were laid in mud and plastered on both interior and exterior surfaces. Thatch roofs with post structures were combined with the plastered walls.

Numerous accounts of sea captains' visits with John Young are recorded in ship's logs and journals. Guests at the homestead included some of the more prominent early missionaries to Hawai'i. Many meetings of trade, foreign affairs, and warfare took place here.

During one period of warfare, in 1810, under the direction of John Young, Mailekini Heiau was used as a fort to protect Kawaihae Bay and the kingdom's arsenal (Ladd, n.d.). Twenty-two cannons were placed within the heiau thereby changing the function of the structure from a religious site to a fortress (Greene 1993:249).

Kamehameha I died in 1819. His son, Liholiho (Kamehameha II) immediately denounced the kapu system. Many heiau were demolished and images were burned. The heiau at Pu'ukohola no longer held its prominence.



In 1835, upon the death of John Young, the upper portion of his homestead was abandoned. During the next 49 years the site was neglected and left for ruin. Historical notes from the Addenda of The Thirty-Eighth Annual Report of the Hawaiian Historical Society for the Year 1929 (1930:60) mention John Young's house, Kawaihae:

"There is a probability that John Young's house in Kawaihae, island of Hawai'i, where he lived during the earlier years of his residence in Hawai'i ... will be preserved to posterity, ... because it was there that all ship captains and many others generally consulted with Young before having an audience with Kamehameha I, and it was there that much of the governmental foundation for the new Kingdom of Hawai'i was studied out. Governor Judd, it is reported, favors the plan for a 'John Young park'."

Local residents utilized Mailekini Heiau as a burial site in the late 19th early 20th centuries. The burials have not been removed since and so the heiau serves as a cemetery. The state of Mailekini Heiau today is that of an ancient heiau with deterioration evident.

In the 1920s, the Parker Ranch constructed a wagon road through Pelekane, past Mailekini Heiau, and continuing south along the coast. In the early 20th century (circa 1910), a section of a marine railway was constructed within the Pelekane area to service the small sugar operations in the region. By 1917, the railway was non-functional.

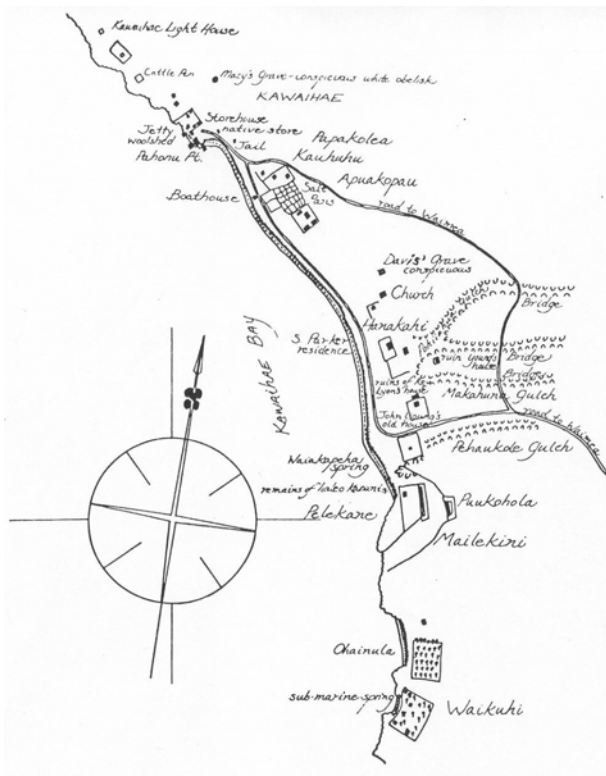
Pu'ukohola Heiau became overgrown with non-native vegetation. A 1922 report from the Smithsonian Institution stated that archaeological investigations of Pu'ukohola were greatly hampered by the overgrowth of the non-native tree, kiawe (*Prosopis pallida*). In 1928, undocumented reconstruction of Pu'ukohola Heiau took place by a local group, "friends of Pu'ukohola" (Ladd 1986). The extent of the work completed is unknown. In 1975-76 two phases of stabilization effort for Pu'ukohola Heiau were conducted. Access to Spencer Beach Park from State Highway 270 was established in circa 1936 by the construction of a paved two-lane road passing between Pu'ukohola Heiau and Mailekini heiau. The Pelekane area was used as a drydock in the 1940s and became a dumping ground for old cars, boats and trash (DCP 1989:15).



1855 painting by Sawkins of Pelekane, Mailekini and Pu'ukohola heiau (Desha 2000).



1880 photo of Kawaihae Bay from Pu'ukohola Heiau (Greene 1993).



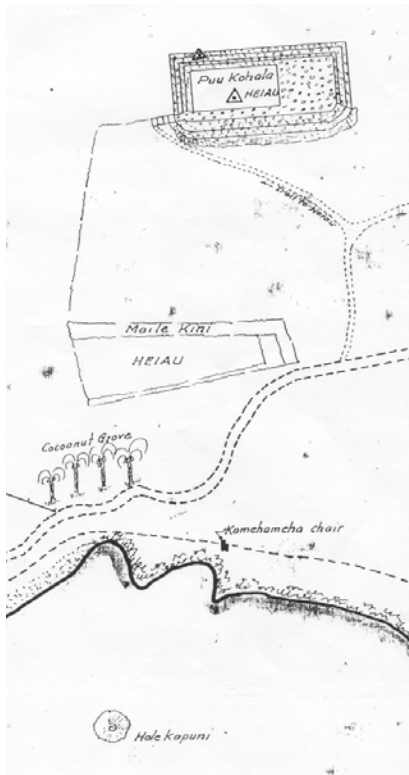
1889 drawing by Duperrey of Kawaihae (Kelly 1974).



1889 photo of Pu'ukohola and Mailekini heiau (Greene 1993).



Photo of Kawaihae landing around 1889 with drawings at top by Linda Greene (Greene 1993).



Drawing by the County of Hawai'i showing location of Hale o Kapuni in 1936 (County of Hawai'i 1936).

Industrial Development to Present (1950-Present)

Industrial development in the late 1950s through the 1970s in Hawai'i had a clear impact on park resources. A quarry operation, south of the upper portion of the John Young Homestead, operated up until the 1960s. Kelly (1974:12) states that "Much of what was once Young's backyard has been excavated away by the recent quarry activities in that area".

In late 1950s, Kawaihae Harbor was developed by the U.S. Army Corps of Engineers. Further construction and the excavation of the coral reef at Kawaihae, to accommodate the light draft boat harbor, occurred during 1969-1970. The U.S. Army Corps of Engineers used explosive charges to expedite the clearing of the waterway for the harbor. Concerns were posed for the stability of Pu'ukohola and Mailekini heiau, the John Young Homestead and other archaeological features. These concerns were addressed by bracing of steeper slopes and corners of the heiau structures. No intervention was performed at the John Young Homestead. No damage to Pelekane and the surrounding area was reported (Day 1972). During the harbor construction, the U.S. Army Corps of Engineers built a road for access to their construction offices on the hill above the harbor. The road construction included minor cuts and fills. This road provides access to the NPS visitors center and administration offices today.

In the 1960s, a concrete mixing plant operated immediately inland of Pelekane. The cleaning and flushing of delivery trucks washed liquid concrete down the gulch into the Pelekane area. Remnants of the operation and dried streams of cement slag are still visible today.

Pu'ukohola Heiau was designated a National Historic Landmark on June 10, 1966. The Landmark included the prominent hill, Pelekane and the John Young Homestead.

On August 17, 1972 Pu'ukohola Heiau National Historic Site was established to preserve and restore "in public ownership the historically significant temple associated with Kamehameha I and the property of John Young who fought for Kamehameha I during the period of his ascendancy to power".

Several National Park Service structures including a visitor center, administrative and service buildings were constructed just southeast of the Pu'ukohola Heiau. It is believed they occupied the site of the U.S. Army Corps of Engineer construction offices. In addition, storage buildings, holding tanks, portable restrooms and a parking lot were established. After 1975, an irrigated lawn and planted area were installed beside the visitor center, consisting of native, Polynesian-introduced and exotic vegetation.

Natural geological processes have affected the site over time. As experienced by John Young himself, earthquakes were frequent throughout recorded history. An August 26, 1973 earthquake collapsed the highest standing wall of the John Young house and considerable plaster from the east wall of the house was detached. In 1974, a wood and metal shelter was erected over the house to serve as a temporary preservation and protection measure. This shelter still stands at the site.

The effects of an April 26, 1973 earthquake prompted an emergency preservation project at Pu'ukohola Heiau. Portions of the structure collapsed during the earthquake and posed a hazard for visitor safety and the preservation of the heiau itself (Ladd 1986). The two phases of stabilization and rehabilitation of the heiau occurred between March 1975 and September 1976.

The Kawaihae-Waimea Road was in place during 1976 when the State of Hawaii Department of Transportation considered a series of alternatives for access to Waimea from Kawaihae. The Highway 270 corridor was constructed over the old unimproved road, physically separating the John Young

Homestead from the remainder of the Park. Presently, the John Young Homestead Area is not easily accessible from the park visitor center.

In August 1976, the park established an annual cultural festival which is on-going today. The two-day cultural festival stages activities such as traditional Hawaiian arts, a procession of the royal court, a re-enactment of the Kamehameha I's battles, Hawaiian dances and outrigger canoe rides in the bay.

In 1985, the National Park Service nominated the John Young Homestead to the National Register of Historic Places.

In 1991, Pu'ukohola National Historic Site celebrated the two hundred year anniversary of the completion of Pu'ukohola Heiau. The 1791 battle between Kamehameha I's forces and Keoua was reenacted. This was the first time in almost two hundred years that drums sounded from the terraces of the sacred temple. The contemporary reenactment at the site contributed to the coming together of the peoples of all districts on the Island and from other Hawaiian Islands.

During a fire suppression exercise in July of 1991, an errant bulldozer crossed over Makahuna Gulch into the upper portion of the John Young Homestead. The bulldozer avoided the obvious shelter protecting the house of John Young. However, the bulldozer continued over the storage house, causing damage in its path to the courtyard as well as subsurface cultural deposits (Carter-Schuster 1992).

In February 1992, the new Spencer Beach access road was built bordering the park to the south, and sharing entry into the park. The old Spencer Beach Road that passed between Mailekini and Pu'ukohola heiau was closed to traffic in 1996. In 2001, the old Spencer Beach Road was removed in order to restore the historical character of the site. Pili grass and native shrubs were planted to restore the disturbed area.



Conjectural artistic painting of Pu'ukohola Heiau by historian Herb Kane in 1978 (Greene 1993).



Contemporary picture of Pu'ukohola Heiau (CLI Team/PISO/2003).



Contemporary photo of Mailekini and Pu'ukohola heiau in the background (CLI Team/PISO/2003).



Contemporary photo of Mailekini Heiau (CLI Team/PISO/2003).



Contemporary photo from Kawaihae Harbor to Pelekane and Pu'ukohola and Mailekini heiau (CLI Team/PISO/2003).



Contemporary photo of the John Young Homestead Site (CLI Team/PISO/2003).



Contemporary photo of the Leaning Post towards Pelekane Bay and Kawaihae Harbor (CLI Team/PISO/2003).



Contemporary photo of Pelekane Bay with Pelekane, Mailekini and Pu'ukohola heiau in the background (CLI Team/PISO/2003).

Analysis And Evaluation

Summary

Pu'ukohola Heiau National Historic Site retains historic integrity in the following landscape characteristics: archeology, buildings and structures, cultural traditions, spatial organization, topography, vegetation and views and vistas. Natural features and systems, circulation and land use have been compromised and no longer retain integrity.

The Pu'ukohola Heiau National Historic Site retains features that support the significance of the heiau, the persons and events associated with the period of significance, and ties together Hawaiian history from the earliest accounts through present day. The associated features still convey the physical character of this historic site. Pu'ukohola and Mailekini heiau remain as good examples of traditional construction methods and site planning. The placement of Pu'ukohola Heiau still retains prominence over the surrounding landscape. Pu'ukohola Heiau still remains as a prominent structure representing the political, religious and cultural period of Kamehameha I and John Young.

The contributing features associated with archeology are Pelekane and the John Young Homestead Site. The contributing features associated with buildings and structures are Pu'ukohola Heiau, Mailekini Heiau, leaning post, stone walls around Pu'ukohola and Mailekini heiau. The contributing features associated with spatial organization are the spatial relationship between Pu'ukohola Heiau, Mailekini Heiau and Pelekane and the John Young Homestead Site. The contributing feature associated with topography is the prominent hill and the John Young Homestead Site. The contributing features associated with vegetation are the coconut grove at Pelekane and the scattered native plants along the coast. The contributing features associated with views and vistas are views from Pelekane to Pu'ukohola Heiau, views from Pu'ukohola Heiau toward the east and west, views from Pelekane Bay toward Pelekane, Mailekini and Pu'ukohola heiau and the views from Pu'ukohola Heiau to the John Young Homestead Site and vice-versa.

Landscape Characteristics And Features

Archeological Sites

Archeological sites found in Hawaii have engaged the interest of some of the earliest visitors to the islands. That interest gave rise to the pioneering of archeological investigation on Hawai'i early on in the 20th century. The earliest site visit by an archeologist was by Stokes in 1906. His photographs and site descriptions have helped us understand the condition of Mailekini and Pu'ukohola heiau at that time. By the 1960s and 1970s, several major archaeological projects were contracted for various projects including the Queen Ka'ahumanu Highway, the Mudlane-Waimea-Kawaihae Road Corridor, as well as resort and other commercial developments planned for South Kohala.

NPS archeologists have inventoried and mapped a number of archeological sites within the park (see layout map of the John Young Homestead). The majority of archeological work at the park primarily focused on the John Young Homestead.

Hale o Kapuni Heiau

Submerged just off shore below the Mailekini Heiau are the ruins of Hale o Kapuni Heiau (exact location is unknown). This structure was also constructed prior to Kamehameha I use of Pu'ukohola Heiau and is located in Pelekane Bay. Documentation relating to the construction and description of the structure is scant. It is believed this heiau was constructed partially submerged and was used by Kamehameha I and his staff chiefs for the feeding of sharks.

The remains of this heiau have been mapped and photographed at various times, the last photograph being when the ocean withdrew during the 1946 tsunami. Despite this evidence, the heiau's location has yet to be determined for a variety of reasons, including the poor visibility under water in this area. There is speculation that the heiau may have been buried under the landfill from the construction of the harbor or silt from the redirected gulches. Therefore, the specific location, form, and condition of the heiau are unknown. Further archeological investigation is necessary to locate and interpret this heiau.

Pelekane Area

An area along the shore of the bay, immediately northwest of the Mailekini Heiau was the location of Pelekane (the royal compound) between 1790 and 1819. During the historic period, accounts describe a primary structure as the king's residence with adjoining outdoor area, and assorted thatch and pole structures for members of his court (Greene 1993). These structures had simple gable roofs built on a stone platform or just on the ground with a paving of smaller smooth stones. The king's residence was described as a "...grass dwelling 10 to 12 feet long and a little less width" (Freycinet 1819 as cited in Greene 1993:262).

A number of structures such as walls and terraces are found in Pelekane. Just north of Pelekane is a large charcoal oven which appears to date to a later period of development. Further research is necessary and could yield significant data associated with the history of these features.

John Young Homestead

The John Young Homestead originally consisted of two parcels: the homestead area currently within the boundaries of the park, and another portion possibly located beneath the coral fill of the Kawaihae Harbor project to the north. Little is known about the portion now under fill, however, the primary homestead area is still extant and located above the Waimea-Kawaihae Highway (Highway 270), between Makahuna and Makeahua Gulches, within park boundaries. The remains of eight structures have been identified within the complex. Of the eight structures, only two have been excavated and identified as the primary residence of John Young and a storage house (Rosendahl and Carter 1988 and Durst 1999).

Prior to 1793, John Young maintained a residence at Kealahou Bay, and moved to what is now referred to as the homestead later that year. It was not until 1798 that he began to construct the first Western-style house on the site (Apple 1978:17). According to John Young's diary, construction of the homestead began in 1798 and continued with major efforts in 1799, 1809, and 1817. "From the time of the first surveys of the John Young Homestead in the twentieth century, it has been described by historians and archeologists as containing both traditional Hawaiian style features and Western-style structures" (Colby and Barrow 1997). This blend represents the mixture of Young's English and Welsh construction techniques with materials and techniques gained upon his integration into Hawaiian society. "John Young's comparison of his homestead to Wales could have been based on the siting of the compound in relation to the sea below or on the relationship between structures and pens and stone fences. It could also relate to the whiteness of the coating on the stone masonry of his structures; the roughness of the masonry; or the rectangular form and masonry gable ends. Other similarities were in the doors and windows of the houses, the pitch of the roofs, and their thatch" (Colby and Barrow 1997:24).

Specific Hawaiian elements found within the structural remains of the house include pole & thatch roof framing, pebble paving and stone platforms. Elements blending both traditions include: rubble-filled and uncoursed/unworked stone masonry, rock laid in mud mortar, plastered interior and exterior walls, compound arrangement, house form and pitched thatched roofs.

“Young constructed his houses out of basalt but had "coral blocks brought by canoe from [the] reef at Puako, dried them and made a plaster mixture of sand, burnt coral...mixed with poi and hair" (Apple 1978:47). The plastering of his houses was not completed until March of 1799. The fences around the animal pens were whitewashed ‘as in Wales’ (Apple 1978:48). According to Young’s Log Book (Young n.d.), he constructed a cook house in August of 1809. It is unclear where this cook house was built. More structures were constructed when Young hired a carpenter in April of 1817. John Young remained in the homestead until near the time of his death in 1835. The homestead was occupied following his death, possibly by representatives of the Catholic Church, and was later occupied by a district judge by 1853 (Colby and Barrow 1997). Otherwise, little is known of post-Young occupation of the site.

The following feature descriptions and condition assessments are paraphrased from Rosendahl and Carter, 1988 and Schuster, 1992 with the principal differentiation between Hawaiian-style and Western-style being the use of mortar and plaster in the latter.

Hawaiian-style feature 1 (F1)

F1 exists today as a stone platform supported by retaining walls and is divided into two sections of which one is paved with water-worn basalt pebbles and the other with the same plus larger scattered flat stones. It is built on a large terrace that forms the northwestern, seaward extent of the site. F1 is 23 x 36 ft and oriented with its longer axis parallel with Makahuna Gulch. The retaining walls are in fair to poor condition.

Hawaiian-style feature 2 (F2)

F2 has been interpreted as a storehouse and exists today as a series of retaining walls supporting a terrace paved with 'ili'ili. It measures 23 x 29.5 ft and the retaining walls are in poor condition.

Hawaiian-style feature 3 (F3)

F3 is a low stone platform located below and on the seaward side of F2. It measures 23 x 29.5 ft and is paved mostly with flat stones. It is in poor overall condition.

Hawaiian-style feature 4 (F4)

F4 is a low pile or mound of cobble sized stones located on the southeast edge of the site. The pile is 8.2 x 16.4 ft with many fire cracked stones indicated possible use as an oven.

Hawaiian-style feature 5 (F5)

F5 is a stone platform abutting the southeast side of the larger platform of F1. The platform is 6.6 x 13.1 ft with a partial collapse in the center and is paved with water-worn basalt pebbles. This is most likely a burial structure post-dating John Young’s occupation.

Western-style structure 1 (S1)

S1 is the former home of John Young and is the most prominent structural feature on the site. It is a rectangular stone walled enclosure centrally located within the site and measures 21.3 x 31.2 ft. The walls are constructed of unmodified stones laid in a red mud mortar and subsequently covered on both the interior and exterior faces with coral lime plaster. The interior floor appears to have been paved with water-worn basalt pebbles. The walls of this structure have been covered by a plywood shelter since 1974 (the shelter was reconstructed in 1998).

Western-style structure 2 (S2)

S2 is interpreted as a storehouse and is the poorly preserved remains of a large, rectangular, stone walled enclosure located only a few meters northwest of and parallel to S1. It is 21.3 x 31.4 ft and delineated by now collapsed walls of unmodified stones laid in a red mud mortar and subsequently covered on both the

interior and exterior faces with coral lime plaster. The center was formerly paved with water-worn basalt pebbles.

Western-style structure 3 (S3)

S3 is a rectangular stone walled enclosure in very poor condition. It measures 16.4 x 27.9 ft and was delineated by now collapsed walls of unmodified stones laid in a red mud mortar and subsequently covered on both the interior and exterior faces with coral lime plaster.

The five Hawaiian-style structures found at the John Young Homestead retain architectural integrity. The three Western-style structures, however, do not retain architectural integrity.

From July 17 to September 30, 1978, under the direction of Principal Investigator Dr. Paul Rosendahl, Rosendahl and four crewmembers attempted subsurface excavations and/or stabilization of four of the structures at the John Young Homestead. The excavations conducted during this project focused on Western-style Structure 2. The results of this archaeological investigation detailed the architecture of the structure to include the basalt stones bound by a mud mortar. The interior walls were whitewashed and plastered, and a locally made plaster was applied to the exterior walls. Five postholes were identified; three of, which were stone, braced. Flooring material of 'ili'ili pebbles was identified. In addition, a stone crypt containing the remains of two human individuals was identified within Western-style Structure 2.

Portable remains numbering over 1,150 items were recovered to include indigenous artifacts of stone, volcanic glass, bone, and shell objects, and historic artifacts of glass, metal, stone, and ceramic. The interpretation of the archaeological remains recovered during this excavation suggested that Western-style Structure 2 was utilized as a storage facility containing a “collection of artifacts and non-artifactual remains [which] provides a baseline assemblage for future analyses of sites dated between 1793 and 1840” (Rosendahl and Carter 1988:75).

In 1978, archaeological excavations of Structure 2 at the John Young Homestead also revealed a crypt burials under the paving of the western-style building. Evidence of a wooden coffin indicates that one of the two individuals was interred in the post-contact period. It is not clear when the second individual was interred. A traditional Hawaiian-style feature at the Homestead, Feature 5, has been interpreted as a probable burial feature of the late 20th century.

During upland fire suppression activities on July 22, 1991, a misdirected state-operated bulldozer traversed the John Young Homestead and caused damage to several of the structural features at the site. Subsequently, between May 19 and June 2, 1992, limited test excavations were conducted to determine the extent of bulldozer damage to the site (Schuster 1992). It was concluded that structural damage had occurred to Hawaiian-style Feature 1 and Western-style Structure 2, as well as to subsurface rock and artifacts beneath the bulldozer's path.

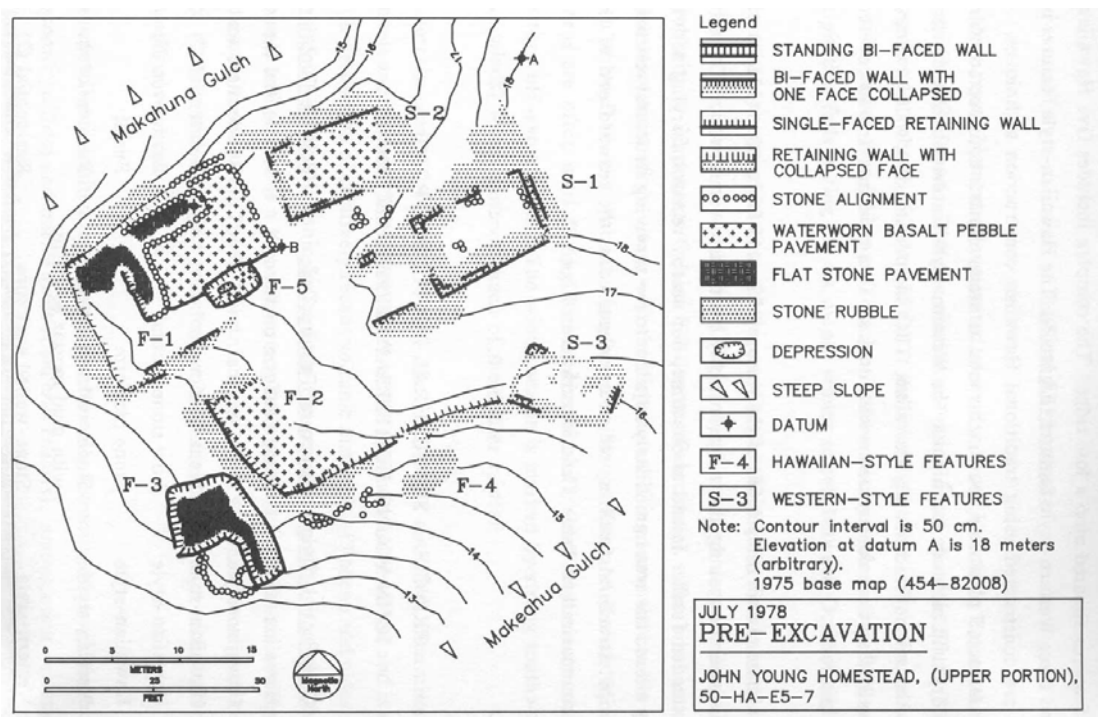
Artifacts recovered from this excavation include glass and ceramic fragments, an iron nail fragment, a strike-a-light, slate fragment and a musket ball. Indigenous artifacts recovered include basalt and volcanic glass debitage, a hammerstone, a coral file, and a shell scraper (Schuster 1992).

Other Features within the Park

Many small-scale archeological features remain as surface features throughout the site including walls, stone platforms, unmarked burials, agricultural terraces and remnants of foxholes and gun emplacement enclosures from World War II. These features have been surveyed and recorded on an Archeological Base Map. Further research is necessary to determine the history of these features.

Summary

The majority of archeological research has been centered on the John Young Homestead. Structures associated with the upper portion of the John Young Homestead still remain, including the five Hawaiian style structures (foundations) and three Western style sites. As cultural landscape features, they all are contributing for their historical association with John Young, as such archeological sites retain integrity as a contributing landscape characteristic of Pu'ukohola Heiau National Historic Site. Additional research on archeological sites such as Hale o Kapuni site and Pelekane area is necessary. Further research could yield important data and a better understanding of ancient Hawaiian culture prior to European contact.



1988 archeological site map of the John Young Homestead (Rosendahl and Carter 1988:12).

Characteristic Feature	Type Of Contribution	LCS Structure Name	IDLCS Number	Structure Number
Pelekane	Contributing			
The John Young Homestead Site	Contributing	John Young Homestead	005640	JYHSE
Hale o Kapuni	Non-Contributing			

Buildings And Structures

Early historical accounts document that during the late 1700s, a small village existed at Kawaihae comprising approximately 100 thatched houses along the shoreline in a grove of coconut trees (Freyinet 1978). At the widest part of the settlement, houses were arranged in three rows stepping back from the shoreline and running generally parallel to it, with the last row at the base of the Kohala Mountain slope. The same accounts indicate that north of this settlement were functional structures including salt pans and fishponds. Most of these structures, as depicted in historical accounts, were simple thatch structures or rock shelters providing protection from the wind.

Prior to Kamehameha I's decision to build the heiau at Pu'ukohola, two earlier heiau had been built on the site. Although the dates for these structures are not known, it is believed that Mailekini Heiau was built sometime between 1400 and 1580. During his occupation of Kawaihae, Kamehameha I used both heiau.

Certainly the most significant structure constructed during the period of significance was the Pu'ukohola Heiau built by Kamehameha I in 1790-1791. Additional structures associated with the construction of the heiau and subsequent occupation of the area by Kamehameha I include habitation sites and terraces remain of the royal compound, and the site of a building complex constructed under the supervision of, and for use by John Young and his family.

Pu'ukohola Heiau

The Pu'ukohola Heiau is located on the brow of a rounded ridge or lava dome called Pu'ukohola overlooking the ocean. The length of the heiau lies generally in a north-south direction and is roughly parallel to Mailekini Heiau. The Pu'ukohola Heiau is sited on the flattop portion of the dome, approximately 130 feet above the shoreline. The front and sides of the structure are built over and down the front slope of the hill in a series of three terraces, curving around and conforming to the hill. The first terrace follows the 110 foot elevation line. The lowest terrace slopes into the hill and the lines of each succeeding terrace blend into the hill.

Pu'ukohola Heiau is considered a luakini heiau, where human sacrifices were offered. These temples were dedicated primarily to Ku ka 'ili moku. Traditional components of the luakini heiau included 'aunu'ua tower where priest received inspiration, a semi-circle arrangement of wood images surrounding the lee or offering platform and thatched houses (on individual platforms) with special functions (Kirch 1985).

By cultural tradition, luakini temples were located "only upon sites formally built on by ka po'e kahiko, the people of old" (Kamakau 1976). Documentation suggests that prior to construction of the Pu'ukohola Heiau Kamehameha I began to build over the Mailekini Heiau, but changed plans and moved higher on the hill above selecting a new site for his temple (Greene 1993).

Pu'ukohola Heiau incorporated several elements and components of the traditional luakini heiau. The heiau is primarily composed of four main structural features: a massive wall, three terraces stepping down the hill, a series of interior platforms and the entrance to the interior.

The walls surrounding the interior portion of the heiau on the north, east and south were composed of rounded stone while their upper surfaces were paved with flat stone. The terraces to the west were faced with rounded stone, filled in with the rough stone, and paved with flat stone. According to Ladd, the construction method was typical of early Hawaiian stacked stone structures.

Wall

A massive wall around the north, east and south sides of the structure provide shelter from the winds sweeping down from the uplands. The dimensions (from Ladd) are as follows: North wall: 112 meters, East wall: 210 feet, South wall: 79 feet, West side (open): 262 feet.

Terraces

A series of three large terraces on the steep seaward slope of the hill run the entire length of the structure curving out and tapering into the slope. The tops of these are paved with stone.

Platforms

Three large platform areas were paved within the walls of the temple and were constructed for specific functions.

Southernmost paved area between the south and east walls. Described by Ellis as the place where the idols were placed around the anu'u (oracle tower). The platform measures approximately 40 x 20 feet and is approximately three feet high. The surface of the platform was paved with dense waterworn volcanic stone. There are five pits in the platform, one in the SW corner and the others generally in a line roughly parallel to the northern wall. A local informant to Stokes stated that the west pit was the luapa'u (refuse pit in the temple enclosure), and the lele (sacrificial alter) was near it on the western edge of the platform.

The middle platform area within the heiau is lower in elevation than the previous and has a curved edge that according to Cluff (et al, 1969:46) is unusual in Hawaiian heiau. Directly adjacent and north of this feature is another platform, measuring approximately 14 x 34 feet and paved with water worn stones, slabs of beach rock, fitted together into a finished pavement.

The northernmost platform is a flat stone-paved area approximately 4.5 feet above the first terrace. In the middle of the platform, a double row of flat stone terminates at a single convex stone. This area covers about one third of the interior portion of the temple and measures approximately 30 x 40 feet.

During the active use of the heiau by Kamehameha I, several symbolic structures and features were sited in the interior. Located on the platforms on the north and south sides of the interior were a number of structures associated with the traditional layout and organization of a luakini heiau. Although impossible to give a definitive account of the clustering and specific structures within Pu'ukohola Heiau, the general character and potential location of these structures has been suggested by Greene (1993) and other individuals. Using documented historical accounts, scholarly studies on traditional culture, secondary source materials, and archeological studies it is possible to suggest the nature and function of these structures.

The large platform on the north end of the interior probably contained several structures traditionally associated with the luakini heiau and these include:

- lele- (or altar) where offerings were made
- 'anu'u -a wood frame tower-located at one end of the interior. All of the figures and houses are oriented relative to it.
- hale mana-a large structure of the war gods with doors facing the alter
- hale pahu-the drum house
- hale umu-oven house
- hale wai'ea-house to revive life

In addition it is possible as described by Ellis and others, that a taboo enclosure (paehumu)

approximately four feet high with human skulls affixed to the wood pales may have extended along the top terrace. This type of structure is associated with other heiau and was used to delineate the sacred boundaries of the structure.

With the denunciation of the kapu system, many of the structures associated with ritual ceremonies within the heiau were removed or destroyed. Historical accounts indicate that the majority of thatch structures within the temple were destroyed around 1819, and that any remaining after that quickly deteriorated (Greene 1993:244).

During later archeological work it was determined that the heiau was used during WWII and features were identified along the top of the outside wall (observation pit and telephone wire) (Ladd 1975).

In 1928, the Sons of Kamehameha I (now a defunct organization) reportedly carried out some restoration work on the central platform and courtyard areas, but the extent and nature of these repairs are unclear. When the National Park Service began management of the historic site in 1972, some areas of the heiau had collapsed including areas along the back of the wall, and a section on the northwest above the entrance platform. Major restoration work was undertaken by the National Park Service under the direction of Edmund Ladd and included stabilization and restoration work carried out between 1975-76. Subsequent work has focused on stabilization. Today the heiau is used by the local community for ceremonial practices.

Mailekini Heiau

Constructed prior to 1790, documentation suggests that the chief ruling the south Kohala built the Mailekini Heiau (Greene 1993). The structure is located directly below and west of Pu'ukohola, straddling a shallow gully. Archeological investigations suggest the landscape may have been leveled or modified to accommodate the construction of the massive structure. The primary wall extends around the north, east and south sides. The west wall is low with the top paved with basalt and coral pebbles. It is aligned on a remarkably straight 350-degree azimuth.

The interior of the heiau can be divided into three areas including (1) the south section, with raised platforms, steps, paved areas, curb features; (2) the central section built over the gully with long concave paved area; and (3) a northern section which contains several grave sites from a later period. Eleven burials have been located within the interior portion of Mailekini Heiau.

In 1812, Kamehameha I sent cannons to Kawaihae Bay to be mounted under the direction of John Young, and by 1819, Young had installed 21 guns on the foundation of Mailekini Heiau where they were to guard the King's Residence as well as the harbor (Greene 1993:249). Although it is possible some modification of the heiau structure was undertaken to accommodate this change in use, those changes were not well documented in the historic record.

Leaning Post

The leaning post is located near the shore within Pelekane Bay. Tradition describes Kamehameha I and/or his chief Alapa'i using the rock while viewing the sharks attracted by offerings at Hale o Kapuni. This rock was broken in three pieces, by a construction vehicle, in 1937. It was repaired and replaced in a concrete foundation. It is again in pieces and not in its original location.

Rock Walls

Dry laid or stacked rock walls are typical of Hawaiian architectural style. They were used for different purposes both during and after the historic period. Early pre-contact period walls would have been used to define sacred areas associated with important heiau, used for confining animals (pigs, or dogs), or as

foundations for roof post placement. A variety of techniques were used to construct dry laid walls. Such differences would be based on the specific use of the wall. Later walls are not necessarily easy to detect, however core filled walls seem to dominate in some areas. Wall heights are higher, marking land boundaries, providing enclosures or exclosures for animals (cattle, goats, sheep, or horses).

Within the historic site, there are low walls, and high walls. Each serve different purposes. The low walls define the sacred area associated with the heiau, the others define historic agricultural areas. The low walls associated with the both heiau remain and are contributing to the historic scene. There are C-shaped walls that may have been used as foxholes by the Army during WWII. There are still other wall features that are found within the park that require further research to determine their history and use (Carter 1989).

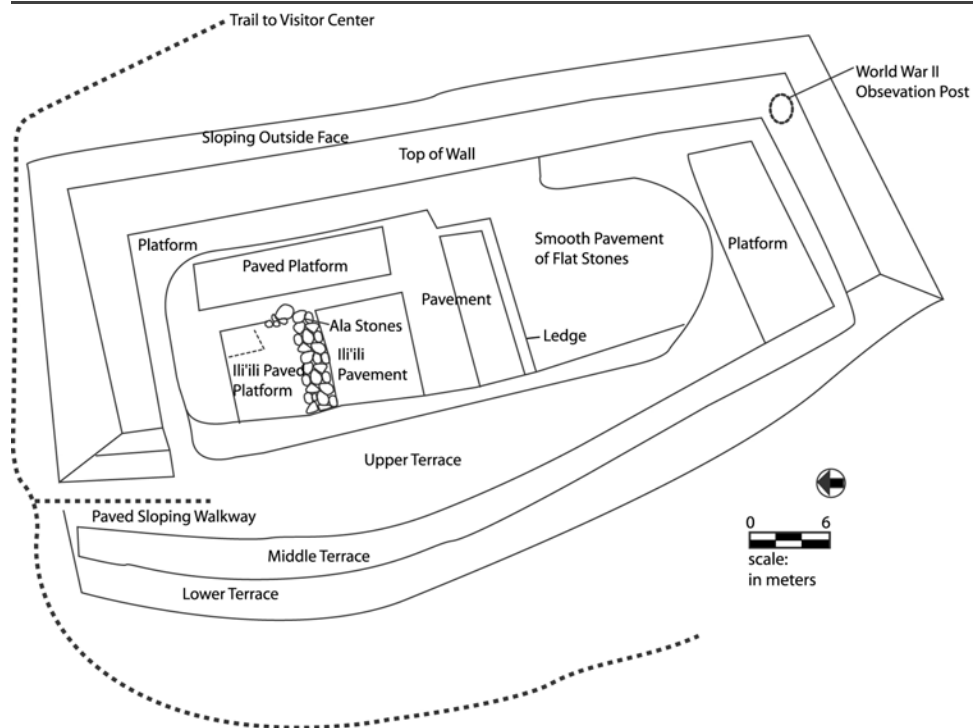
National Park Service Facilities

In 1974, the National Park Service (NPS) constructed four temporary buildings, a storage shed and tanks on approximately 2 acres to serve as administrative offices and a visitor contact point. Over the years these buildings have been enlarged and improved, and other structures added to the area, including two trailers, a maintenance storage shed, and four temporary toilets. These structures are clustered southeast of Pu'ukohola Heiau. Some of these buildings were associated with the Army Corps of Engineers during the construction of the harbor and are considered non-historic. In 2003, the park built a maintenance facility south of the John Young Homestead Site. This new facility is not contributing to the historic scene.

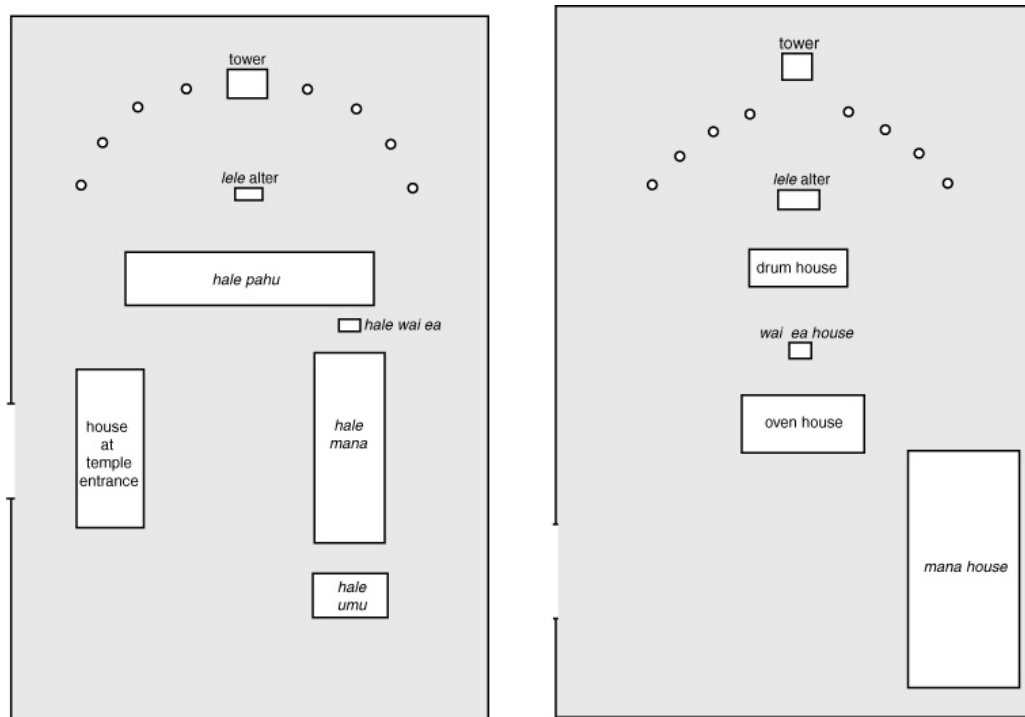
Summary

A number of key structures from the historic period remain and have a high degree of historical significance. Especially significant are the two heiau historically associated with use of the site by Kamehameha I between 1770 and 1819. Of the three structures, Pu'ukohola Heiau retains the most physical integrity. In addition, Mailekini Heiau retains many of the structural characteristics that historically defined it and although modified over the years (for gun emplacements and internments) it also retains integrity. The leaning post and stone walls around the two heiau retain integrity and contribute to the historic scene. The visitor center and administration buildings and all other service buildings are not contributing to the historic scene.

When considering the physical integrity for many of the structures historically associated with this site, especially the Hawaiian style structures, some consideration must be given to the character of traditional building materials. Most of these materials were ephemeral in nature such as grasses and natural occurring vegetation, and were not expected to last long, being replaced as needed. In addition, most of the Hawaiian style structures were actively removed from the heiau with the abolition of the kapu system during the historic period. In this regard, for traditional style Hawaiian structures, when the foundations of these sites retain structural integrity (intact platforms and pavement if present) they have been determined to have integrity in the context of the cultural landscape. As such, buildings and structures retains integrity as a contributing landscape characteristic of Pu'ukohola Heiau National Historic Site.



Plan view of the interior of Pu'ukohola Heiau (redrawn from Green 1993:315).



Traditional layout and organization of Luakini Heiau (Redrawn from Greene 1993:320).



Contemporary photo of stonework on main platform within Pu'ukohola Heiau (CLI Team/PISO/2001).

Characteristic Feature	Type Of Contribution	LCS Structure Name	IDLCS Number	Structure Number
Leaning Post	Contributing	Leaning Post	056773	LEANING
Mailekini Heiau	Contributing	Mailekini Heiau	005527	MAILEKIN
Pu'ukohola Heiau	Contributing	Pu'ukohola	005526	PUHE
Stone walls around Pu'ukohola Heiau	Contributing			
Stone walls below Mailekini Heiau	Contributing			
Visitor Center and Administration Buildings and all other associated service buildings	Non-Contributing			

Cultural Traditions

Cultural traditions that have influenced the physical structure and character of the landscape include early traditional Hawaiian religious and cultural practices, such as, organization of the landscape based on societal and religious beliefs, aquaculture, the construction of heiau, and the use of plant materials for both material culture and subsistence. Other cultural traditions historically associated with the development and character of the landscape include the construction technologies, materials, and stylistic elements associated with the development of vernacular houses, shelters, and walls.

Traditional Systems Effecting Development of the Landscape

The study of cultural traditions or practices conducted at Pu'ukohola Heiau National Historic Site has been somewhat limited and has focused on the use of Pu'ukohola Heiau as a luakini heiau, and the kapu system that provided the cultural framework for defining spaces within the site.

Kapu

Extremely important to the structure of Hawaiian society as evidenced in the built landscape was the kapu system. Kapu was applied as the framework of traditional Hawaiian cultural and consisted of socio-political and socio-religious prohibitions. Kapu was based on the principle of "complementary opposition" (Levin 1969). Through the interaction of the elements of darkness and light, Po and Ao, all things were created. Levin (1969:412) suggests:

"that which constituted the sacred, positive aspect of nature was the male principle - the sky, light, life, day knowledge, and strength. That which was considered the unsacred, negative aspect of nature was the female principle-earth, darkness, night, ignorance, weakness and the left side."

The transformation from the Polynesian descent-group system to a state-like society during the classic period of Hawaiian society (post-1400 AD) brought about class distinction. Thus, the concept of sacred (kapu) and common (noa) or unsacred were distinguished and crosscut by birth, genealogical seniority, and gender (Levin 1969). The distinction of aristocracy, commoners, and those in servitude (kauwa) considered "unclean" were determining factors in the control of the lands and the associated resources.

The expression of kapu in Hawai'i involved the practices of the segregation of the sexes during various activities, i.e. food preparation and consumption, religious activities and worship. Segregation of the sexes as determined by the kapu was a physical expression in the traditional household cluster--the preparation and consumption of food by males and females was conducted in separate areas, a separate menstrual hut would be available to women, men would gather at the hale mua or men's house (Handy and Pukui 1972, Malo 1951, Kamakau 1976). Practices regarding clothing, personal actions, and many more customs were all part of the religious doctrine steeped in kapu extending into the socio-political arena. The kapu also involved chiefly taboos. It was by this system of prohibitions that the ali'i were able to sustain the socio-political system and bring about an order of control to the kingdom.

At Pu'ukohola, the kapu system defined the primary spatial patterns and the hierarchy of occupation during the period of significance, delineating the areas of use and activity within the site.

Heiau

Heiau cover a range of temple and shrine structures—ranging from single upright stones to massive platforms for human sacrifice (luakini), and are part of a wide-spread tradition of temple building throughout Eastern Polynesia (Kirch 1985:59). In this regard, the Hawaiian heiau is defined more by its function than by its material form.

Pu'ukohola Heiau is considered a luakini heiau, where human sacrifices were offered. These temples were dedicated primarily to Ku ka 'ili moku, the God of War, although in some cases, agricultural rituals were also performed there. Traditional components of the luakini heiau included 'aunu'u tower where priest received inspiration, a semi-circle arrangement of wood images surrounding the lele or offering platform, thatched houses (on individual platforms) with special functions (Kirch 1985).

By cultural tradition, luakini temples were located "only upon sites formally built on by ka po'e kahiko, the people of old." (Kamakau, 1976). Documentation suggests that prior to construction of the Pu'ukohola Heiau, Kamehameha I began to build over the Mailekini Heiau, but changed plans and moved higher on the hill above selecting a new site for his temple (Greene 1993:244).

Pu'ukohola Heiau incorporated several elements and components of the traditional luakini heiau. The heiau is primarily composed of four main structural features: a massive wall, three terraces stepping down the hill, and a series of interior platforms: two platforms and a pavement area in the south end, and a platform in the northern portion of the structure. The entrance to the interior of the heiau was at the northwest corner of the structure (present location).

During the active use of the heiau by Kamehameha I, several symbolic structures and features were sited in the interior. Located on the platforms on the north and south sides of the interior were a number of structures associated with the traditional layout and organization of the luakini heiau. Two other heiau located in the historic site pre-date Pu'ukohola Heiau and are also important physical structures, reflecting associated cultural traditions (See Buildings and Structures). Although Pu'ukohola Heiau is considered the primary heiau, the presence of three heiau at one site is culturally significant.

Other Buildings and Structures

During the period of significance, historical accounts describe several structures in the area of the royal compound at Pelekane. Among these were the king's residence with adjoining lanai, and assorted huts for members of his court (Greene 1993:215). The thatched huts were simple gable structures with some stone used for flooring or foundation platforms. The king's residence was described as a "grass dwelling 10 to 12 feet long and a little less width" (Freycinet, 1819, in Greene, 262).

Archeological evidence at this location and at the John Young Homestead indicate the use of stones for platforms and flooring materials. Stones were also used for paving within Pu'ukohola Heiau.

Stone walls are evident throughout the site. These walls are comprised of dry-stacked lava stone. In some cases, these walls consist of a facing veneer, with smaller rubble stone filling the interior. Walls on the site are associated with boundary demarcations, habitation sites, agricultural enclosures, and livestock enclosures.

Summary

Traditional Hawaiian cultural practices and associations have had a strong influence on the development and character of the physical landscape at Pu'ukohola. These include the application of the kapu system and the building of the Pu'ukohola Heiau, the presence of two other heiau (indicating the significance of this locale in the context of traditional use and cultural affiliations), the evidence of traditional building techniques (remnant platform structures and stone features), and the development of structures relating to aquaculture, and the use of marine resources offshore. Collectively, cultural traditions strongly shaped and influenced development and use of the site during the period of significance and remain evidenced in the physical landscape. As a result, cultural traditions retain integrity as a contributing landscape characteristic of Pu'ukohola Heiau National Historic Site.

Spatial Organization

Little is known about the landscape features, structures use and spatial organization of the Pu'ukohola area before 1790. Historic documentation suggests that this area was a fishing village with seasonal use and vernacular structures clustered along the shoreline north of the study area. Two large heiau were located above the shore, but their use is not documented.

During the period of significance (1790-1835), the most defining element of spatial organization was the siting of the three heiau sited upon the hill. The three heiau and the hill defined the sacred or kapu area and placement of all other features upon the landscape. Therefore, the spatial organization was reflected on the landscape in three ways:

1. The position and orientation of three heiau in relation on the hill, the shoreline, and to each other.
2. The position of all other features in relation to the heiau.
3. The sacred or kapu area extending to the ocean on the north and south side of Pu'ukohola Heiau and Pelekane.

Pu'ukohola Heiau was sited along the leeward coast of the Big Island and on the lower western slope of the Mauna Kea volcano. The hill provided a strategic location with advantageous topography, exposure, and views. It sits 130 feet above the surrounding village and communities along the shoreline, and is visible from the north, south, east, and west. From the shoreline below, the majority of villagers and foreign visitors arrived to the site and viewed the structure.

The other two heiau, Mailekini and Hale o Kapuni, were located just west and down slope of Pu'ukohola Heiau. Pu'ukohola Heiau overlooks the other two heiau, the shoreline and Pelekane Bay. Mailekini and Pu'ukohola paralleled each other in a north to south direction, and were spatially connected by low-stacked rock walls. These walls created an enclosure that may have defined the boundaries of the kapu or sacred area. All three heiau were sited and constructed in response to natural features, each other and the surrounding views.

Pelekane, the site of the Kamehameha I residence and royal court, was located at the bay between Mailekini and Hale o Kapuni heiau. During the period of significance, this area contained a cluster of wood and thatch dwellings on stone platforms (or within rock enclosure walls) situated within a grove of coconut trees. The area of the royal court was kapu, or prohibited to commoners. The location, near the shoreline, provided the King close control of the harbor and economic activity. Incoming ships would stop to request the King's permission to dock and trade.

Close to Pelekane were springs that were used for bathing and thought to have medicinal properties. They were located south of the royal grounds, along the shore, below the high tide line. The springs were enclosed with piles of stones (Ellis 1963:278 as cited in Kelly 1974:33). Also along the shoreline south of Pelekane, was a large stone referred to as "The Leaning Stone". It was located and orientated on the shore for convenient observation overlooking the shark temple, Hale o Kapuni.

On a rise to the northeast of Pelekane, is the homestead of John Young. It was sited on a high-point between two gulches, Makahuna and Makeahua. This site was advantageous for economic, political and safety concerns. From this high point, Young could look out over any activities at the harbor where import, export and trading of goods took place. The view to Pu'ukohola Heiau was also clear from the homestead.

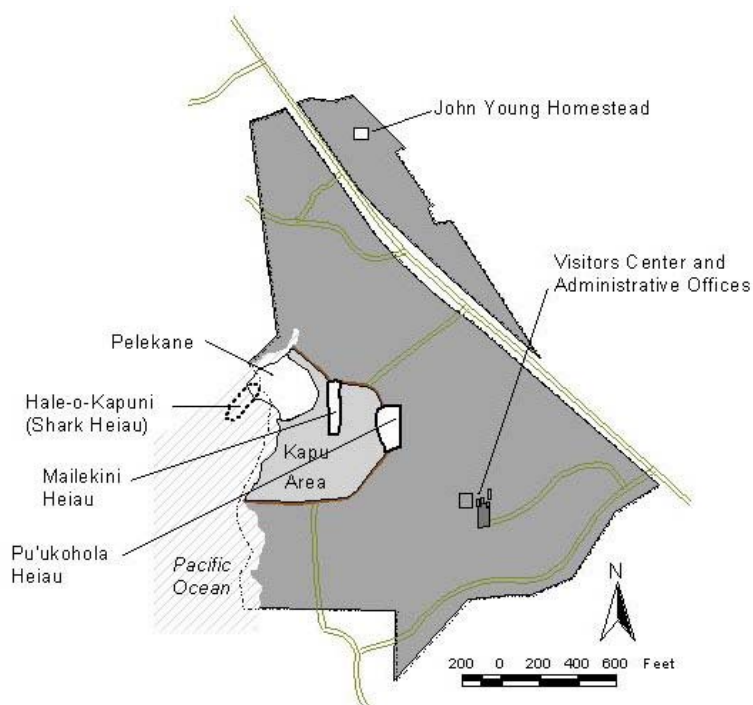
With the abolition of the kapu system in 1819, the spatial organization of the landscape changed and was

used in a more vernacular way for grazing cattle and agriculture. The concept of scared space and separation of spaces, previously defined by the heiau walls and restricted areas like the royal grounds, no longer influenced use and development of the landscape. Over the years, new stone walls were constructed throughout the area, based on the functional need to protect gardens from browsing cattle and other feral animals. Some new settlement occurred along the shoreline in the Pelekane area, but it was scattered and ill defined.

Within the park, the biggest change affecting historic spatial organization, had been the construction of the Spencer Beach Road and Highway 270. The Spencer Beach Park Road bisects the park between Pu'ukohola and Mailekini heiau. The construction of State Highway 270 divided the John Young Homestead from the rest of the park. Adjacent harbor construction and car dump has also had an impact of historic views and circulation patterns throughout the park.

Summary

In spite of changes to the landscape, the spatial organization between the heiau and the topography is still present. This is especially true for Pu'ukohola and Mailekini heiau in relation to their siting to each other and to the shoreline. Although the exact location of the third heiau is speculative, the fact that these heiau were sited upon the hill is a critical element of spatial relationship and the design intent. The historic walls that connected the two heiau have been altered to the degree that they no longer define an enclosure, but the remnants of the walls are evident on the slopes towards the sea from Pu'ukohola Heiau. Despite significant changes made to the harbor and shoreline, Pelekane still retains its spatial relationship to Pu'ukohola and Mailekini heiau. Spatial organization retains integrity as a contributing landscape characteristic at Pu'ukohola Heiau National Historic Site.



Map showing spatial organization and kapu area around the heiau and Pelekane during the period of significance (CLI Team/PISO/2001).

Characteristic Feature	Type Of Contribution	LCS Structure Name	IDLCS Number	Structure Number
Spatial relationship between Pu'ukohola Heiau, Mailekini Heiau and Pelekane	Contributing			

Topography

The prominent is a coastal lava dome rising to approximately 130 feet above sea level. This land feature forms the center point of the entire landscape. The heiau was constructed upon the hill in a formal spatial relationship to each other, and most importantly, to the topography. This topographic feature still anchors the entire cultural landscape of Pu'ukohola Heiau National Historic Site although the topography has been manipulated by modern construction.

Archeological evidence indicates that the traditional methods of building structures on the landscape involved constructing stone terraces and platforms to create level ground, rather than extensive manipulation of the natural topography. These terraces and platforms are evident at Pelekane, the John Young Homestead, and Pu'ukohola Heiau.

Both Pu'ukohola and Mailekini heiau were constructed on the surface of existing slopes with little manipulation of the topography. The rear wall of Pu'ukohola Heiau is constructed to slope down to meet the natural grade of the hill at around the 110-foot elevation. The inside of the heiau is a platform built from stone. Along the front of the heiau, three narrow terraces are constructed to step down and tie back in to the natural slope of the hill. Mailekini Heiau straddles a shallow gully and follows the natural topography with both ends of the heiau being slightly higher than the middle. The spot chosen for the construction was where the slope levelled for roughly the width of the heiau and then dropped again. Both above and below the heiau, the gully is deeper than the portion on which Mailekini stands (Dunbar 1991).

The shoreline and Pelekane Bay has been compromised by the construction of the Kawaihae Harbor (and recent small boat harbor), constructed between (1959 and 1970). Although most of the construction was outside the current park boundaries, the impacts of construction on the park have been significant. The Kawaihae Harbor revetment extends out from the inside shore boundary of the Pelekane. It is composed of basalt boulders with coral fill. This artificial facility was completed in 1970 by dredging a portion of the coral reef along the coast of Kawaihae. Eighty percent of the natural reef was destroyed within the embayment and adjacent areas through blasting and dredging activities during construction.

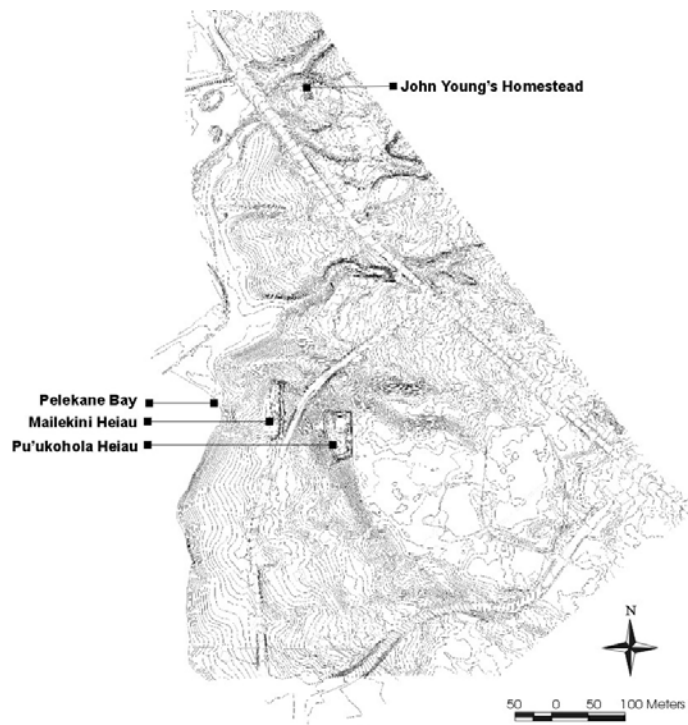
Harbor construction also significantly changed the Makeahua Gulch, which was diverted into Pohaukole Gulch. A brackish lagoon was created resulting in the buildup of the beach area and mudflats. About half of the area is silted over by alluvium deposited, in part, from this runoff. Water turnover with the embayment is light because it is shallow, sheltered from the prevailing northeast trade winds, and because the Kawaihae Harbor revetment has blocked the current that once swept through this part of Kawaihae Bay. These modifications have directly changed the shoreline, gulches and drainage patterns, the structure of Pelekane Bay, and have obscured the location of Hale o Kapuni Heiau.

The most significant topographic modifications to the landscape have been the construction of three roads that intersect the park. These roads include: Highway 270 along the north edge of the site, the visitor access road and the (unpaved) Military Tank Road. All three roads include cut and fill, slopes, culverts, and paved surfaces (except for the Military Tank Road). Removal of the Old Spencer Beach Road in 2002 and the restoration of the sloped ground plane significantly improved previous site intrusions.

Summary

The most significant topographic feature is Pu'ukohola and the siting of the heiau on the prominent hill in relation to the natural topography. The landform and placement of the heiau is contributing to the historic scene. The gulches and Pelekane Bay have been compromised by the modifications to Kawaihae Harbor.

However, despite the above listed alterations to the topography of Pu'ukohola Heiau National Historical Site, the essential component remains along with its topographic relationship with the heiau. As a result, topography retains integrity as a contributing landscape characteristic.



Topographical map showing 2-foot contours (HNL/PISO 2001).

Characteristic Feature	Type Of Contribution	LCS Structure Name	IDLCS Number	Structure Number
Prominent Hill	Contributing			
Gulches	Non-Contributing			
Pelekane Bay	Non-Contributing			
Shoreline	Non-Contributing			

Vegetation

The area surrounding Pu'ukohola Heiau National Historic Site is an arid, coastal landscape. Historical studies indicate that prior to European contact vegetation in the area may have included native plant species such as pa u o hi iaka (*Jacquemontia sandwicensis*), pili (*Heteropogon contortus*), 'ilima (*Sida fallax*) and kakonakona (*Panicum torridum*) (Macneil and Hemmes 1977:4-5). Today, this landscape predominately consists of introduced exotic plants such as buffelgrass (*Cenchrus ciliaris*) and kiawe (*Prosopis pallida*) brought by Europeans in the 1920s and 1930s.

Descriptions of vegetation first documented in written accounts as well as paintings and drawings indicate that the Pu'ukohola landscape was largely "treeless and barren" (Greene 1993). After the building of Pu'ukohola Heiau, Archibald Menzies, a Scottish surgeon and naturalist/botanist visited Kawaihae on the ship, *Discovery*, lead by Captain George Vancouver during a voyage to the Hawaiian Islands between 1792 and 1794. Menzies described the area as being "destitute of trees or bushes of any kind". He also described cultivated areas as "industrious cultivation by the number of small fields" present in the upper slopes of the landscape (Menzies 1920:52, Pratt 1998:82). After the introduction of cattle in 1793 and other grazing animals, Pratt speculates that intensive grazing would have had a negative impact on the existing vegetation. However, Pratt presumes that it is likely that native plants such as pili (*Heteropogon contortus*), panicum spp., lama (*Diospyros sandwicensis*), kauila (*Colubrina oppositifolia*), wiliwili (*Erythrina sandwicensis*) and ohe makai (*Reynoldsia sandwicensis*) were probably scattered in the area (Pratt 1998:83).

In 1793, George Vancouver, captain of the ship *Discovery*, described Kawaihae as being "situated in a grove of cocoa-nut trees, just behind a sandy beach" (Greene 1993:193). A watercolor painting done in 1855 by James Gay Sawkins depicts Pelekane with a grove of coconut trees on the grounds (see historic watercolor painting in this section). During several migrations to the Hawaiian Islands, Polynesians brought about 29 plant species including coconuts (Abbot 1992).

Existing vegetation at Pu'ukohola consists primarily of introduced plant species. The primary factors influencing the introduction of new plant species into the area was the sandalwood trade, the influx of Europeans and missionaries and use of the Kawaihae Harbor (Macneil and Hemmes 1977:5).

Today the park consists of four plant communities; dry scrub grassland, a closed kiawe forest, a halophytic community, and a disturbed roadside community (Macneil and Hemmes 1977, Pratt 1998). The predominant coastal plant communities are grassland, buffelgrass (*Cenchrus ciliaris*) and a forest of kiawe (*Prosopis pallida*) (Pratt 1998:83). Kiawe was introduced to Hawai'i in 1928 by Father Bachelot and used for fuel wood and cattle feed (Wagner et al. 1990:693). In the 1930s, buffelgrass was introduced to Hawai'i as a cultivated crop (Wagner et al. 1996:1512).

There have also been recent plantings of native and Polynesian introduced plants around administrative offices at Pu'ukohola Heiau. These plantings include an irrigated lawn. The vegetation surrounding the Pu'ukohola Heiau and Mailekane Heiau is primarily comprised of buffelgrass and scattered kiawe trees. A five-foot "plantless" buffer around both heiau is maintained by the NPS maintenance crew at the park.

The existing coconut grove in the Pelekane area is similar to the grove described during the historic period (per verbal communication with park Superintendent Daniel Kawaiaea 4/18/01). It is not known if the existing coconut trees are from the same genetic gene pool (dating back to the late 1700s). An elder Hawaiian informant, Mr. Bill Akau collected coconut tree seeds from plants that were present in the Pelekane area around the mid-1950s (possibly 1954) and planted them at his home in Kawaihae. He collected seeds because he was concerned that the plants would get damaged during the dredging of the

harbor. Superintendent Kawaiaea stated that in the 1970s, there were several coconut trees left in that area and that the remaining groves were augmented with additional plantings of coconut trees (per communication with Superintendent Daniel Kawaiaea, April 19, 2001).

Superintendent Kawaiaea stated that there probably was not a religious connection between the Pu'ukohola Heiau and the coconut trees at Pelekane. Traditional use of native plants suggests that perhaps the coconut tree leaves were used for weaving baskets to carry offerings into the sacred heiau. In addition, coconuts at Pelekane probably provided food, shade and twine. Superintendent Kawaiaea also stated that the size of king's coconut grove was a reflection of his power. During war times between rival chiefs, coconut groves were targeted for destruction. Coconut trees were grown around villages and used for tools, weapons, medicine, hula/music, fishing, food/drink, fiber/cordage, containers/utensils, ceremonies, and for the building materials including canoes (Krauss, 1993). Other plants (Pratt 1998) speculated to be historically present on the shoreline also had many uses such as pili grass and *Panicum* species for roof thatch use. Lama, kauila, wiliwili and ohe makai also had cultural and religious uses ranging from medicinal, to ceremonial use and food sources. These scattered native plants along the coast and the coconut grove at Pelekane are contributing to the historic scene.

Buffelgrass is present in all areas of the park excluding the dense kiawe tree stand in the north section of the park and the NPS administrative area. The visual character of this grass is different from that of the pili grass which is indigenous to the area and was probably present during the period of significance (Pratt 1998). An experimental pili grass plot has been established on the south side of the Pu'ukohola Heiau. Buffelgrass and kiawe trees are not contributing to the historic scene.

Beginning in the 1970s when the NPS actively began to manage the site, maintenance crews began removing kiawe trees from the park grounds. The northern portion of the park contains the largest stands of trees whereas the middle and southern portions contain scattered individual trees. The kiawe stand in the north section of the park consists of a thick stand of trees providing dense cover where none existed during the historic period. NPS staff has also introduced native species, not historically found in the area, therefore these plants are considered non-contributing to the historic scene.

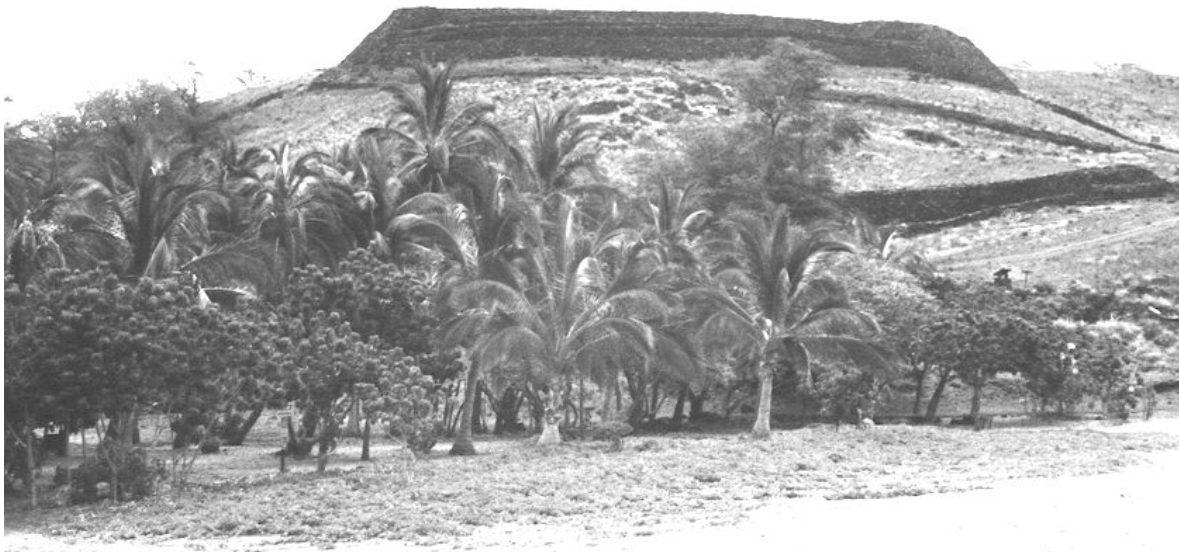
Summary

Vegetation at Pu'ukohola has changed over time due to changing land use and the introduction of new plant species to the Hawaiian Islands by Polynesians, Europeans and NPS staff. The relatively barren landscape was historically covered with pili grass which has been crowded-out by buffelgrass, introduced in the 1930s as forage for cattle. Today, natural stands of pili grass are not present on the historic site except for an experimental grass plot adjacent to Pu'ukohola Heiau and along the Old Spencer Park Road corridor which was recently removed.

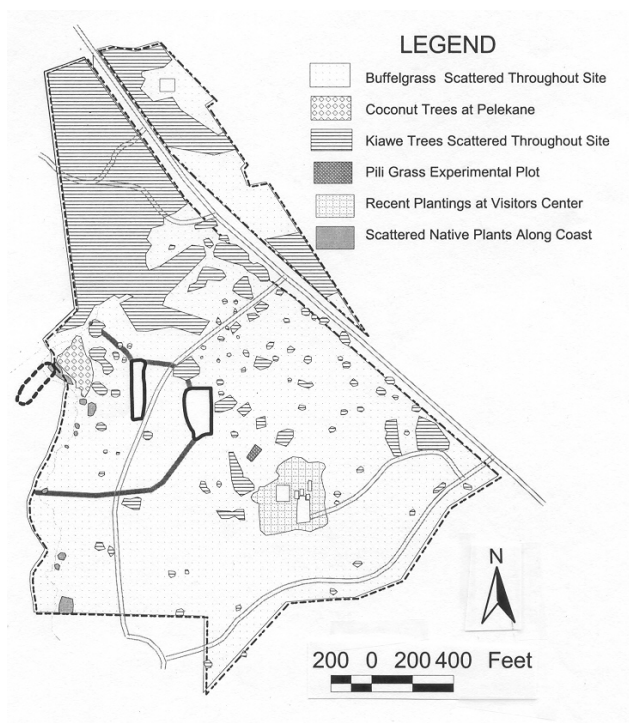
The coconut grove at Pelekane resembles the historic character of the grove during the historic period in scale, type, cover and density. As a grove, it is considered significant and a contributing feature of the cultural landscape. The remaining vegetation on the site today, except for the Pelekane coconut grove and the scattered native plants along the coast, is very different from what was present during the historic period and as a result is a non-contributing characteristic of the cultural landscape.



Historic watercolor of Pelekane, Pu'ukohola and Mailekini heiau (James Gay Sawkins ca. 1855 in Desha 2000).



Contemporary photo of Pu'ukohola Heiau as compared to historic watercolor in Desha 2000 (CLI Team/PISO/2001).



Existing vegetation map of Pu'ukohola Heiau National Historic Site (CLI Team/PISO/2001).



Existing plantings at visitors center (CLI Team/PISO/2001).



Experimental pili grass plot near Pu'ukohola Heiau (CLI Team/PISO/2001).

Characteristic Feature	Type Of Contribution	LCS Structure Name	IDLCS Number	Structure Number
Coconut grove at Pelekane	Contributing			
Scattered native plants along coast	Contributing			
Buffelgrass scattered throughout site	Non-Contributing			
Experimental pili grass plot	Non-Contributing			
Kiawe trees scattered throughout site	Non-Contributing			
Plantings at Visitor Center/Administration Buildings	Non-Contributing			

Views And Vistas

The siting of Pu'ukohola Heiau and Mailekini heiau on the western slope creates striking views. Historically, the view from the heiau looked west over Pelekane and out over the bay and village along the northern shore. The view to the heiau was clear from all directions of the surrounding landscape. Historically the heiau were the primary components of any view from the shoreline below, the village, the surrounding slopes, and as far away as the summit of Mauna Kea. An account from Missionary Hiram Bingham's 1820 journal states, "The frowning structure is so large and prominent, that it can be distinctly seen with the naked eye, from the top of Mauna Kea, a distance of about 32 miles" (Greene 1993:227).

On June 3, 1994 Herb Kane, a local artist was contracted to provide input regarding vantage points within the park boundaries. His assessment involved the esthetic experience. Kane (1994) felt that:

"The open, generally barren condition best reveals the massive and sculptural land forms and the manner in which the heiau architecture rests upon these earth forms. I like to think of Pu'ukohola Heiau as a sculpture and the "hill of the whale" as its most ideal pedestal. When viewed from makai in the full afternoon sun, the strong earth colors of the rockwork and the softer but analogous colors of the hill offer an impressive esthetic experience, even to those who know nothing of the history of the place. Both heiau dominate the landscape, yet appear as part of it, as if they had grown out of it."

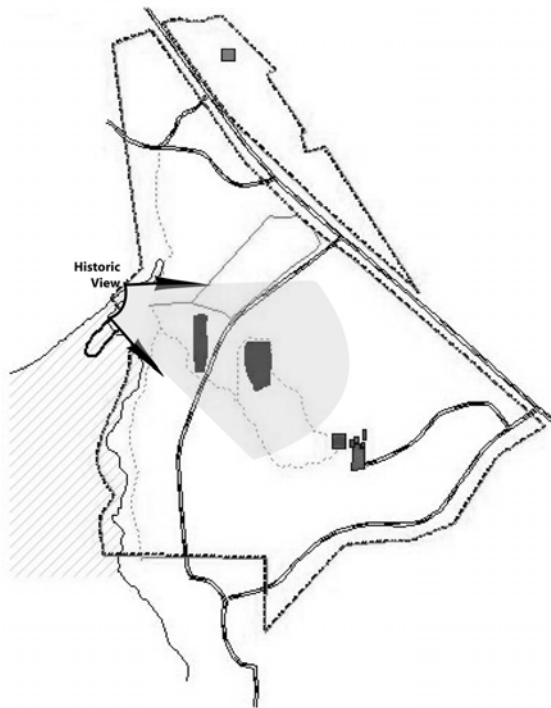
During the period of significance, travelers most often approached the area by water rather than hiking over the rough broken lava fields. Therefore, the most common historic view of the heiau was from the bay and this view retains integrity. Accounts from early sea captains describe the open views, from offshore along the western slope, to the interior of the Pu'ukohola Heiau. Detailed accounts make note of the small village (in the 1790s), the heiau, the freshwater stream emptying into the bay, and Pelekane (Greene 1993:222-7). This perspective, across the water, and up the slope to Mailekini and Pu'ukohola heiau, was the most remarkable view. Today, the view from the water, or even the coral flats across the water, upslope to Pu'ukohola Heiau, is still the most remarkable. Evaluating views within the park boundaries, the views from Pelekane and Pelekane Bay, upslope toward Mailekini and Pu'ukohola heiau retains historic integrity.

A description by Sea Captain Freycinet in 1819 makes specific reference to the John Young Homestead Site, from the beach, indicating a clear sight line to that area. Because the area surrounding Pelekane and the heiau was kapu, these descriptions, from off shore vessels indicate that the sight lines and view sheds were open, not obscured by other structures or vegetation (Greene 1993:225). Today, views from the John Young Homestead and the Tank Road area, (north of Pelekane) are obstructed by non-native kiawe trees along with the view from Pu'ukohola Heiau toward the John Young Homestead Site. This historic open view no longer retains integrity and is not contributing to the historic scene.

Modern development along the shore has impacted views from the heiau and the surrounding slopes of the park. Immediately to the north of the heiau the deep-water port of Kawaihae Harbor remains a significant visual intrusion on the historic scene. Industrial equipment, storage tanks, and containers add further intrusions to the historic viewshed along the north shoreline outside of the park. Spencer Beach Park area is a non-historic feature upon the landscape that has in impact on the view along the south shore. The visitor center and administration complex also compromises the view from the heiau toward the south. Therefore, views from the Pu'ukohola Heiau towards Kawaihae Harbor, Spencer Beach Park, and the visitor center and administration buildings do not retain integrity and is non-contributing to the historic scene. However, views from the Pu'ukohola Heiau toward the west and east do retain integrity and are contributing to the historic scene.

Summary

Views from Pu'ukohola Heiau to the north and south are non-contributing because of Kawaihae Harbor, Spencer Beach Park, and the visitor center and administration buildings. Views to the east and west are contributing to the historic scene. Views from the John Young Homestead towards Pu'ukohola Heiau and vice-versa are non-contributing to the historic scene because kiawe trees block this historically open view. Historically, the most prominent view was from Pelekane and Pelekane Bay looking east towards Mailekini and Pu'ukohola heiau. This view retains integrity and is contributing to the historic scene. As this is the most significant view within the park, views and vistas retains integrity and is a contributing landscape characteristic of Pu'ukohola Heiau National Historic Site.



Map illustrating the single remaining historic view: from Pelekane upslope to Pu'ukohola Heiau (CLI team/PISO/2001).



Contemporary view from Pu'ukohola Heiau over Pelekane Bay, showing the coral flats of the Kawaihae Harbor (CLI Team/PISO/2001).



Retouched photo simulating the historic view from Pu'ukohola Heiau, over Pelekane Bay, before construction of the Kawaihae Harbor (CLI team/PISO 2001).



Contemporary view from Pelekane, upslope towards Mailekini and Pu'ukohola heiau (CLI team/PISO/2001).



Contemporary view from Pu'ukohola Heiau towards the northwest (CLI Team/PISO/2003).



Contemporary view from the west of Pu'ukohola looking east (CLI Team/PISO/2003).

Characteristic Feature	Type Of Contribution	LCS Structure Name	IDLCS Number	Structure Number
Views from Pelekane Bay towards Pelekane, Mailekini and Pu'ukohola heiau	Contributing			
Views from Pu'ukohola Heiau to the east	Contributing			
Views from Pu'ukohola Heiau to the west	Contributing			
Views from the Pelekane upslope toward Pu'ukohola Heiau	Contributing			
Views between the John Young Homestead Site and Pu'ukohola Heiau	Non-Contributing			
Views from Pu'ukohola Heiau to Spencer Beach Park, and the visitor center and administration buildings (south)	Non-Contributing			

Views from Pu'ukohola Heiau Non-Contributing
towards Kawaihae harbor (north)

Management Information

Descriptive And Geographic Information

Historic Name(s):	Pu'ukohola Heiau
Current Name(s):	Pu'ukohola Heiau National Historic Site
Management Unit:	
Tract Numbers:	101-01, 101-02, 101-03, 101-04, 101-05, 101-06, 101-07, 101-08
State and County:	Hawaii County, HI
Size (acres):	86.24

Boundary UTM

Boundary UTM(s):	Source	Type	Datum	Zone	Easting	Northing
	USGS Map 1:24,000	Point	NAD 83	5	204810	2217318
	USGS Map 1:24,000	Point	NAD 83	5	204836	2216729
	USGS Map 1:24,000	Point	NAD 83	5	205255	2216927
	USGS Map 1:24,000	Point	NAD 83	5	204512	2217039
	USGS Map 1:24,000	Point	NAD 83	5	205182	2216881
	USGS Map 1:24,000	Point	NAD 83	5	205066	2217127
	USGS Map 1:24,000	Point	NAD 83	5	204608	2217117
	USGS Map 1:24,000	Point	NAD 83	5	204652	2217162
	USGS Map 1:24,000	Point	NAD 83	5	204901	2217338
	USGS Map 1:24,000	Point	NAD 83	5	204884	2217532
	USGS Map 1:24,000	Point	NAD 83	5	204667	2217521
	USGS Map 1:24,000	Point	NAD 83	5	204610	2217498
	USGS Map 1:24,000	Point	NAD 83	5	204771	2217541
	USGS Map 1:24,000	Point	NAD 83	5	204736	2217533
	USGS Map	Point	NAD 83	5	204460	2217460

1:24,000					
USGS Map	Point	NAD 83	5	204927	2217344
1:24,000					
USGS Map	Point	NAD 83	5	204836	2216619
1:24,000					
USGS Map	Point	NAD 83	5	204953	2216750
1:24,000					
USGS Map	Point	NAD 83	5	204793	2217378
1:24,000					
USGS Map	Point	NAD 83	5	204734	2216734
1:24,000					
USGS Map	Point	NAD 83	5	205118	2216782
1:24,000					
USGS Map	Point	NAD 83	5	204896	2217369
1:24,000					

GIS File Name: PUHESiteMap.apr,PUHESpatialOrg.apr,Boundry.apr,Vegmap.apr

GIS File Description: These are ArcView files containing numerous .shp files (including boundary map, site map, spatial organization map and, vegetation map) as part of the project located in E:/PUHE/GISData. The computer and server is located at Hawai'i Volcanoes National Park and belongs to the CLI program.

National Register Information

National Register Documentation: Entered -- Inadequately Documented

Explanatory Narrative:

In 1962, Pu'ukohola Heiau was designated a National Historic Landmark. In 1966, the heiau and its environs were listed in the National Register of Historic Places as a historic district. Six years later, Pu'ukohola Heiau National Historical Site was established as a unit of the National Park Service. Pu'ukohola Heiau National Historic Site's legislative mandate is to preserve and restore "ir public ownership the historically significant temple associated with Kamehameha I and the property of John Young who fought for Kamehameha I during the period of his ascendancy to power".

NRIS Information:

NRIS Number:	66000105
Primary Certification:	Listed In The National Register
Primary Certification Date:	10/15/1966
Other Certifications:	Designated National Landmark
Other Certification Date:	12/19/1962
Name In National Register:	Pu'ukohola Heiau National Historic Site
Other Names In National Register:	Pu'ukohola Historic District;PUHE 1;PUHE 2;PUHE 3

National Register Eligibility: Eligible -- Keeper

Explanatory Narrative:

Date of Eligibility Determination: 10/5/1966

National Register Classification: Site

Significance Level: National

Contributing/Individual: Individual

Significance Criteria:

A -- Inventory Unit is associated with events that have made a significant contribution to the broad patterns of our history

B -- Inventory Unit is associated with the lives of persons significant in our past

C -- Inventory Unit embodies distinctive characteristics of type/period/method of construction; or represents work of master; or possesses high artistic values; or represents significant/distinguishable entity whose components lack individual distinction

D -- Inventory Unit has yielded, or is likely to yield, information important to prehistory or history

Period Of Significance

Time Period: 1790 - 1835 AD

Historic Context Theme:	Peopling Places
Historic Context Subtheme:	Ethnohistory of Indigenous American Populations
Historic Context Facet:	Varieties Of Conflict, Conquest Or Accommodation

Area Of Significance:

Category:	Ethnic Heritage
Sub-category:	Pacific Islander
Priority:	1

National Historic Landmark Information

National Historic Landmark Status:	Yes
Date Determined Landmark:	12/29/1962
Landmark Theme:	Indigenous Peoples

World Heritage Site Information

World Heritage Site Status:	No
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Cultural Landscape Type and Use

Cultural Landscape Type:	Ethnographic Landscape Historic Designed Landscape Historic Site Historic Vernacular Landscape
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Current and Historic Use/Function:

Use/Function Category:	Government
Use/Function:	Capitol
Detailed Use/Function:	Capitol
Type Of Use/Function:	Historic
Use/Function Category:	Religion
Use/Function:	Ceremonial Site
Detailed Use/Function:	Ceremonial Site
Type Of Use/Function:	Both Current And Historic
Use/Function Category:	Commerce/Trade
Use/Function:	Commerce/Trade-Other
Detailed Use/Function:	Commerce/Trade-Other
Type Of Use/Function:	Historic
Use/Function Category:	Funerary
Use/Function:	Grave/Burial
Detailed Use/Function:	Grave/Burial
Type Of Use/Function:	Both Current And Historic

Use/Function Category:	Transportation
Use/Function:	Pedestrian-Related
Detailed Use/Function:	Hiking Trail
Type Of Use/Function:	Both Current And Historic
Use/Function Category:	Education
Use/Function:	Interpretive Landscape
Detailed Use/Function:	Interpretive Landscape
Type Of Use/Function:	Current
Use/Function Category:	Transportation
Use/Function:	Pedestrian-Related
Detailed Use/Function:	Interpretive Trail
Type Of Use/Function:	Current
Use/Function Category:	Transportation
Use/Function:	Water-Related
Detailed Use/Function:	Landing (Wharf, Dock)
Type Of Use/Function:	Historic
Use/Function Category:	Landscape
Use/Function:	Landscape-Other
Detailed Use/Function:	Landscape-Other
Type Of Use/Function:	Both Current And Historic
Use/Function Category:	Domestic (Residential)
Use/Function:	Multiple Dwelling
Detailed Use/Function:	Multiple Dwelling-Other
Type Of Use/Function:	Historic
Use/Function Category:	Recreation/Culture
Use/Function:	Recreation/Culture-Other
Detailed Use/Function:	Recreation/Culture-Other
Type Of Use/Function:	Both Current And Historic
Use/Function Category:	Vacant (Not In Use)
Use/Function:	Ruin
Detailed Use/Function:	Ruin
Type Of Use/Function:	Current
Use/Function Category:	Social
Use/Function:	Social-Other
Detailed Use/Function:	Social-Other
Type Of Use/Function:	Both Current And Historic

Use/Function Category:	Undetermined
Use/Function:	Undetermined
Detailed Use/Function:	Undetermined
Type Of Use/Function:	Historic

Ethnographic Information

Ethnographic Survey Conducted: No Survey Conducted

Significance Description:

Information about traditional use of Pu'ukohola Heiau National Historic Site by native Hawaiians is drawn from existing documented sources. To date, no ethnographic overview and assessment has been completed for the site. Anecdotal and documented information about current use (documented by the National Park Service since 1972) does state that the site is currently used by the Native Hawaiian community for ceremonial, recreational (fishing), and cultural events.

When an ethnographic overview and assessment for the site is completed, information relating to the cultural landscape will be incorporated in this inventory.

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Description:

It is important to note that many of the features historically associated with the development and use of the cultural landscape during the historic period are located outside of current park boundaries. These historic features remain in various degrees of physical integrity, and while they are not evaluated in this document, they do contribute to an understanding of the larger cultural landscape associated with Pu'ukohola National Historic Site.

Viewsheds are an important characteristic of the historic period. Viewsheds outside of the park boundary contribute to the significance and integrity of the site except for the views toward Kawaihae Harbor and Spencer Beach Park.

General Management Information

Management Category: Must Be Preserved And Maintained

Management Category Date: 7/19/2001

Explanatory Narrative:

The Pu'ukohola Heiau National Historic Landmark landscape falls under Category A: Must be Preserved and Maintained due to its NHL status.

Condition Assessment And Impacts

The criteria for determining the condition of landscapes is consistent with the Resource Management Plan Guideline definitions (1994) and is decided with the concurrence of park management. Cultural landscape conditions are defined as follows:

Good: indicates the landscape shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The landscape's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the landscape shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character-defining elements will cause the landscape to degrade to a poor condition.

Poor: indicates the landscape shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

Undetermined: Not enough information available to make an evaluation.

Condition Assessment: Fair

Assessment Date: 09/30/1998

Date Recorded: 09/30/1998

Park Management Concurrence: Yes **Concurrence Date:** 4/15/2003

Level Of Impact Severity: Unknown

Explanatory Notes: Superintendent Kawaiaea concurred with the findings of the CLI in an email message on the above date. This message is included in the front of this document.

Stabilization Measures:

The construction of Kawaihae Harbor by the State of Hawai'i, and the resulting erosion and siltation, has greatly altered the shoreline, drainage patterns, and ocean currents of Pelekane

Bay and Pohaukole Gulch. Potential stabilization efforts may involve altering drainage patterns, constructing breakwaters and groynes, and dredging. However the costs of these potential efforts cannot be adequately assessed without extensive erosion, drainage, and water current assessments.

Park efforts at chinking stone walls should be continued.

Current park efforts at removal of invasive species should continue and expand to the entire park boundary.

Impact:

Type of Impact: Adjacent Lands

Internal/External: External

Description:

Kawaihae Harbor construction changed and continues to impact the shoreline, Pelekane, Pelekane Bay and Hale o Kapuni by increasing siltation as well as altering drainage patterns and ocean currents.

Type of Impact: Exposure To Elements

Internal/External: Internal

Description:

Exposure to coastal conditions and severe storms, including wind and rain, and have an impact on all structures and archeology sites.

Type of Impact: Planting Practices

Internal/External: Internal

Description:

Non-historical plantings and irrigation around the visitor center and administration buildings impact sub-surface archeological sites and succession of native vegetation.

Type of Impact: Pollution

Internal/External: Both Internal and External

Description:

Noise pollution from the Kawaihae Harbor is intrusive to the visitor's experience.

Type of Impact: Structural Deterioration

Internal/External: Internal

Description:

Deterioration and collapse of portions of the Pu'ukohola and Mailekini heiau stone walls may occasionally collapse, however, the walls appear to be stable at this time.

Type of Impact: Vegetation/Invasive Plants

Internal/External: Both Internal and External

Description:

Invasion by non-native species (kiawe and buffelgrass) into the park impacts sub-surface archeology and succession of native vegetation.

Agreements, Legal Interest, and Access

Management Agreement: Memorandum Of Agreement

Expiration Date: 12/1/2005

Explanatory Narrative:

There is a Memorandum of Agreement between the park and the State of Hawai'i. The park manages (roads, trails and trash) on state lands and this contract is renewed every five years.

Public Access: With Permission

Access into Pu'ukohola and Mailekini heiau requires requested permission from park staff.

Unrestricted

Park access is unrestricted on state land, however, access is restricted to the interior of Pu'ukohola Heiau and Mailekini Heiau.

Treatment

Approved Treatment: Preservation
Approved Treatment Document: Other Document
Document Date: December 29, 1994

Explanatory Narrative:

Resource Management Plan calls for establishment of appropriate preservation program for Pu'ukohola Heiau. Some lichens, plants on top of surface which need to be removed. Heiau fully stabilized, continue regular stabilization work.

Approved Treatment Completed: Yes

Approved Treatment Cost

LCS Structure Approved Treatment Cost: \$132,800

Landscape Approved Treatment Cost:

Cost Date:

Level of Estimate:

Cost Estimator:

Explanatory Description: The ultimate treatment for the Mailekini Heiau (15,800), John Young Homestead (112,000), and and stone enclosure (5000) total \$132,800.

Stabilization Costs

LCS Structure Stabilization Cost: \$1,200

Landscape Stabilization Costs: \$7,900

Cost Date: March 6, 2002

Level Of Estimate: C - Similar Facilities

Cost Estimator: Support Office

Explanatory Description: LCS Structure Stabilization Cost is \$1,200 to determine and move the Leaning Post to its original location. The landscape stabilization costs of \$7,900 is drawn from costs associated with alien plant control in the former state park road corridor. This figure represents an effort on a small portion of the site and should be used as a

figure for future annual site-wide alien plant control efforts.

Documentation Assessment and Checklist

Documentation Assessment: Good

Documentation:

Document: Development Concept Plan

Year Of Document: 1989

Adequate Documentation: No

Explanatory Narrative:

The DCP is outdated and does not address current planning, vegetation, or preservation issues. It does not include CLI information i.e. contributing features.

Document: Other

Year Of Document: 0

Amplifying Details: Ladd, Edmund. N.D. National Register of Historic Places Inventory Nomination Form, Pu'ukohola Historic District

Adequate Documentation: Yes

Explanatory Narrative:

Contains adequate Ruins Stabilization and Restoration Record for Pu'ukohola Heiau National Historic Site.

Document: Other

Year Of Document: 1991

Amplifying Details: Dunbar, Holly, 1991. Pu'ukohola National Historic Landmark Boundary Study, Preliminary Draft (12/2/91) Personal correspondence from Holly Dunbar to Rob Hommon.

Adequate Documentation: Yes

Explanatory Narrative:

The draft report contains a thorough narrative of the history, all structures, integrity of the landmark, and condition of the NHL components. Document includes a complete bibliography of resources for the Pu'ukohola National Historic Site.

Document: Other

Year Of Document: 1993

Amplifying Details: Greene, Linda Wedel, 1993 A Cultural History of Three Traditional Hawaiian Sites on the West Coast of Hawai'i Island.

Adequate Documentation: Yes

Explanatory Narrative:

This document contains a thorough history of Pu'ukohola Heiau National Historic Site and historical literature.

Document: Resource Management Plan

Year Of Document: 1994

Adequate Documentation: No

Explanatory Narrative:

The RMP should be updated to include the contributing features of this report and associated preservation/management practices for these resources.

Document: Vegetation Management Plan

Year Of Document: 1996

Amplifying Details: Pratt, L.W., 1996. Vegetation Management Strategies for Three National Historical Parks on Hawai'i Island

Adequate Documentation: Yes

Explanatory Narrative:

This document is inclusive of historical and existing vegetation species within the park. Also provides management strategies for native and non-native species.

Appendix

Bibliography

Citations:

Citation Author:	Menzies, Archibald
Citation Title:	Hawai'i Nei, 128 Years Ago.
Year of Publication:	1920
Source Name:	Library Of Congress/Dewey Decimal
Citation Number:	A-P 9969M
Citation Type:	Both Graphic And Narrative
Citation Location:	HAVO CLI Library

Citation Author:	Pukui, Mary K. and Samuel H. Elbert
Citation Title:	Hawaiian Dictionary.
Year of Publication:	1986
Source Name:	Library Of Congress/Dewey Decimal
Citation Number:	PL6446.P795
Citation Type:	Narrative
Citation Location:	HAVO CRM Library

Citation Author:	Abbott, Isabella
Citation Title:	La'au Hawai'i, Traditional Hawaiian Uses of Plants.
Year of Publication:	1992
Source Name:	Library Of Congress/Dewey Decimal
Citation Type:	Both Graphic And Narrative
Citation Location:	HAVO CLI Library

Citation Author: Wagner, W.L., D. R. Herbst, and S.H. Sohmer
Citation Title: Manual of the Flowering Plants of Hawai'i.
Year of Publication: 1990
Source Name: Library Of Congress/Dewey Decimal
Citation Number: QK473.H4W33
Citation Type: Both Graphic And Narrative
Citation Location: HAVO CRM Library

Citation Author: Krauss, Beatrice H.
Citation Title: Plants in Hawaiian Culture.
Year of Publication: 1993
Source Name: Library Of Congress/Dewey Decimal
Citation Number: DU624.65.K72
Citation Type: Both Graphic And Narrative
Citation Location: HAVO CRM Library

Citation Author: Bates, George Washington
Citation Title: Sandwich Island Notes by a Haole.
Year of Publication: 1854
Source Name: Library Of Congress/Dewey Decimal
Citation Type: Narrative

Citation Author: Handy, E.S.C. and M. K . Pukui
Citation Title: The Polynesian Family System in Ka'u, Hawai'i.
Year of Publication: 1972
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Citation Number: 75-171998
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Citation Author: Desha, Stephen
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Year of Publication: 2000
Source Name: Bernice P. Bishop Museum
Citation Type: Both Graphic And Narrative
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Citation Author: Cluff, Deborah and others
Citation Title: The Archaeological Surface Survey of Pu'ukohola Heiau and Mailekini Heiau, South Kohala, Kawaihae, Hawai'i Island.
Year of Publication: 1969
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Citation Number: 919.6903C64
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Citation Author: McEldowney, H.
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Year of Publication: 1983
Source Name: Bishop Museum
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Citation Author: Kirch, Patrick V.
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Year of Publication: 2001
Source Name: NPS
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Citation Location: HAVO CRM Library

Citation Author: NPS
Citation Title: Development Concept Plan and Environmental
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Hawai'i.
Year of Publication: 1989
Source Name: NPS
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Citation Author: Rosendahl, Paul H. and Laura A. Carter
Citation Title: Excavations at John Young's Homestead, Kawaihae,
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Year of Publication: 1988
Source Name: NPS
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Citation Location: PUHE Library

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Citation Author: Herb Kane
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Citation Author: Dunbar, Holly
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Year of Publication: 1991
Source Name: Personal Correspondence
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Year of Publication: 1930
Source Name: Star Bulletin
Citation Type: Narrative
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Year of Publication: 1976
Source Name: Towill (R.M.) Corporation
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Citation Location: PUHE Library

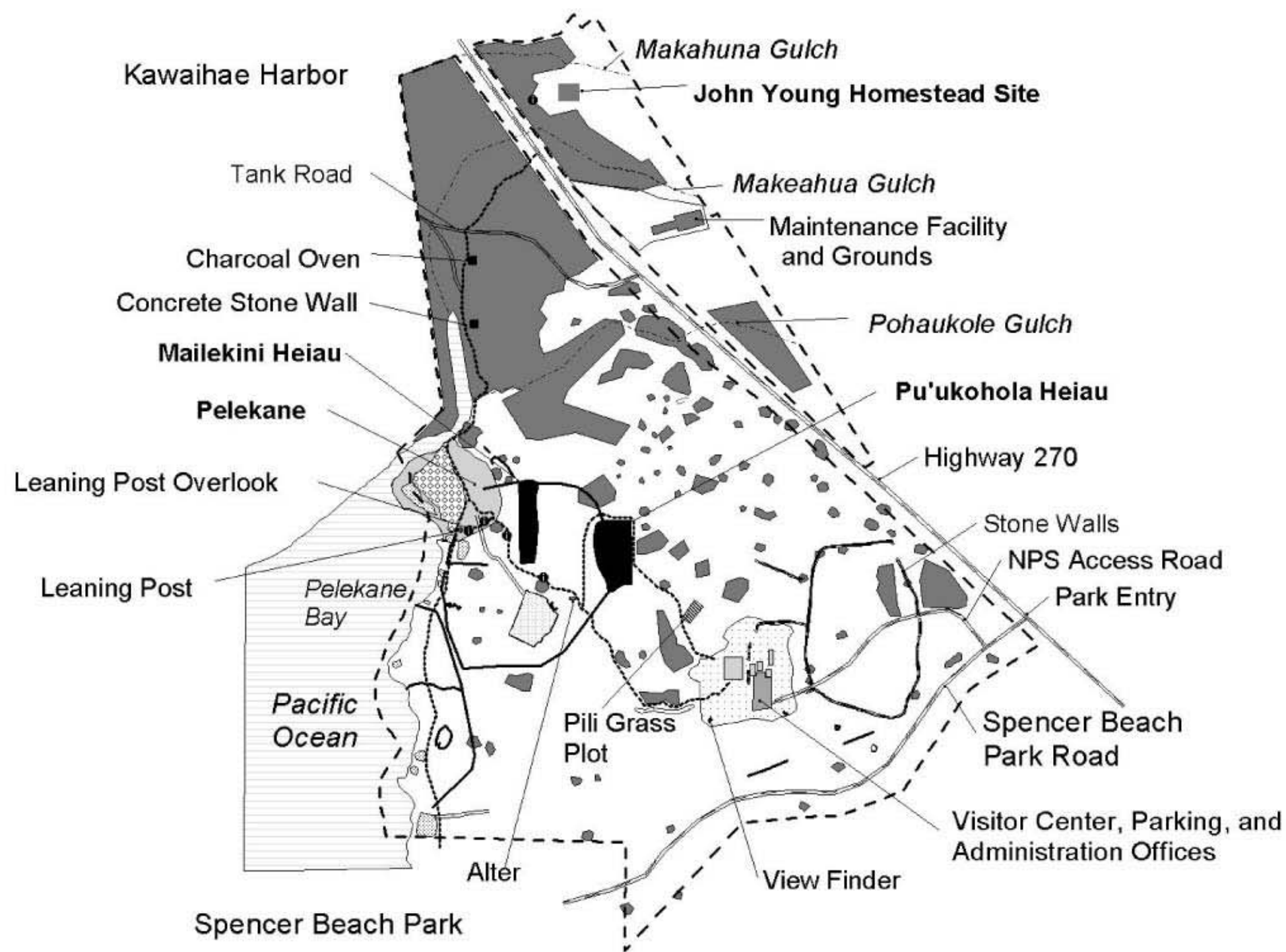
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Citation Author: Mara Durst
Citation Title: A Cooperative Archaeological Excavation Project At
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Year of Publication: 2001
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Citation Type: Both Graphic And Narrative
Citation Location: HAVO CRM Library

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Road, Pu'ukohola Heiau National Historic Site.
Year of Publication: 1989
Source Name: NPS
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Citation Location: HAVO CRM Library

Citation Author: County of Hawai'i.
Citation Title: Kawaihae Road Map.
Year of Publication: 1936
Publisher: County of Hawai'i.
Source Name: County of Hawai'i.
Citation Type: Graphic
Citation Location: HAVO CRM Library

Supplemental Information



LEGEND

- Cultural Landscape Boundary
- Old Parking Area
- Dirt Road
- Stone Walls
- Interpretative Signs
- Park Trails
- Scattered Native Plants
- Non-Historical Planting and Lawn
- Coconut Trees
- Pelekane
- Kiawe Trees

200 0 200 400 Feet

