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Phase III Archaeological Site Preservation Plan Pualani Residential Community Mitigation Program

Lands of Puapua'a 1st and 2nd
North Kona District, Island of Hawai'i



Paul H. Rosendahl, Ph.D., Inc.

Archaeological • Historical • Cultural Resource Management Studies & Services

Phase III Archaeological Site Preservation Plan Pualani Residential Community Mitigation Program

Lands of Puapua'a 1st and 2nd
North Kona District, Island of Hawai'i
(TMK:3-7-5-17:28,29)

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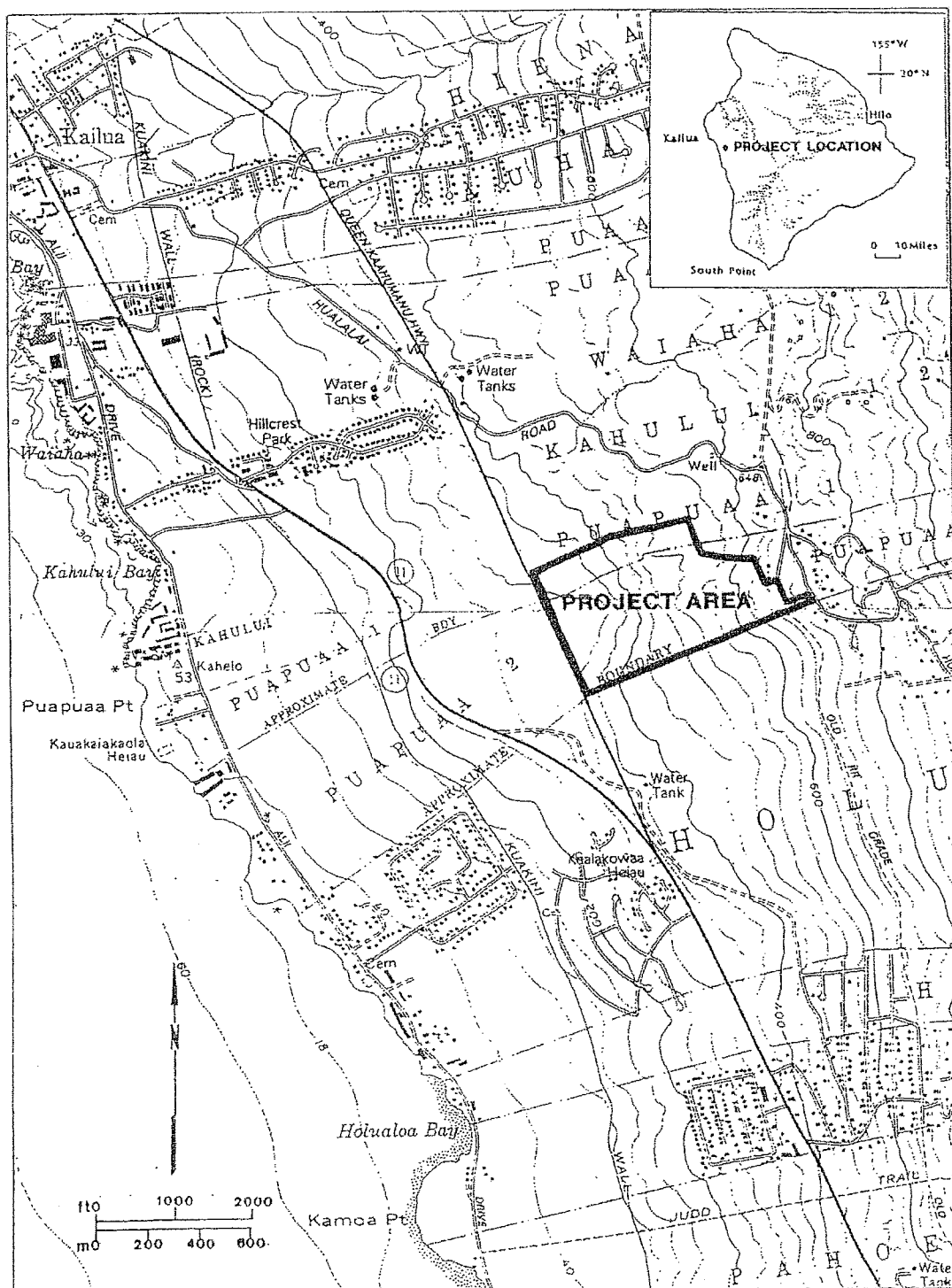
INTRODUCTION

Paul H. Rosendahl, Ph.D., Inc. (PHRI) has prepared this Site Preservation Plan (SPP) at the request of Mr. Robert West (RMKC) for their client Pualani Estates, Inc. (PEI) (formerly Pualani Development Company). This plan has been prepared in conjunction with the proposed development of the Pualani Residential Community, situated in the lands of Puapua'a 1st and 2nd, North Kona District, Island of Hawai'i (TMK:3-7-5-17:28,29) (Figure 1).

Based on the findings of the 1988 PHRI survey (Walker and Rosendahl 1988), and on input received from the Department of Land and Natural Resources - State Historic Preservation Division (DLNR-SHPD) (letter dated January 23, 1989, from Mr. Ralston H. Nagata, DLNR, to Mr. Harold Masumoto, Office of State Planning), a detailed archaeological mitigation plan containing both preservation as well as data collection components was determined to be the most appropriate vehicle for developing site-specific mitigation commitments (Jensen 1990). As a result of the conversations and formal communications, the following four phases were determined to be appropriate for the Pualani mitigation program:

- | | |
|------------------|---|
| Phase I | Preparation of a formal Archaeological Mitigation Plan, including (a) data collection, (b) interim site preservation (including monitoring), (c) burial treatment, and (d) construction monitoring; |
| Phase II | Archaeological data recovery and data collection work, including mobilization, historical documentary research, field work (including interments), data analyses, and preparation of Interim and Final reports; also, execution of the Interim Preservation Plan; |
| Phase III | Preparation of a Site Preservation Plan, upon completion of Phase II data recovery and collection work, to provide for long-term site preservation concerns; and |
| Phase IV | Archaeological Monitoring, as appropriate, of construction activities that potentially might impact significant archaeological remains already identified or which may remain undetected within the project area. |

The present document seeks to meet conditions of Phase III of the Archaeological Mitigation Plan, addressing long-term site preservation and interpretation, and includes proposed treatment and long-term preservation concerns relating to burials within the project area. Furthermore, this plan has been formulated in compliance with (a) Chapter 6E-43 HRS, for review and approval by the Department as a means for implementing the Hawai'i Island Burial Council's formal determination to disinter the identified remains and reinter them in the formal preservation area (Site 15130) (letters dated June 2 and 29, 1992 and November 30, 1993, from Don Hibbard to Paul H. Rosendahl); (b) recommendations of the Hawai'i County Planning Department; and (c) guidelines for preservation plan development as set forth in Rules and Regulations for carrying out Chapter 6E HRS, Title 13, Subtitle 6, Chapters 146-8 & 10, and 148-4,5,6,7,8,9,10,11 (Outside Draft # 3, November 1989).



SITES CONTAINING BURIALS

OVERVIEW OF PREVIOUS ARCHAEOLOGICAL WORK

On April 4-14, 1988, PHRI conducted a full (100%) archaeological inventory survey (Walker and Rosendahl 1988) of the Pualani Subdivision project area, consisting of c. 104 acres located within the lands of Puapua'a 1st and 2nd. The overall objective of the survey was to provide information appropriate to and sufficient for the preparation of the Land Use Boundary Amendment Petition (A88-632) that was eventually submitted to the State Land Use Commission. Seventy-six sites (containing 129 component features) were recorded during the survey. Of the 76 sites, six had been previously identified and 70 were newly identified. The sites included both single- and multiple-component examples. Formal feature types present within the project area included terraces, trails, C- and L-shaped walled shelters, walled enclosures, free-standing walls, modified outcrops, platforms, a lava blister, boulder alignments, mounds, a historic railroad bed, and additional modified areas. Functional types identified in the project area included habitation, transportation, agricultural, religious, possible burials (three burials were confirmed during later mitigation work, and one burial was inadvertently discovered following grubbing of the property; see below), boundary walls, a historic dump, and recent cattle ranching walls, pens, and foundations.

Of the 76 sites identified/reidentified during the 1988 project, 69 (90.8%) were assessed as significant solely for scientific information content. Further data collection was recommended for 51 (67.1%) of these 69 sites. No further work was recommended for 18 (23.7%) of the 69 sites. Of the remaining seven sites (9.2%), four (primarily foot trail segments or possible shrines) were assessed as culturally significant as valuable for information content. Further data collection was recommended for these four sites. Two of the remaining seven sites were assessed as important for information content, and were also evaluated as potentially culturally significant in view of the possible presence of human remains (burials). Further data collection and preservation "as is" were tentatively recommended for these two sites, pending the results of further data collection. The last site (a possible *heiau* or high-status residence [Feature A]) was assessed as significant for information content, cultural value, and as excellent example of a site type. Further data collection followed by preservation with some level of interpretive development was recommended for this site (Site 15130) (Jensen 1989:1).

Phase II - Archaeological Data Recovery work was conducted in two phases between December 1990-March 1991, and May-June 1991 (Graves and Goodfellow 1993). Data recovery focused on the 58 sites identified in the Mitigation Program (Jensen 1990) as requiring further work. Some of these sites were combined to facilitate recording of site complexes, bringing the total to 53 sites. During the course of data recovery work, two previously unidentified sites (Sites 15108 and 15405) were located and treated. Thus, 55 sites with 723 component features underwent data recovery, including detailed mapping and recording, surface collections and test excavations. Completion and findings of the Phase II - Archeological Data Recovery work was reported by Graves and Goodfellow (1993), and the report is currently being reviewed by DLNR-SHPD.

IDENTIFICATION OF SITES WITH HUMAN REMAINS

During the course of the data recovery work, the presence of human skeletal remains was confirmed at Sites 15115 (Feature C), 15123 (Feature N), and 15390 (Feature B). In July of 1991, public notices, asking for anyone with information about graves or buried individuals within the Pualani subdivision, were run in the Hawai'i Tribune-Herald, West Hawai'i Today, and the Honolulu Advertiser (Figure 2). No contacts were made as a result of the public notices.

Existence of the burials was referred to the Hawai'i Island Burial Council (HIBC), and a burial treatment plan (Graves 1992) was developed through consultation with DLNR-SHPD and the HIBC. On August 9, 1991 the Council met with representatives from PHRI and PEI at Pualani to review the sites where burials were known to be present, and to view the historic preservation area near the *heiau* (Site 15130). Based on the findings and communications, it was proposed that the human skeletal remains at Sites 15115, 15123, and 15390 be disinterred and reinterred in the formal c. 0.5-acre historic preserve (Site 15130) for perpetual protection. The HIBC approved the burial treatment plan at its August 1991 Council meeting (letter dated August 21, 1991, Don Hibbard, DLNR, to Mr. Leon Daniell, Pualani Development Co.).

As stated in the August 21, 1991 letter, the major reason for the HIBC determination was, "[T]he wish to consolidate the scattered burials and the establishment of a historic preserve area." The Council also recommended that any isolated remains discovered during the course of construction work also be placed within the preserve following the normal notice procedures as outlined in Hawai'i Revised Statutes 6E-43.

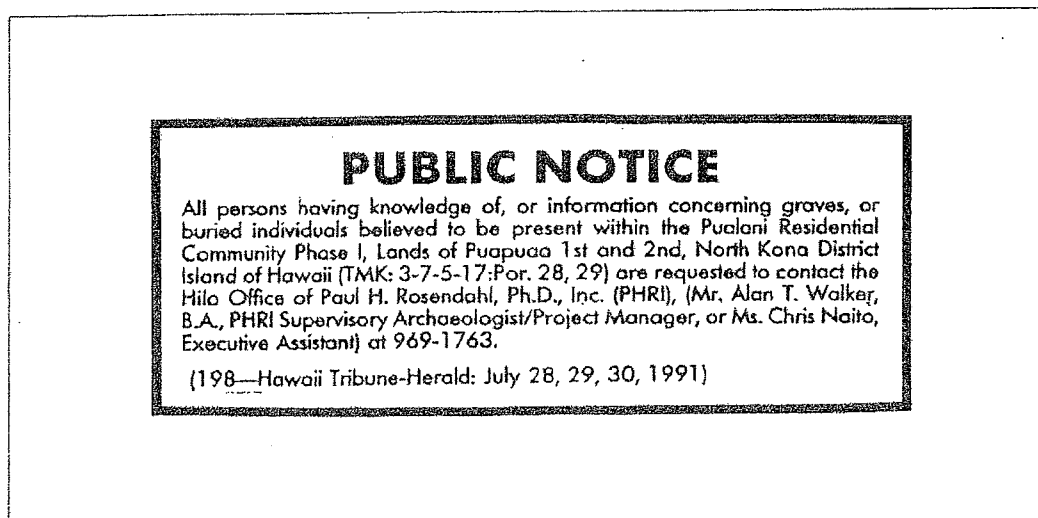


Figure 2. Public Notice

DISINTERMENT OF KNOWN HUMAN REMAINS

Additional Phase II - Archaeological Data Recovery work, conducted in preparation for grubbing activities within the project area, included the disinterment of the human skeletal remains at Sites 15115, 15123, and 15390, done between June 2-6, 1992. In addition to the burial remains, five human teeth (one tooth from Site 15128 and four from Site 14081), were recovered from midden samples processed at the PHRI Lab in Hilo. Per an agreement between DLNR and PHRI, all remains were curated in the Hilo DLNR-SHPD office of Staff Archaeologist Marc Smith (letters dated June 2 and 29, 1992, and November 30, 1993, from Don Hibbard, DLNR, to Paul H. Rosendahl, PHRI).

As a result of the HIBC site inspection in August, 1991, a recommendation was made to place a test unit in the historic preserve, north of the *heiau*. This unit was placed in order to determine if any subsurface remains would be impacted by reintering remains at the site. A 1.0 m by 1.0 m test unit was dug to 0.6 m depth; no cultural remains were located (Figure 3).

INADVERTENT DISCOVERY OF HUMAN REMAINS

As mentioned above, based on the previous field work and findings (1990-1991), it had been believed that all sites with human remains within the Pualani project area were located. In preparation for reinterment of the previously disintered remains, the author (Kepā Maly), went into the field on Sunday, June 12, 1994, with stone mason Puaita Pulotu to finalize preparation of the reinterment site. The property had been grubbed in early 1994, and while walking to the *heiau* preserve site (Site 15130), a scattering of bone (i.e., teeth, a partial jaw bone, and long bone fragments) was observed. Having been impacted by dozer activity, the remains had been spread over an area approximately 9 feet long by 7 feet wide, with no evidence of the feature in which the remains had been interred (Figure 3). Based on field maps, it appears that the area in which the remains had been originally buried, was a feature a little south of Site 15128.

On Monday June 13, 1994, the author contacted Marc Smith and E. Halealoha Ayau of the DLNR-SHPD, and Steve Lim, Esquire, representing Pualani Estates, Inc. Mr. Ayau reviewed the identification of the inadvertent discovery with members of the Hawai'i Island Burial Council. It was agreed that due to the severe nature of the dozer-impact to the remains that the author should collect all of the *iwi* (remains) and bundle them in preparation for reinterment. On June 29, 1994, the author, accompanied by PHRI field staff, Earl Fujishige and David Statler, went to the project area to conduct a pedestrian survey in the project area in order to determine if any other sites with human remains had been impacted as a part of the grubbing work. The survey was completed, and no additional sites with human remains were located, though the possibility remains that some features could have been hidden by the vegetation overgrowth. On June 29th, the author also gathered the *iwi* located on June 12, 1994, and bundled them and left in place until reinterment which was scheduled for July 5, 1994.

Reinterment of the three previously collected *iwi* (Sites 15115, 15123, 15390, and human teeth from Sites 14801 and 15128) and the *iwi* located on June 12, 1994, were reintered on July 5, 1994 by Halealoha Ayau, Punahale Lerma, Ahi'ena Kanahale, Ruby McDonald, and the author. On July 6, 1994, the author had Puaita Pulotu place cap rock over the reinterment site. Pursuant to the request of the Hawai'i Island Burial Council, the reinterment site was not solidly filled and closed. This provision has been made in case any

other remains are identified, and it is determined that disinterment and reinterment will provide the best form of protection of the *iwi*.

As a result of having located the additional *iwi* on June 12, 1994, Pualani Estates, Inc., agreed to notify qualified archaeologists of future grading and ground work in order to monitor the activity for any other possible archaeological sites (ms. S. Lim, Esquire to G. Johnston July 8, 1994).

In the event that additional human remains are inadvertently discovered within the project area during grading or construction, they will be treated on a case-by-case basis, following Chapter 6E:43.6 (as amended by Act 306), and in consultation with the Hawai'i Island Burial Council and lineal descendants (if any should come forward), and in accordance with informal rules set forth by DLNR-SHPD.

While preservation-in-place is the preferred treatment, if disinterment with reinterment and preservation at the historic preserve (Site 15130) should be recommended, this process would be undertaken with sensitivity and in compliance with the wishes of identified lineal descendants and the Hawai'i Island Burial Council. At times, natural phenomena or human activities pose a threat to ancient remains, and protection of those remains can be best achieved through reinterment in another location, as was indicated in the DLNR-SHPD/HIBC letter of August 21, 1991 (from Don Hibbard, DLNR, to Leon Daniell, Pualani Development Co.).

PRESERVATION STRATEGIES

CONCERNS FOR INTERIM AND LONG-TERM PRESERVATION

As is the case with other "common property areas" within the Pualani Estates development, it is proposed that long-term site preservation, maintenance, interpretation, and monitoring of the historic preserve be the responsibility of the Pualani Estates Association (PEA), which will also serve as the on-site curator of the cultural resources. It is proposed that the historic preserve be turned over to the PEA as a "turn-key" project, with most of the detailed documentation of current site conditions, and site stabilization and interpretive mechanisms, etc., already established. Specific tasks and a formal agreement are to be developed, and entered into between the DLNR-SHPD, HCPD, and PEA in order to facilitate fulfillment of the curatorship goals and objectives, and to monitor site conditions and to set out guidelines for monitoring activities within the preserve. It is also proposed that members of the curatorship organization be given an opportunity to participate with qualified consultants in finalizing development of some of the interpretive wayside exhibits. Participation by the residents of Pualani in this process will foster a sense of awareness and pride in the cultural preserve, and enhance long-term preservation efforts.

Pualani Estates Association Community Curatorship Organization

Section 5. of the Pualani Estates "Declaration of Covenants, Conditions and Restrictions," provides sets forth guidelines to the PEA membership for protection of the archaeological preserve:

5.02. Maintenance - Common Areas and Historic Preservation Areas. ...The Association shall also be obligated to maintain and assess the Owners as a common expense as provided herein for the preservation, monitoring, cataloging, and maintenance of the archaeological resources and sites preserved within Pualani Estates, including but not limited to Site T-37 [Site 15130], and identified as parcels on the Plan, pursuant to a historic preservation and maintenance plan approved by the State Historic Preservation of the Department of Land and Natural Resources and the County of Hawaii Planning Department. All such archaeological resources and sites preserved shall be Common Areas maintained, monitored, cataloged and preserved by the Association (October 11, 1994:9-10).

Once the PEA Curatorship Agreement is formalized, and the historic preserve is in their care, all preservation and interpretive activities, etc., and any modifications to the approved plan, will be reviewed by DLNR-SHPD for comment and approval. Regular monitoring and maintenance schedules for the historic preserve will be in effect. This will allow the curatorship group to document changes in site stability, and to take preventative actions should adverse affects from site visitation, or natural phenomena result.

Protection of the Archaeological Preserve

The Archaeological Mitigation Program (Jensen 1990), set forth conditions required for interim preservation of the historic preserve (Site 15130). Furthermore, as outlined in the June 29, 1992 letter from DLNR-SHPD (D. Hibbard to P.H. Rosendahl), the site has been accurately plotted and appropriate notations have been made on grading plans. Site 15130 and the proposed reinterment site are set within a preserve area that has boundaries which are 115.42 feet long on the east, 170.74 feet long on the north, 93.79 feet long on the west, and 170.19 feet long on the south (totaling c. 18,689 square feet—approximately a half-acre), within which no construction activity may occur. The outer perimeter of the historic preserve has been marked with brightly colored fencing, and construction and development personnel have been given instructions relating to the location, nature, and significance of the preserve.

When construction and earth moving are completed, the stakes and fencing will be removed from the interim-preservation buffers around the historic preserve area, and long-term preservation measures will be implemented. Concerns for long-term preservation include:

1. Documentation of the historic preserve site conditions and perimeters for future reference in development planning and/or land use evolution;
2. Monitoring site integrity; i.e., assigning maintenance schedules for landscaping and litter control, and for monitoring levels of pedestrian impact and/or inappropriate site uses;
3. Site landscaping and identification. Landscaping within the general vicinity of the preservation sites should be in keeping with both the native, and Hawaiian-introduced vegetation of the North Kona Region, and may be representative of activities recorded as having occurred within the Kona Field System.

No construction or land modification activities, other than appropriate landscaping, interpretation, and maintenance will occur within the historic preserve. In areas where inappropriate vegetation should be cleared to foster site preservation and interpretation, no plants will be pulled out by the roots; instead they will be cut to the surface level and spot-treated with a poison approved by DLNR-SHPD, so as not to impact any possible subsurface remains. Additionally, appropriate native vegetation may be planted on the perimeter and within the historic preserve (see discussion on preservation site buffers below).

Description of Site 15130

Graves and Goodfellow (1993) offer the following description of Site 15130, which has been set aside as the formal historic preserve area and reinterment site:

The *heiau* (Site 15130) is by far the largest structure in the project area and occupies a rocky knoll with a clear view of the coast and Kailua. It is set within a grove of *Kukui* trees and may be the *heiau* called Keaukukui'ula (The Sacred *kukui* Grove) noted (but not seen) by Stokes (1919 [Stokes and Dye 1991]). The structure is rectangular in plan view, layered with three tiers at the top of the knoll and one tier descending the SW slope. It does not appear to have been walled. Considering its context within the Kona Field System, and its morphology (relatively

small, terraced/tiered, and unenclosed), the *heiau* may have served as a temple of Lono, the god of fertility and abundance. It is interesting to note the pit-like depressions located near the east end of the *heiau*. These may of functioned to support wooden images, as refuse, or they may be the result of later vandalism... (Graves and Goodfellow 1993:22).

The existing features within Site 15130 will be accessible along a designated interpretive trail. The *ahu ilina* (reinterment site—grave cairn) has also been situated within the confines of the preserve area. It is proposed that the *ahu ilina* be marked in such a way as not to attract attention to it. Only individuals who have a familial tie to the lands of Puapua'a will be encouraged to visit the reinterment site. In general, it is proposed that signs which provide: the feature type; SIHP number; a statement about the sensitive nature of archaeological sites, and include the appropriate interpretive site descriptions, be placed in strategic areas along the trail (Figure 4).

PRESERVATION SITE MONITORING: MONITORING OF NATURAL AND VISITOR IMPACTS, MAINTENANCE AND LANDSCAPING, ACCESS, AND INTERPRETATION

Upon completion of project work, site stabilization, and buffer establishment, an archival catalogue (photographs, maps, and written documentation) of the cultural resources will be compiled, and copies will be housed with DLNR-SHPD, HCPD, the Kona Historical Society, and the Pualani Estates Association (PEA) Community Curatorship organization. This catalogue will document the condition(s), nature, and maintenance access(es), etc., for the historic preserve, including the reinterment site at the time of completion of work. The catalogue will also serve as the "control" for monitoring reviews that will be conducted by the community-curatorship organization and Pualani maintenance staff, and for reviews which may be conducted by DLNR-SHPD and HCPD staff. Over the years, the catalogue will provide a base record for evaluating changes in the sites, which might be caused either through natural aging and weathering processes, or through visitation impacts.

Site Protection and Monitoring

Site 15130 is protected within the preservation site boundaries as described above. The *ahu ilina* or reinterment site is also situated within the boundaries of the Site 15130 historic preserve (Figures 3 and 4). As a result of discussions with members of the Hawai'i Island Burial Council and staff of the DLNR-SHPD, the historic preserve was selected as the most appropriate location for reinterment and protection of the *iwi*. Prior to completion of project work, the land owner and DLNR-SHPD will enter into a "Reinterred Burial Agreement," as is the standard practice of DLNR-SHPD in such cases. The land owner believes this is an appropriate step, and is committed to the protection, maintenance, and where appropriate, interpretation of the cultural resource in this area.

Because the environment is always changing, maintenance crews and the preserve curators will participate in workshops which will address appropriate methods of landscaping (using appropriate native species), restoration of native ecosystems, maintenance of both the cultural and natural resources, and monitoring of site stability. DLNR-SHPD and other agencies or individuals with specialized skills in curatorial management, will be consulted for advice on

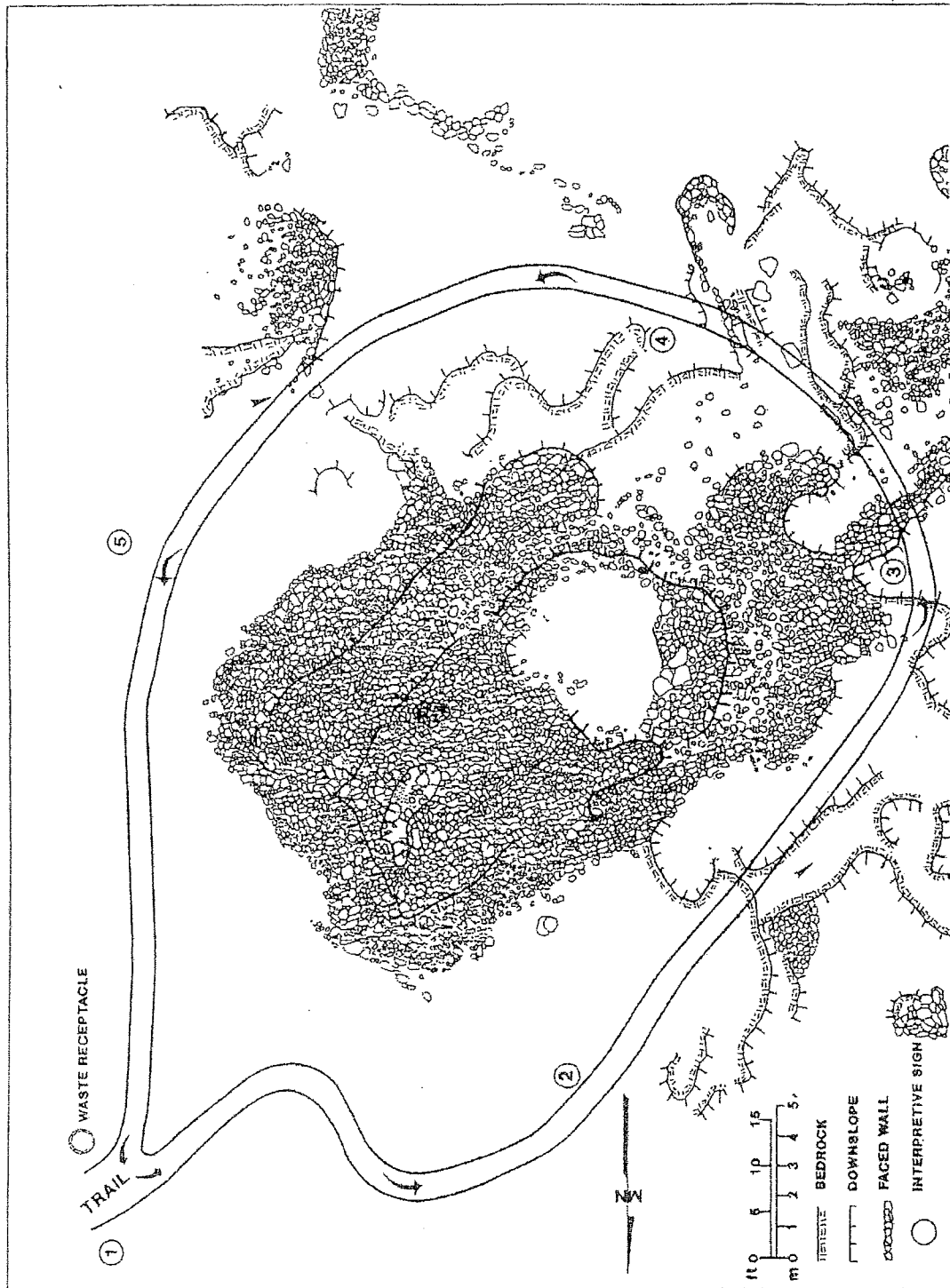


Figure 4. Site 15130 - Historic Preserve Trail and Wayside Exhibits

treatment alternatives as needed. It is also recommended the DLNR-SHPD conduct site inspections a minimum of twice a year in order to monitor site conditions, and that this arrangement be formalized as a part of a DLNR-SHPD/HCPD - PEA Curatorship Agreement.

It is recommended that the PEA-Curatorship conduct a check of the preserve area twice weekly. This monitoring schedule will include conducting a visual inspection the site to determine if there have been any changes in the physical condition of the *heiau* and *ahu ilina* (reinterment site—grave cairn). Should changes be noted, the PEA-Curatorship shall call the SHPD Hawai'i Island Archaeologist that same day (or the next working day), to request a site inspection, and make recommendations for additional stabilization and protection efforts.

General site maintenance, collecting of refuse from the waste receptacle situated near the entrance to the preserve-trail (Figure 4), and general grounds maintenance within the preserve will be conducted during the site checks which will be conducted two times each week. In order to minimize the level of modification to the existing terrain, it is proposed that the surface of the trail within the preserve be kept as natural as possible. In order to adequately delineate the trail borders, a curb-stone siding may be laid out, and where appropriate, #3 fine gravel or a cinder material may be used as fill in order to even out the terrain. Access off of the trail will be limited to those individuals who have either a cultural affiliation to the site, or are in the process of maintaining the preserve.

Maintenance and Landscaping

Regular maintenance and monitoring processes will be conducted by the PEA—Community Curatorship organization. All maintenance personnel will participate in orientation workshops in which they will learn about site locations, site sensitivity, and be given guidelines for curatorial maintenance of all cultural resources. Appropriate (curatorial) maintenance treatments will include, but not be limited to: hand clearing of undesirable vegetation; no vegetation will be uprooted; instead, it will be cut to the surface and treated with a DLNR-SHPD approved poison; appropriate native- or introduced-vegetation will be maintained in the immediate area of the sites in order to minimize growth-impacts and so as not to obscure the sites from view; trail accesses will be maintained and monitored for erosion impacts, and a waste receptacle, in a shade of *kukui* leaf green will be placed near the entry-exit way of the preserve trail.

It is recommended that landscaping within the preserve should be in keeping with the natural vegetation of the area. A variety of plants may be used for site preservation-stabilization tasks; among them are the following plants which are often found in this environmental zone of North Kona:

<i>Pili</i>	(<i>Hetropogon</i>)
<i>Noni</i>	(<i>Morinda citrifolia</i>)
<i>'Ilima</i>	(<i>Sida fallax</i>)
<i>Nehe</i>	(<i>Lipochaeta lavarum</i>)
<i>Kō</i>	(Native sugar canes)
<i>'Uala</i>	Native sweet potatoes); and
<i>Ipu</i> or <i>Hue</i>	(Gourds)

The above plants are all adapted to the environmental zone and could be used to enhance the interpretive program. Additionally, the following plants are important for their symbolism and/or their regional uses.

Laʻi (the ti leaf [*Cordyline terminalis*]) is often suggested because of its important cultural symbolism, and if properly cared for in a traditional mulched mound- or hole-type planting environment, would be an important addition.

Kukui (the candle nut tree [*Aleurites moluccana*]) is an important tree; it symbolizes light and knowledge, and had many religious and domestic uses. For Kona, the *kukui* is particularly important, because it is a body-form of the god Lono, provider of the rain clouds of *Kona kai ʻōpua* (Kona of the billowing horizon clouds) and successful growth of crops that nurtured the *poʻe kahiko* (ancient people). The *kukui* is already present within the preservation area.

If approved at some time in the future, plantings of the larger trees must be done carefully in consultation with DLNR-SHPD, and at the outer periphery of the preservation site, so as not to impact the cultural resources. It is suggested here that the existing *kukui* trees are an appropriate and adequate cover, and that no other trees are needed at this time within the preserve. It is possible that some time in the future, the existing *kukui* will age and wane, and replacement planting will be needed. If any other plants are to be used, it is recommended that they consist of those plants that do not establish a deep root base or develop strong destructive root systems. It may also be desirable to thin and eventually remove the introduced Manila tamarind (*ʻopiuma*), monkey pod, and alien grasses and weeds once native vegetation becomes established.

Access and Interpretation

Among the activities considered to be appropriate within the historic preserve are those which are associated with native Hawaiian practices, and activities which may occur with appropriate cultural sensitivity—e.g., religious observances, honoring the remains of the past generations, or the gathering of certain natural resources for traditional practices. It is also proposed that safety and interpretive information be incorporated into a series of unobtrusive wayside exhibits along the preserve trail (see Figure 4). Proposed interpretive texts are presented in the section of this report titled “Interpretation Plan for the Puapuaʻa (Pualani) Historic Preserve.” It is the goal of the interpretive program to create an awareness of the cultural history and value of the site, and foster both and appreciation and preservation ethic for the cultural and natural resources. One goal of the preservation—interpretation plan to promote culturally sensitive activities which may take the form of self-guiding and group-interpretive programs.

As a part of the preservation—interpretation plan, it is proposed that safety and interpretive information be incorporated into a series of unobtrusive wayside exhibits along the preserve trail (see Figure 4). Proposed interpretive texts are presented in the section of this report titled “Interpretation of the Puapuaʻa Historic Preserve.”

At the *ahu ilina* (reinterment site), situated a short distance beyond the interpretive trail, it is proposed that minimal signage be set in place, identifying the cultural sensitivity of the feature, asking that respect be given, and that nothing be removed. People who are familiar with, or are descended from families of Puapuaʻa will be able to visit the site as they desire. Assistance will be offered to those who request help, and the curators will also be able to coordinate site visits as well. Because it is not appropriate to draw casual visitor attention to

wahi ilina (burial sites), wording should be kept to a minimum. The goal is to provide enough information so that it is understood that the modified feature is culturally sensitive. The sign might read:

AHU ILINA (or KULA IWI)

This is a culturally sensitive site; please respect those
who came before us and refrain from entering this area.
Your respect will be greatly appreciated.

It is proposed that general public access—visitation to the historic preserve be open between sunrise to sunset, year-round. If native practitioners, or individuals claiming a familial relationship to traditional residents of Puapua'a wish to exercise traditional rights and practices at other times, it is recommended that access be open with no restrictions for those individuals. Because the PEA Community Curatorship organization and its affiliates will be responsible for monitoring site activities and visitation, it would be appropriate for those wishing to visit the site after hours to simply coordinate the visit with the association office. In general, monitoring site activities (insuring that visitors refrain from inappropriate activities at the site, and requesting that visitors respect the culturally sensitive nature of the site) and prohibiting any inappropriate uses of the cultural resources; e.g., picnicking, exploring, and camping, etc., will be the responsibility of the curatorship association. This will include documenting names or vehicle license numbers and contacting DLNR-SHPD authorities regarding those individuals who persist in unacceptable activities.

Over the years, it may be found that the impact conditions, either natural or those related to human activities, may have changed to the point where conservation (preservation and unsupervised access) is no longer the best management alternative. Should site conditions have changed, the community-curatorship organization will consult with appropriate specialists (e.g., DLNR-SHPD, etc.) to assist in determining appropriate treatments. Implementation of protective measures will be reviewed and approved by the Hawai'i State Historic Preservation Division and the Hawai'i County Planning Department, and execution of these plans will be verified by these offices.

INTERPRETIVE STRATEGIES AT THE PUAPUA'A (PUALANI) HISTORIC PRESERVE

In the context of planning for preservation and cultural resources management, the interpretive program is meant to translate the history of the individuals who once lived in this area into a language which will foster awareness, pride, and preservation. The interpretive scope includes culture, behavior, biological and physical characteristics, and adaptations over time to the natural environment. It seeks to describe the human situation in the terms of the complex interrelationships of culture, natural environment, and biological realities. An interpretive program must be responsible to the culture, and should be both educational and entertaining, containing information about the past, and the cultural resources which are the physical remains of the past.

The primary interpretive theme of the Pualani project area will be the Hawaiian culture, including:

1. Natural history (geology, and leeward slope environments);
2. Legendary events in and around Puapua'a;
3. The relationship of people to the land and ocean and practices associated with use of those resources;
4. The unique adaptations of ancient Hawaiians to dryland agricultural systems (e.g., Kona Field System);
5. Family systems; and
6. The integral role of religion in these practices.

A secondary interpretive theme will relate the evolution of the Puapua'a area from a native Hawaiian community to ranching and coffee cultivation, and the present day. Interpretation is dynamic; it should be allowed to change and evolve as visitors, staff and resources interact. This interaction and feedback will contribute to a successful program, which can draw people, not once, but often to the Pualani historic preserve.

THE PUAPUA'A (PUALANI) SITE PRESERVATION INTERPRETIVE PROGRAM

It is proposed that only off-site interpretive activities be incorporated into the site preservation - interpretive program of Pualani Estates:

Off-site Interpretive Activities - Because of their cultural sensitivity, direct access to the *heiau* and reinterment site will not be encouraged for individuals other than native Hawaiian practitioners. Indeed, one of the most sensitive classes of sites at which access will be limited, are those associated with human remains. Also among the sensitive resources are ceremonial sites and sites which are unstable.

Except for native practitioners - lineal descendants, off-site visitation would be encouraged for the protection of these sites. Off-site interpretive

activities take place away from, but in view of the sites, thus serving as static exhibits. Viewing of the sites will be available, but contact will be discouraged. Signs and printed material will provide the interpretation. A self-guided program, along an established trail, guided only by signs or a brochure/guidebook will enhance site appreciation, and foster an atmosphere of awareness and responsible site visitation (Figure 4).

INTERPRETATION ALONG THE PUAPUA'A (PUALANI) HISTORICAL TRAIL

It is proposed that the interpretive trail be situated similarly to the configuration as outlined in Figure 4 of this report. The design has been produced to minimize impacts on the existing terrain, and to maximize viewing opportunities of the *heiau* site. Wayside exhibits (signs) will be situated at selected areas along the trail to interpret cultural and natural resources, and points or areas of legendary or historic interest; with the intent of describing the relationship of the ancient Hawaiians to their environment, and the processes which have brought Puapua'a to this period of time. Additionally, it is proposed that texts also reference visitor responsibilities, safety, and site access concerns. Because only limited information can be effectively included in sign texts, the sample signs below provide some basic information for site visit use. It is also proposed that a trail guide-leaflet be developed from the completed interpretive texts, and that it be available to visitors from a trail-guide box at the entrance of the preserve and from the curatorship group.

General Interpretive Themes:

1. Wayside Exhibit: Overview of the of the historic preserve and visitors' responsibility for respectful visitation (includes a site and trail map);
2. Wayside Exhibit: Site 15130, thought to be a ceremonial site dedicated to the Hawaiian god *Lono* – Narratives to discuss site specific *Heiau* (Temple -ceremonial site) history and relate religious beliefs in life of ancient Hawaiians;
3. Wayside Exhibit: Remnant of the trail Site 14075, discussions of possible use and the general network of traditional trails;
4. Wayside Exhibit: Symbolism of the *Kukui* in ritual, an importance in culture;
5. Wayside Exhibit: Narratives on Hawaiian settlement and the development of dryland agricultural complex of Kona (e.g., the Kona Field System), and commentary on the surrounding region— prominence of the view plain;

Additional signage may be set in place to describe planting areas and particular plants within the preserve. Examples of three of the possible interpretive signs which may be used within this historic preserve are presented below. The sample texts (Interpretive Themes No. 1, 2, and 4) specifically address the nature of the Historic preserve and the land of Puapua'a in the context of Hawaiian land management practices, the general significance of *Lono* and

heiau (ceremonial sites) dedicated to him, and the symbolism of the *kukui* (*Aleurites molucana*) tree in *Lono* rituals.

It is proposed that the final interpretive texts be completed in consultation with members of the community association—curatorship group, concerned residents of Kona, the DLNR-SHPD, and the HCPD. Participation by members of the curatorship group and Pualani residents will help provide residents with tools necessary for successful, long-term management of the historic preserve, and give them a sense of proprietorship which will foster a long-term commitment to preservation and interpretation of the resources.

(Wayside Exhibit I)

E AKAHELE KA HOLO ANA MA KE ALA O PUAPUA'A
(Travel Carefully Upon the Trail of Puapua'a)

This cultural preserve (the preserve) and the historic site which it protects, has been established through an agreement between the State of Hawai'i, Hawai'i County, the developer of the Pualani Estates, and concerned residents of the island of Hawai'i. The preserve includes sites which are of cultural significance to the native people of Hawai'i, and is meant to share some of the histories and qualities which make Hawai'i a unique place. Please walk carefully upon this ground, remain upon the designated trail, and learn about some of the history of the original inhabitants of Puapua'a. Your respect is needed, and required—*E akahele ka holo ana ma ke ala o Puapua'a*.

Archaeological sites can be easily damaged. Please remain on the designated trails and do not remove anything from this area.

Damage to this preserve is punishable under
Chapter 6E-11, Hawai'i Revised Statutes.

The traditional name of the this land division, "*Pua-pua'a*" may be translated as "Billowy, pig-shaped clouds." The name is symbolic of the Hawaiian god *Lono*, who assumed many *kino lau* (body forms); among which were billowy horizon clouds and rain clouds, the *kukui* (*Aleurites molucana*) tree, and the *pua'a* (pig). *Lono* was an important deity of agriculturalists, and the priests of his order played an important role in the organization and practices of ancient Hawai'i (cf. "Hawaiian Antiquities" Malo 1951, "Fragments of Hawaiian History" I'i 1959, and "Native Planters in Old Hawaii" Handy and Handy 1972). Indeed, even the name *Pua-lani* (Heaven or sky flower) is the name of an ancient Hawaiian deity of cloud formations who was called upon to bring rains to the land ("Unwritten Literature of Hawaii" Emerson 1965).

The trail on which you will walk while visiting the preserve, will take you along side a traditional site which is believed to be a *heiau* (ceremonial site) in which ceremonies were offered to ensure good growing weather—adequate rains and sunshine—and successful harvests. This site is the last on of its kind in this portion of the land of Puapua'a, and was once within one of the largest agricultural field systems in all of the Hawaiian Islands. Interpretive signs are placed at intervals along the trail, and they provide you with information about the history, beliefs, and practices of the Hawaiian people who first lived here. Please remain on the trail and respect those people who came before us.

(Wayside Exhibit 2)

SITE 15130 - FEATURE A

Believed to be an Ancient Heiau or Ceremonial Site

Archaeological sites can be easily damaged, and religious sites are important to the Hawaiian people. Please remain on the designated trails and do not remove anything from this area.

Damage to this preserve is punishable under
Chapter 6E-11, Hawai'i Revised Statutes.

In the early 1900s, the Bishop Museum conducted an archaeological survey of *heiau* or religious sites around the island of Hawai'i ("Heiau of the Island of Hawaii" Stokes and Dye 1991). During the survey, Stokes identified one *heiau* (ceremonial site) near the coast of Puapua'a, and mentioned one additional site called Keaukukui'ula (The red, or sacred grove of *kukui* trees), which he did not visit (Stokes and Dye 1991:52). The style and construction, and prominent location of this platform indicate that this site was of importance in ancient Hawai'i. Though we may never know the exact name and function of this site, its location and proximity to the most extensive agricultural complex in Kona indicate that it may possibly be a *heiau* associated with the rituals of the agricultural deity *Lono* (cf. "Native Planters in Old Hawaii" Handy and Handy 1972).

Heiau are Hawaiian places of worship. Their size and style vary, depending on their function and location. This site may be an agricultural shrine dedicated to the replenishment of the land and the production of dryland crops such as the *'uala* (sweet potato), *ipu* (gourds), *'ulu* (the breadfruit), *kō* (sugar cane), *kalo* (taro), and other crops which were of importance to the native Hawaiian diet, and which could be cultivated in this environmental zone under the proper conditions.

Because the cultivation of crops in the dry leeward climate of Kona was dependent upon adequate amounts of rainfall, the rituals the god *Lono* were of great importance to the people of Kona. The ancient Hawaiian *mahi 'ai* (farmers) were observant of the weather, and skilled at mulching and nurturing various crops in the lava fields of Kona. Because of the prominence and location of this site, it is possible that this site is of the class of temples called "*Heiau ho'oulu 'ai*" or "*Heiau ho'oulu ua*" (Temples for ceremonies to -increase the growth of crops, or -increase the abundance of rains). It was at such temples, that that priest-specialists in the ceremonies of *Lono*, called upon the god-creative force of nature to ensure rains, abundant crops, and fertility of the land.

(Wayside Exhibit 4)
**KUKUI (*Aleurites molucanna*;
the candlenut tree) and the Significance of the Platform
within the Historic Preserve of Puapua'a**

The *kukui* tree is one of the important plant body-forms of the god *Lono*. Commonly called the candlenut tree, the nuts of the *kukui* were used for lighting in ancient Hawai'i. The *kukui* symbolizes light and knowledge, and also has many domestic and ceremonial uses. The maple-like shaped leaves of the *kukui* are reminiscent of a pig's head; the points of the leaves represent the ears, eyes, and snout of a pig—and the *kukui* was used in place of pigs for offerings in the ceremonies of *Lono* (cf. Handy and Handy 1972).

In the early 1900s, Bishop Museum sent J.F.G. Stokes to do an archaeological survey of religious sites around the island of Hawai'i (Stokes and Dye 1991). During the survey, Stokes identified one *heiau* (ceremonial site) near the coast of Puapua'a, and mentioned one additional site called Keaukukui'ula (The red, or sacred grove of *kukui* trees), which he did not visit (Stokes and Dye 1991:52). The construction and prominent location of the platformed structure around which these *kukui* trees grow, indicate that the site was of importance. Though we may never know with certainty, it is possible that this site is the *heiau* of Keaukukui'ula—it is situated in an area of prominence and within the corridor of an ancient agricultural complex that stretched c. 18 miles across the district of Kona (the Kona Field System, Site 6601). The remnant *kukui* trees are also one of the *kino lau* (multiple body forms) of the agricultural god *Lono*.

‘OLELO WEHEWEHE (Explanatory Comments)

As reported by Graves and Goodfellow (1993), two sites within the project area provided dates for initial site use; the dates ranged between c. AD 420-660, while the period between c. AD 1000-1400 appears to be the time in which widespread occupation and land utilization occurred within the project area (Graves and Goodfellow 1993:24). In general, the lands of Puapua‘a sustained a substantial Hawaiian population through the middle 1800s. By the 1850s, the Hawaiian population had undergone a radical decrease, and lands of this region lay fallow. By the late 1800s large tracts of the land of Puapua‘a were put to use for cattle ranching; the upper slopes were used for the cultivation of coffee; thus, human activities in the area continued till fairly recently.

As also documented by Graves and Goodfellow (1993), it is obvious from the archaeological remains within the project area that the native people who dwelt within the project area, were actively involved in cultivation practices. The Puapua‘a project area lies within the bounds of the Kona Field System (Site 6601), which included an area of c. 3 by 18 miles of Hawaiian dryland cultivation fields which supported the large commoner- and royal-communities of this portion of Kona. Crops such as sweet potatoes, sugar cane, bananas, breadfruit, gourds, and coconuts, etc., provided the “bread” of the Hawaiian diet. Also, on the upper slopes of Hualālai, the native tenants of Puapua‘a would have propagated and harvested *olonā* (*Toucardia latifolia*) for cordage, and ‘awa (*Piper methysticum*) for ceremonial and domestic use, and collected various woods and resources from the upland forests (the woods were used for spears, paddles, canoes, and tools, etc.).

Fishing in this region was considered some of the best on Hawai‘i, and it is likely that a great deal of energy went into harvesting ocean resources; thus, the families of Puapua‘a who lived on the coast probably caught the fish which provided the “meat” of the Hawaiian diet. Though farmers probably gathered some ocean resources, and fishermen probably kept some food plants near their homes, it is generally accepted that many of the tasks related to the well-being of the community as a whole were entrusted to specialists. It is therefore reasonable to assume that the fishermen provided fish and other ocean resources to the planters, who in turn supplied the products of the land to the fishermen.

The religious beliefs, cultural practices and history of the Hawaiian people reflect both their Polynesian origins, and the uniqueness of Hawai‘i’s island resources. The Hawaiian people lived within the boundaries of their island resources; they worked the land, fished the sea, and developed their unique “Hawaiianess.” Their only recorded contact with the outside world was in occasional interactions with other Polynesians. Because each facet of Hawaiian existence relied so completely on the bounty of the earth, every aspect of life connected back to the relationship of people to their land.

For modern Hawaiians, one of the most revered manifestations of their relationship to the land and their past are found in the context of Hawaiian burials. Many of the *maka‘āinana* (people of the land) were buried near the places where they had lived, just as their ancestors had been buried before them. Living and working amongst the bones of their *kūpuna*, the people of ancient Hawai‘i communed with their ancestors as they led their daily lives. The winds carried their prayers, and the spirits of their ancestors to the rich fishing grounds, to their agricultural sites, and to the forested regions, all of which were harvested for the bounty of their resources. This interaction of gods, nature, bone, and ancestral spirits allowed the Hawaiians

to identify with their ancestors, and kept the "*po'e kahiko*" (ancient people) alive as a promise to nurture the future.

The burials of Hawaiians symbolize a trust between those who came before us; their gods; the environment which gave them their essence; and Hawai'i's future. Hawaiian burials are part of a bond between families, the elements of nature, and the creative forces of nature which the Hawaiians worshipped.

The ancient Hawaiian saying "*Moe kau a ho'oilo*" (Sleep undisturbed from the dry season of *kau* to the wet season of *ho'oilo*; i.e. sleeping from season to season) is associated with the setting of a loved one to his or her resting place. At times in the past, for whatever the reason, it was determined that preservation of the ancestors could be best achieved through reinterment. In the context of this Burial Preservation Plan, it is our hope that this rest will continue undisturbed season to season.

O nā mea maika'i mālama, o nā mea maika'i 'ole kāpae 'ia
(Those things which are good keep, those things which are incorrect set aside)

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