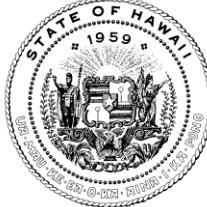


HRS 6E,
ARCHAEOLOGICAL
ASSESSMENT AND
ARCHAEOLOGICAL
MONITORING PLAN
ACCEPTANCE LETTER
FROM STATE HISTORIC
PRESERVATION DIVISION
DATED APRIL 17, 2020

APPENDIX
E-3

DAVID Y. IGE
GOVERNOR OF
HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

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M. KALEO MANUEL
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KAHOOLawe ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

April 17, 2020

Mr. Glen Ueno, Administrator
County of Maui
Department of Public Works
Development Services Administration Division
250 South High Street
Wailuku, Hawaii 96793

IN REPLY REFER TO:
Log No.: 2017.02140
2020.00762
Doc. No.: 2004AM09
Archaeology

Dear Mr. Glen Ueno:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –
Archaeological Assessment Report for the Hawaiian Cement Expansion Project and
Archaeological Monitoring Plan for the Increments 2 and 4 of the Expansion Project
Pūlehu Nui Ahupua‘a, Wailuku District, Island of Maui
TMK: (2) 3-8-004:001 por.**

This letter provides the State Historic Preservation Division's (SHPD's) review of the subject draft report titled, *Archaeological Assessment Report for Hawaiian Cement Quarry Expansion Located at TMK: [2] 3-8-004:001 por.*, *Pūlehu Nui Ahupua‘a, Kula Moku, Wailuku District, Island of Maui* (Fuentes et al., March 2020). SHPD previously reviewed the subject archaeological assessment (AA) report and request revisions to the report in a letter dated May 12, 2015 (Log No. 2014.04654, Doc. No. 1505MD19). SHPD received the subject revised report on September 17, 2017 (Log No. 2017.02140).

This letter also provides SHPD's review of the subject draft plan titled, *Archaeological Monitoring Plan for the Hawaiian Cement Quarry Mining Site Increments 2 and 4 Expansion Project, Pūlehu Nui Ahupua‘a, Wailuku District, Maui Island, TMK: (2) 3-8-004:001 por.* (Yucha and Hammatt, March 2020). SHPD received the subject archaeological monitoring plan on March 31, 2020 (Log No. 2020.00762) following consultation between Hawaiian Cement, Cultural Surveys Hawaii Inc. (CSH, archaeological consultant), and SHPD on March 4, 2020.

The parcel has been subject to previous archaeological investigations including an archaeological reconnaissance survey (Kennedy 1990), and two archaeological inventory surveys (Rotunno-Hazuka et al. 2011 and Fuentes et al., March 2020). The two archaeological inventory survey (AIS) investigations identified no historic properties. Per HAR §13-284-5(b)(5)(A), negative AIS results shall be presented in an archaeological assessment (AA) report. SHPD reviewed and accepted the Rotunno-Hazuka et al. (2011) AA report in a letter dated August 8, 2012 (Log Nos. 2011.0298 and 2001.0340, Doc. No. 1208JP01). SHPD reviewed and requested revisions to a draft of the Fuentes et al. (October 2014) AA report in a letter dated May 12, 2015 (Log No. 2014.04654, Doc No. 1505MD19) and received the subject revised report on September 17, 2017 (Log No. 2017.02140).

The Fuentes et al. (2020) AIS was conducted in support of the Hawaiian Cement Quarry Expansion project. The project area consists of a 41.968-acre portion of the overall 2,008-acre subject parcel. Archaeological testing of the project area included a pedestrian survey of a portion of the project area spaced in 5-meter intervals. Additionally, 17 backhoe test trenches and two bulldozer cuts were excavated. No historic properties were. The AA report includes the locations of the test trenches, photographs, soil profiles drawn to scale, and soil descriptions using USDA soil terminology and attributes with Munsell colors.

The revised Fuentes et al. (2020) AA report adequately addressed the requested revisions from our previous review (Log No. 2014.04654, Doc No. 1505MD19). The report meets the minimum requirements specified in HAR §13-276-5. **The AA report is accepted.** Please send two hard copies of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version to the Kapolei SHPD office, attention SHPD Library and to lehua.k.soares@hawaii.gov.

Hawaiian Cement and their archaeological consultant (CSH) consulted with SHPD during a meeting on March 4, 2020. During the meeting, Hawaiian Cement requested SHPD review the revised AA report submitted to SHPD on September 17, 2017 (Log No. 2017.02140). Additionally, Hawaiian Cement proposed work for increments 2 and 4 of the expansion project, including a field inspection with program of archaeological monitoring for identification purposes to be conducted during the excavation of soils overlying bedrock within the project area. The proposed project will include cement quarry mining within the entire footprint of increments 2 and 4. Overlying agricultural soils will be stripped away from the surface to expose the shallow underlying bedrock to be quarried and processed. No quarrying will occur within Kolaloa Gulch.

The AMP (Yucha and Hammatt, March 2020) proposes archaeological monitoring for identification purposes and provides a summary of previous archaeological investigations and identified historic properties present within the parcel and is formatted to address the rules outlined in HAR §13-279-4 (1) through (8) and stipulates the following:

- Archaeological monitoring will begin with the completion of a 100% coverage pedestrian inspection to confirm that there are no surface historic properties within the project area. This inspection will be completed prior to the start of project-related ground disturbance;
- A coordination meeting will be conducted between the construction team and monitoring archaeologist prior to construction activities so the construction team is aware of the need for archaeological monitoring and the provisions detailed in the plan;
- Archaeological monitoring will include a combination of on-site and on-call monitoring. An on-site archaeological monitor will observe sediment excavation for up to five (5) full days to confirm there are no subsurface historic properties within the sediment deposits of the project area. If there are no significant finds during this period, the remainder of sediment excavation will proceed under on-call archaeological monitoring with an archaeologist conducting spot checks once every 10 business-days to record progress and inspect the exposed stratigraphy for historic properties. No archaeological monitoring will occur during quarrying of the basalt bed;
- Quarterly archaeological monitoring letter reports will be submitted to SHPD consisting of a cover letter with photographs, a summary of archaeological work and the status of project related construction work;
- The Quarterly reports will start with the results of the initial pedestrian survey and are intended to keep SHPD informed. A monitoring report meeting the requirements of HAR §13-279-5 and covering all the reported work will be submitted for review and acceptance following the completion of project related archaeological monitoring;
- The archaeological monitor has the authority to temporarily halt all activity in the area in the event of a potential historic property being identified, or to record archaeological information for cultural deposits or features;
- If non-burial historic properties are identified, documentation shall include, as appropriate, recording stratigraphy using USDA soil descriptions, GPS point collection, recordation of feature contents through excavation or sampling of features, screening of features, representative scaled profile drawings, photo documentation using a scale and north arrow, and appropriate laboratory analysis of collected samples and artifacts. Additionally, photographs and profiles of excavations will be collected from across the project area even if no significant historic properties are encountered. Representative profiles will be a minimum of 2-meter sections;
- If human remains are identified, work will cease in the vicinity and the find shall be secured, and provisions outlined within the Hawaii Revised Statutes (HRS) §6E-43 and HAR §13-300-40, and any SHPD directives, shall be followed;
- Collected materials not associated with burials will be temporarily stored at the archaeological firm's office/laboratory until an appropriate curation facility is selected, in consultation with the landowner and the SHPD and;
- Any changes in these provisions shall occur only with written approval from the SHPD.

The plan meets the minimum requirement of HAR §13-279-4. **It is accepted.** Please send two hard copies of the document, clearly marked FINAL, along with a text-searchable PDF version to the Kapolei SHPD office, attention SHPD Library. Additionally, please send a digital copy of the final AMP (Yucha and Hammatt, March 2020) to lehua.k.soares@hawaii.gov.

SHPD hereby notifies the County that the AA report (Fuentes et al., March 2020) and the AMP (Yucha and Hammatt, March 2020) have been accepted. The permit issuance process may continue.

SHPD requests written notification at the start of archaeological monitoring. SHPD looks forward to receiving brief archaeological monitoring letter reports of findings **quarterly** as specified in HAR §13-282-3(f)(1). Subsequently, SHPD looks forward to receipt of an archaeological monitoring report meeting the requirements of HAR §13-279-5 for review and acceptance following the conclusion of archaeological monitoring work.

Please contact Andrew McCallister, Historic Preservation Archaeologist IV, at Andrew.McCallister@hawaii.gov or at (808) 692-8015 for matters regarding archaeological resources or this letter.

Aloha,

Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: The County of Maui, dsa.subdivision@mauicounty.gov
The County of Maui, building.permits@mauicounty.gov
Atlas Archaeology, atlasarch808@gmail.com
Trevor Yucha, CSH, tyucha@culturalsurveys.com
Gomes, David, Hawaiian Cement, david.gomes@hawaiiancement.com

CULTURAL IMPACT
ASSESSMENT
REPORT

APPENDIX
E - 4

**A CULTURAL IMPACT ASSESSMENT REPORT IN ADVANCE OF THE
PROPOSED PUUNENE QUARRY EXPANSION PROJECT**

**PŪLEHU NUI AHUPUA‘A, WAILUKU (KULA) DISTRICT
ISLAND OF MAUI, HAWAI‘I**

[TMK: (2) 3-8-004:001 por. AND 002 por.]

Prepared by:
Cathleen A. Dagher, B.A.
December 2020

Final

Prepared for:
Hawaiian Cement

SCIENTIFIC CONSULTANT SERVICES Inc.



1357 Kapiolani Blvd., Suite 850 Honolulu, Hawaii`i 96814

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INTRODUCTION

At the request of Hawaiian Cement, Scientific Consultant Services, Inc. (SCS) has prepared a Cultural Impact Assessment (CIA) in advance of the proposed Puunene Quarry Expansion Project. The proposed project area will be located in Pūlehu Nui Ahupua‘a, Wailuku (Kula) District, Island of Maui, Hawai‘i [TMK: (2) 3-8-004:001 por. and 002 por.]. (Figures 1 through 3). The 336-acre property is owned by Alexander and Baldwin LLC. and leased by Hawaiian Cement for quarrying purposes. Figure 4, which was provided by Hawaiian Cement, identifies Quarry Mining Site Increments 1 through 5: Increment 1 is comprised of 92.55 acres mined out approximately 50 years ago and is no longer active. Increment 2 is comprised of 44.28 acres and is currently untouched. Increment 3, is comprised of 41.968 acres, is actively being quarried and will soon be mined out. Increment 4 is comprised of 45.350 acres, and Increment 5 is comprised of 88.93 acres and is currently untouched.

The Hawaii State Office of Environmental Quality Control (OEQC 1997:11) states that “an environmental assessment of cultural impacts” gathers information about cultural practices and cultural features that may be affected by significant environmental effects:

Cultural impacts differ from other types of impacts assessed in environmental assessments or environmental impact statements. A cultural impact assessment includes information relating to the practices and beliefs of a particular cultural or ethnic group or groups.

The purpose of a CIA is to identify the possibility of on-going cultural activities and resources within a project area, or its vicinity, and then assessing the potential for impacts on these cultural resources. The CIA is not intended to be a document of in depth archival-historical land research, or a record of oral family histories, unless these records contain information about specific cultural resources that might be impacted by a proposed project.

CULTURAL IMPACT ASSESSMENT METHODOLOGY

The Constitution of the State of Hawai‘i clearly states the duty of the State and its agencies is to preserve, protect, and prevent interference with the traditional and customary rights of Native Hawaiians. Article XII, Section 7 (2000) requires the State to “protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by *ahupua‘a* tenants who are descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778.” Additionally, Articles IX and XII, of the State constitution, other State laws, and the courts of the State, impose on government agencies a duty to promote and protect cultural beliefs and practices, and resources of Native Hawaiians as well as those of other ethnic groups.

Kamehameha III (Kauikeaouli) preserved the peoples traditional right to subsistence. As a result, in 1850, the Hawaiian Government confirmed the traditional access rights to native Hawaiian ahupua‘a tenants to gather specific natural resources for customary uses from undeveloped private property and waterways under the Hawaiian Revised Statutes (HRS) 7-1. In 1992, the State of Hawai‘i Supreme Court, reaffirmed HRS 7-1 and expanded it to include, “native Hawaiian rights...may extend beyond the ahupua‘a in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner” [Pele Defense Fund v. Paty, 73 Haw.578, 620, 837 P.2d 1247, 1272 (1992)].

Act 50, enacted by the Legislature of the State of Hawai‘i (2000) with House Bill (HB) 2895, relating to Environmental Impact Statements, proposes that:

there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawaii’s culture, and traditional and customary rights... [H.B. NO. 2895].

Act 50 also requires state agencies and other developers to assess the effects of proposed land use or shoreline developments on the “cultural practices of the community and State” as part of the HRS Chapter 343 (2001) environmental review process. It also re-defined the definition of “significant effect” to include “the sum of effects on the quality of the environment including actions that impact a natural resource, limit the range of beneficial uses of the environment, that are contrary to the State’s environmental policies, or adversely affect the economic welfare, social welfare or cultural practices of the community and State.” Cultural resources can include a broad range of often overlapping categories, including places, behaviors, values, beliefs, objects, records, stories, etc. (H.B. 2895, Act 50, 2000).

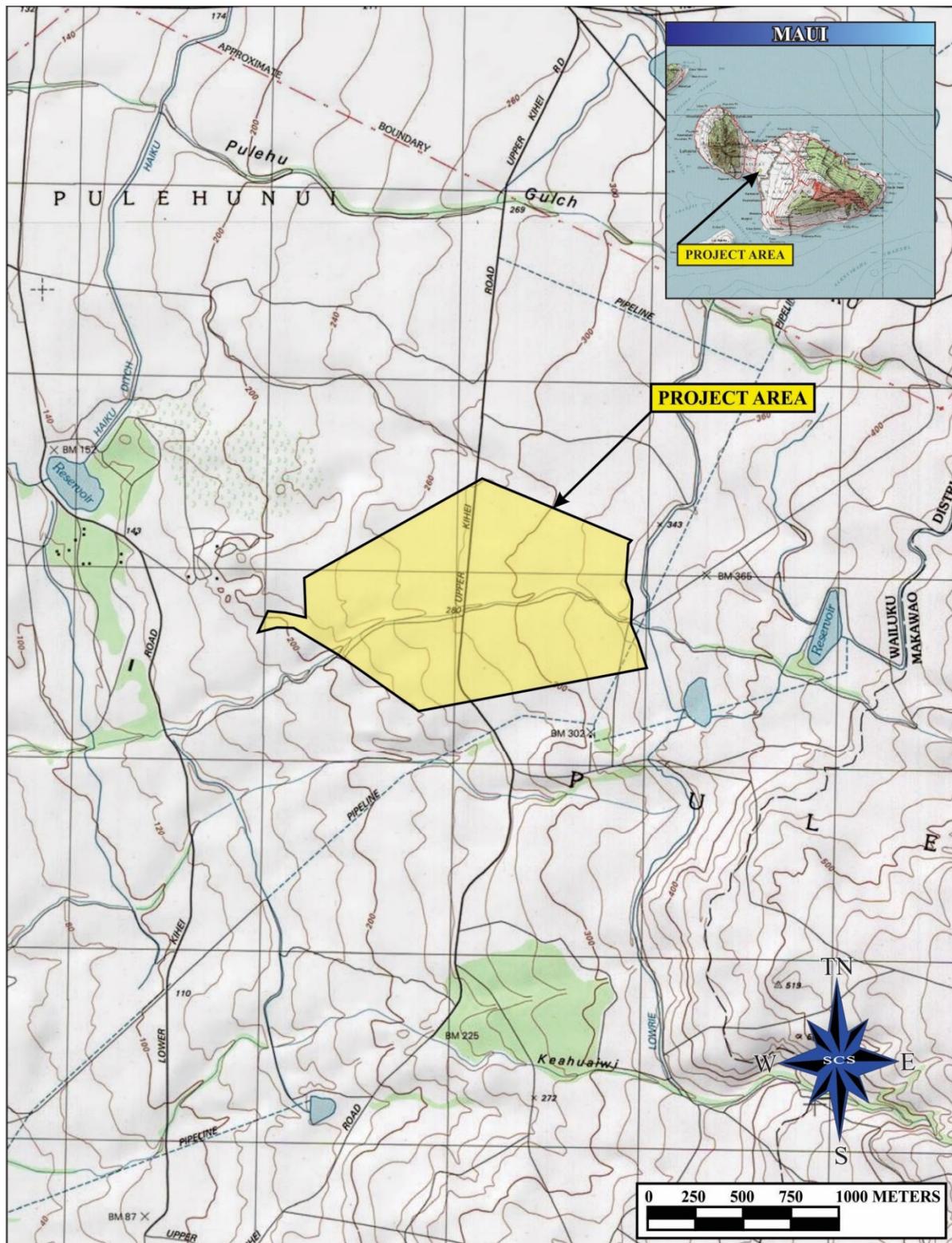


Figure 1: Portion of USGS quadrangle (Maalaea, HI 2017; 1:24,000) map showing project area location.

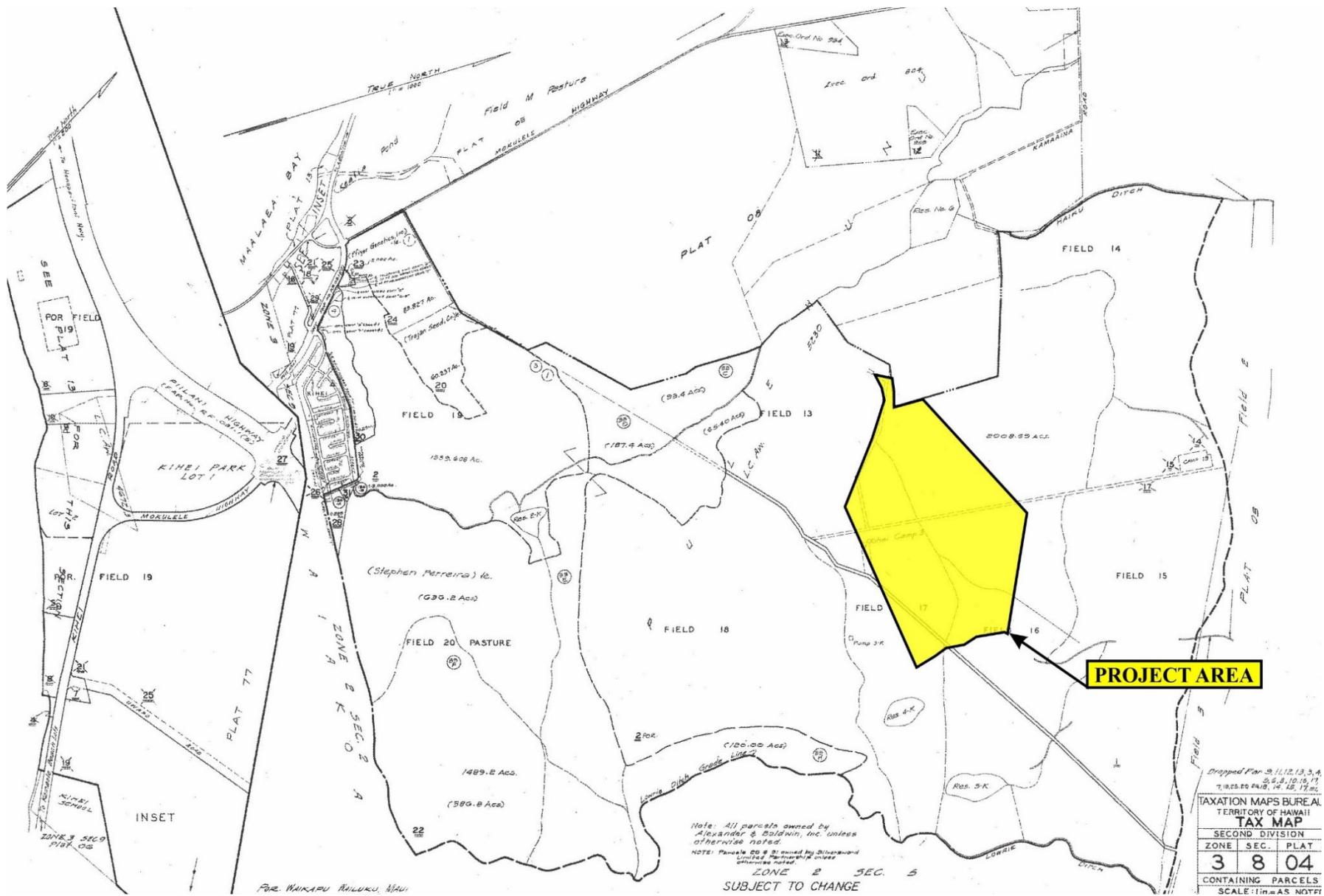


Figure 2: Tax Map Key [TMK: (2) 3-8-004] showing project area location.

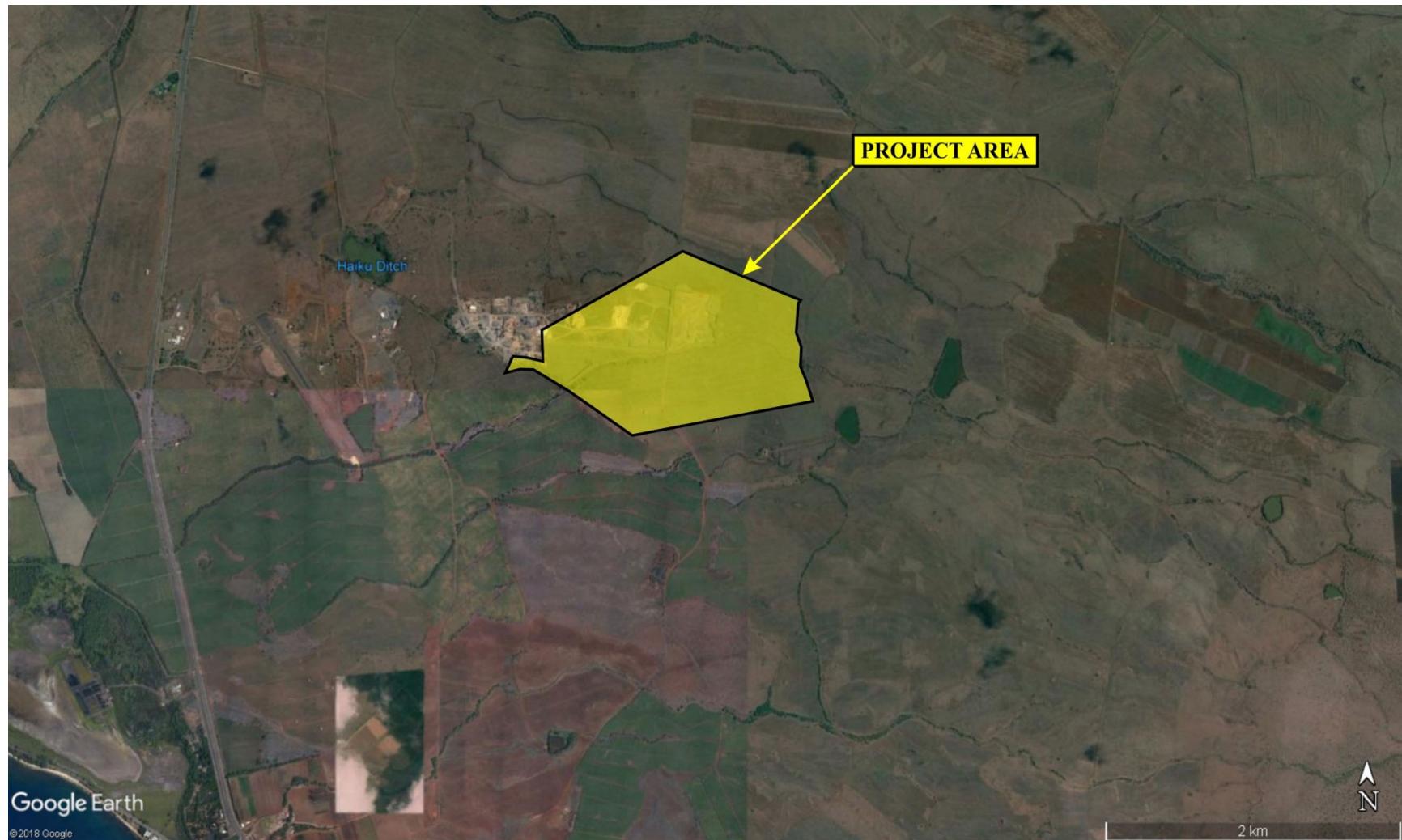


Figure 3: Google Earth satellite image (Date 1/13/2013) showing project area location.

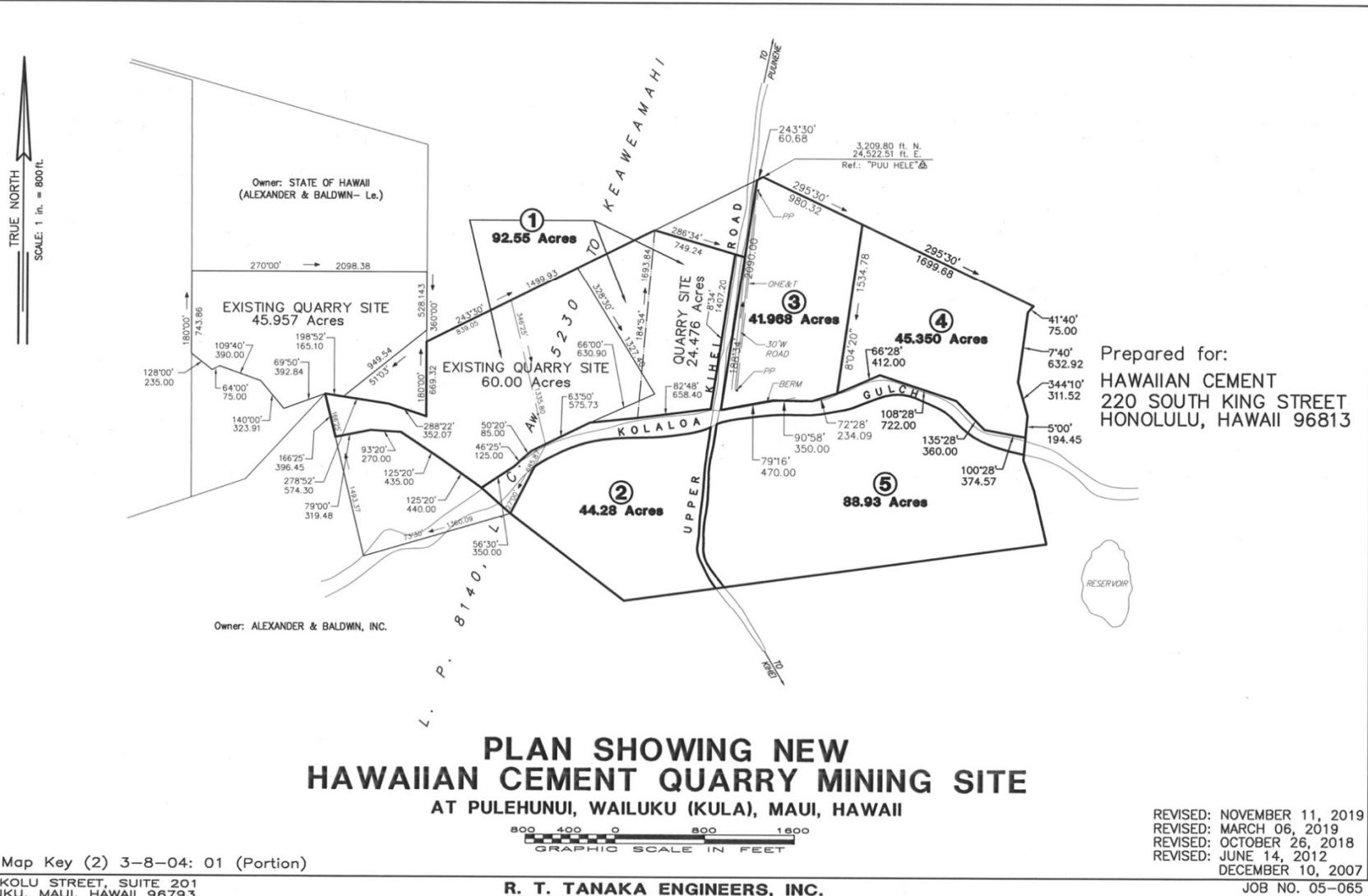


Figure 4: Hawaiian Cement quarry plan identifying mining site increments 1 through 5 (Courtesy R.T. Tanaka Engineers Inc. 2019).

GEOGRAPHIC EXTENT

As defined by the Hawaii State Office of Environmental Quality Control (OEQC 1997:11), the geographic extent should be greater than the proposed project area in order to ensure that cultural practices occurring outside of it that may still be affected are included in the assessment. For example, a project that may not itself physically impact traditional gathering practices, although it may block access to them, would be included in the assessment. The concept of geographical expansion is recognized by using, as an example, “the broad geographical area, e.g., district or *ahupua'a*. In some cases, the geographical extent could extend beyond the *ahupua'a* if cultural practices do so as well.

OEQC GUIDELINES FOR ASSESSING CULTURAL IMPACTS

According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control:

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, which support such cultural beliefs. [OEQC 1997:12]

The meaning of “traditional” is explained in *National Register Bulletin* as referring to:

Those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property then is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. [Parker and King 1998:1]

This CIA was prepared in accordance with the suggested methodology and content protocol in the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). In outlining the “Cultural Impact Assessment Methodology,” the OEQC states that “information may be obtained through scoping community meetings, ethnographic interviews and oral histories” (OEQC 1997:11). The Guidelines recommend that preparers of assessments analyzing cultural impacts adopt the following protocol:

- Identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or *ahupua'a*,

- Identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action,
- Receive information from, or conduct ethnographic interviews and oral histories, with persons having knowledge of the potentially affected area,
- Conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research,
- Identify and describe the cultural resources, practices and beliefs located within the potentially affected area, and
- Assess the impact of and alternatives to the proposed action, and mitigation measures on the identified cultural resources, practices, and beliefs.

CULTURAL IMPACT ASSESSMENT CONTENTS

The Guidelines state that an assessment of cultural impacts should address, but not be limited to, the following:

- Discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the obtained information.
- Description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of undertaken effort.
- Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the obtained information.
- Biographical information concerning the individuals and consulted organizations, their particular expertise and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.
- Discussion concerning consulted historical and cultural source materials, the searched institutions and repositories, and the level of undertaken effort. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.
- Discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location in the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.

- Discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources in the project area affected directly or indirectly by the proposed project.
- Explanation of confidential information that has been withheld from public disclosure in the assessment.
- Discussion concerning any conflicting information in regard to identified cultural resources, practices, and beliefs.
- Analysis of the potential effect of any proposed physical alteration on cultural resources, practices, or beliefs, the potential of the proposed action to isolate cultural resources, practices, or beliefs from their setting, and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.
- A bibliography of references and attached records of interviews which were allowed to be disclosed.

If on-going cultural activities and/or resources are identified, assessments of the potential effects on the cultural resources and recommendations for their mitigation can be proposed.

PROJECT METHODOLOGY

This report contains archival and documentary research, as well as communication with organizations and individuals with knowledge of the project area, its cultural resources, and practices and beliefs characteristic of it. An example of the initial letter of inquiry is presented in Appendix A, an example of the follow up letter is presented in Appendix B, and a copy of the posted newspaper notice and affidavit are presented in Appendix C. Permission to include each interview summary in the form of signed information release forms and emails, are presented in the Interview section. This CIA was prepared in accordance with the suggested methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 1997:13) whenever possible. The assessment concerning cultural impacts may include, but not be limited to, the following items.

ARCHIVAL RESEARCH

Archival research focused on a historical documentary study involving both published and unpublished sources. These include legendary accounts of native and foreign writers, early historical journals and narratives, historical maps and accounts, land records such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records, and previous archaeological reports.

Historical and cultural sources used for this CIA can be found in the References. Scholars Samuel Kamakau, Martha Beckwith, Jon J. Chinen, Lilikalā Kame‘elehiwa, R. S. Kuykendall, Marion Kelly, E. S. C. Handy and E.G. Handy, John Papa ‘Ī‘ī, Gavan Daws, A. Grove Day, Elspeth P. Sterling, Mary Kawena Puku‘i and Samuel H. Elbert continue to contribute to our knowledge and understanding of Hawai‘i’s past and present. Their works and others were consulted and incorporated in this report where appropriate. Land use document research was supplied by the Waihona ‘Aina (2020) database, the Office of Hawaiian Affairs Kipuka database (2020), and the County of Maui County Real Property Assessment Division database (2020).

INTERVIEW METHODOLOGY

Interviews are conducted in accordance with Federal and State laws and guidelines when knowledgeable individuals are able to identify traditional cultural practices and/or resources in the project area or its environs. If they have knowledge of traditional stories, practices, beliefs, and resources associated with a project area, or if they know of historical properties within IT, they are sought out for additional consultation and interviews. Individuals who have particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area are invited to share relevant information concerning particular cultural resources. Often people are recommended for their expertise, and indeed, organizations, such as Hawaiian Civic Clubs, the Island Branch of Office of Hawaiian Affairs (OHA), historical societies, Island Trail clubs, and Planning Commissions are depended upon for their recommendations of suitable informants. These groups are invited to contribute their input and suggest further avenues of inquiry, as well as specific individuals to interview. This process does not include formal or in-depth ethnographic interviews or oral histories as described in the OEQC’s Guidelines for Assessing Cultural Impacts (1997). The assessments are intended to identify potential impacts to ongoing cultural practices or resources, within a project area or in its close vicinity.

If knowledgeable individuals are identified, personal interviews are sometimes taped and then summarized. These draft summaries are returned to each of the participants for their review and comments. After corrections are made, each individual is to sign an information release form, making the interview available for this study. When telephone interviews occur, a summary of the information is also sent for correction and approval, or dictated by the informant and then incorporated into the document. If no cultural resource information is forthcoming and no knowledgeable informants are suggested for further inquiry, interviews are not conducted.

KA PA‘A KAI O KA‘AINA V. LAND USE COMMISSION, STATE OF HAWAI‘I

The Land Use Commission (LUC) is also required to apply the analytical framework set forth by the Hawaii Supreme Court in *Ka Pa‘akai O Ka‘Aina v. Land Use Commission, State of Hawai‘i*, 94 Hawai‘i 31, 7 P.3d 1068 (2000) (hereinafter, “*Ka Pa‘akai*”). In this case, a coalition of Native Hawaiian community organizations challenged an administrative decision by the Land Use Commission (LUC) to reclassify nearly 1,010 acres of land from conservation to urban use, to allow for the development of a luxury project including upscale homes, a golf course, and other amenities. The Hawaiian organizations appealed, arguing that their Native Hawaiian members would be adversely affected by LUC’s decision because the proposed development would infringe upon the exercise of their traditional and customary rights. Noting that “article XII, section 7 of the Hawaii Constitution obligates the LUC to protect the reasonable exercise of customarily and traditionally exercised rights of Native Hawaiians to the extent feasible when granting a petition for reclassification of district boundaries,” the Hawai‘i Supreme Court held that the LUC did not provide a sufficient basis to determine “whether [the agency] fulfilled its obligation to preserve and protect customary and traditional rights of Native Hawaiians” and, therefore, the LUC “failed to satisfy its statutory and constitutional obligations” (*Ka Pa‘akai*, 94 Hawai‘i at 46, 53, 7 P.3d at 1083, 1090).

The Hawai‘i Supreme Court in *Ka Pa‘akai* provided an analytical framework in an effort to effectuate the State’s obligation to protect Native Hawaiian customary and traditional practices while reasonably accommodating competing private interests. In order to fulfill its duty to preserve and protect customary and traditional Native Hawaiian rights to the extent feasible, the LUC must—at a minimum—make specific findings and conclusions as to the following:

- A. The identity and scope of “valued cultural, historical, or natural resources” in the petition area, including the extent to which traditional and customary Native Hawaiian rights are exercised.
- B. The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action.
- C. The feasible action, if any, to be taken by the LUC to reasonably protect Native Hawaiian rights if they are found to exist (*Ka Pa‘akai*, 94 Hawai‘i at 47, 7 P.3d at 1084).

To fulfill these purposes outlined by *Ka Pa‘akai*, the Cultural Impact Assessment has reviewed historical research and suggestions from contacts knowledgeable about traditional cultural practices conducted within the project area and in the surrounding environs. The potential effect of the proposed project on cultural resources, practices, or beliefs, its potential to

isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place has been analyzed, as required by the OEQC (1997).

ENVIRONMENTAL SETTING

The island of Maui ranks second in size of the eight main islands in the Hawaiian Archipelago. It was formed by two volcanoes, Mauna Kahalawai in the west and Haleakalā in the east. They are joined together by an isthmus containing dry, open country (or *kula*, from Hawaiian, “pasture”). The isthmus between the two volcanoes is primarily composed of alluvial fans made of out-washed silts and gravels overlain by coralline sands blown inland from the coast. Lower sand strata have become firmly lithified, forming a soft rock known as eolianite (Stearns 1966:10).

Mauna Kahalawai dominates the western part of Maui, and its highest peak Pu‘u Kukui stands 1,764 m above mean sea level (amsl). The mountain is composed of large, heavily eroded amphitheater valleys containing well-developed permanent stream systems that water fertile agricultural lands extending to the coast. West Maui’s deep valleys and associated coastal areas have been a witness to many battles in ancient times and were coveted productive landscapes.

The younger of the two volcanoes, Haleakalā, soars 2,727 m (10,023 ft.) amsl with its highest summit Pu‘u ‘Ula‘ula, and dominates the larger Eastern section of the island. Unlike the amphitheater valleys of West Maui, the flanks of Haleakalā are distinguished by gentle slopes. Although receiving more rain than their counterparts in the west, the permeable lavas of the Honomanū and Kula Volcanic Series prevent the formation of rain-fed perennial streams. The few perennial streams on the windward side of Haleakalā originate from springs located at low elevations. Valleys and gulches were formed by intermittent water run-off.

PROJECT AREA LOCATION

The project area (see Figure 4) encompasses a total of 336 acres, and is comprised of vacant, quarried out, and actively quarried areas. The project area is situated in the southern section of the Maui isthmus, on the open plain below the western slopes of Haleakalā, approximately 5.5 miles (9 km) south of Kahului Bay, 3 miles (4.5 km) north of Mā‘alaea Bay, and 2 miles east of Mokulele Highway. The quarry is positioned approximately between 300 and 340 feet amsl on lands owned by Alexander and Baldwin LLC. The Puunene Quarry is bounded on the north, east, south and west by former sugar cane fields. Kolaloa Gulch extends through the center of the quarry, and Upper Kihei Road bisects the eastern portion of the existing quarry.

CLIMATE

According to Giambelluca et al. (2013), the project area receives no more than eighteen inches per year, occurring mostly during December and January. Unlike the coast, higher elevations of Pūlehu Nui Ahupua‘a receives more precipitation because of fog drip and lower temperatures. The frequency of upland wash in the project area receiving depends on the amount of water accumulated upslope and the available water drainages in and near the project area.

Given the absence of consistent water resources in the proposed project area, traditional (i.e., pre-1778 C.E.) crops such as dryland sweet potato may have been the only feasible subsistence resource planted in the area prior to the advent of large-scale plantation-type irrigation systems. Upland, gravitational wash also may have contributed to soil movement through the proposed project area environs during the Pre-Contact Period.

SOILS

According to Foote et. al. (1972: Sheet 106; Figure 5), the Puunene Quarry is comprised of three distinct Soil Series: the Waiakoa Series (specifically WGBS, WvB, and WID2), the Alae Series (specifically Aca and AaB), and the Pulehu Series (specifically PpB, PrB, PsA and PtA). These soil types are briefly described below.

WAIAKOA SOIL SERIES

Soils of the Waiakoa Series occur in the northwestern, southwestern, and northeastern portions of the quarry. In general, the well-drained soils of the Waiakoa Series developed from decomposing basalt between 100 and 1,000 feet amsl in areas receiving 12 to 20 inches of annual rainfall. Waiakoa very stony silty clay loam, 3 to 7 percent slopes (WGBS), occurs in the northwestern portion of the project area. This soil exhibits a moderate permeability, slow runoff, and a slight erosion hazard. The WGBS soils are used for the commercial production of sugarcane, pasture, and as wildlife habitats (Foote et al. 1972: 126–127).

Waiakoa extremely stony silty clay loam, 3 to 7 percent slopes (WvB) comprises the southwestern section of the quarry. Basalt pebbles and cobbles cover 3 to 15 percent of the ground surface of areas in WvB soils. Like the WGBS soils, the WvB soils are used for the commercial production of sugarcane, pasture, and as wildlife habitats (Foote et al. 1972: 127). Waiakoa extremely stony silty clay loam, 3 to 25 percent slopes (WID2), is located in the northeastern corner of the project area. These well-drained soils occur on the upland slopes of Maui, between 100 to 1,000 feet amsl, in areas receiving 12 to 20 inches of annual rainfall (Foote et al. 1972: 126). The WID2 soils are characterized by eroded surface with stones covering 3 to

15 percent of the ground, medium runoff, and a severe erosion hazard. Areas comprised of WID2 soils are used for ranchlands and as habitats for wildlife (Foote et al. 1972:127).

ALAE SERIES

Soils on the eastern and southern portion of the project are comprised of the Alae Series, specifically Alae cobbly sandy loam, 0 to 3 percent slopes (AcA), and Alae sandy loam, 3 to 87 percent slopes (AaB). The Alae Series are well-drained soils derived from decomposing volcanic ash and recently deposited alluvium occurring between 50 and 600 feet amsl. in areas receiving annual rainfall of 12 to 20 inches. The AcA soils occurs on alluvial fans and exhibit rapid permeability, slow runoff and a very slight erosion hazard, and are used in the commercial cultivation of sugarcane and as pastureland. The AaB soils are similar to the AcA soils, but do not have cobblestones on the ground surface. AaB soils exhibit slow runoff and a light erosion hazard (Foote et al. 1972:2 14, 26).

PULEHU SOIL SERIES

The remainder of the quarry is comprised of soils of the Pulehu Series. The well-drained igneous soils of the Pulehu Series form on alluvial fans, stream terraces, and in basins. They occur between sea level and 300 feet amsl in areas receiving 10 to 35 inches of annual rainfall. In general, soils of the Pulehu Series are used in the commercial cultivation of sugarcane and vegetables, pastures, residential areas, and as wildlife habitats.

One of the specific types of Pulehu Soils identified within the Puunene Quarry is Pulehu silt loam, 3 to 7 percent slopes (PpB). These soils exhibit slow runoff and a slight erosion hazard. Also common are the Pulehu cobbly silt loam, 3 to 7 percent slopes (PrB), which are characterized by surface covered in basalt cobbles, slow runoff, and by a slight erosion hazard. The Pulehu clay loam, 0 to 3 percent slopes (PsA), which are common in the central and western parts of the project area, exhibit moderate permeability, slow runoff, and a slight erosion hazard. The Pulehu cobbly clay loam, to 7 percent slopes (PtA), are soil series similar to the PsA, except that they exhibit a cobbly ground surface (Foote et al. 1972: 115-116).

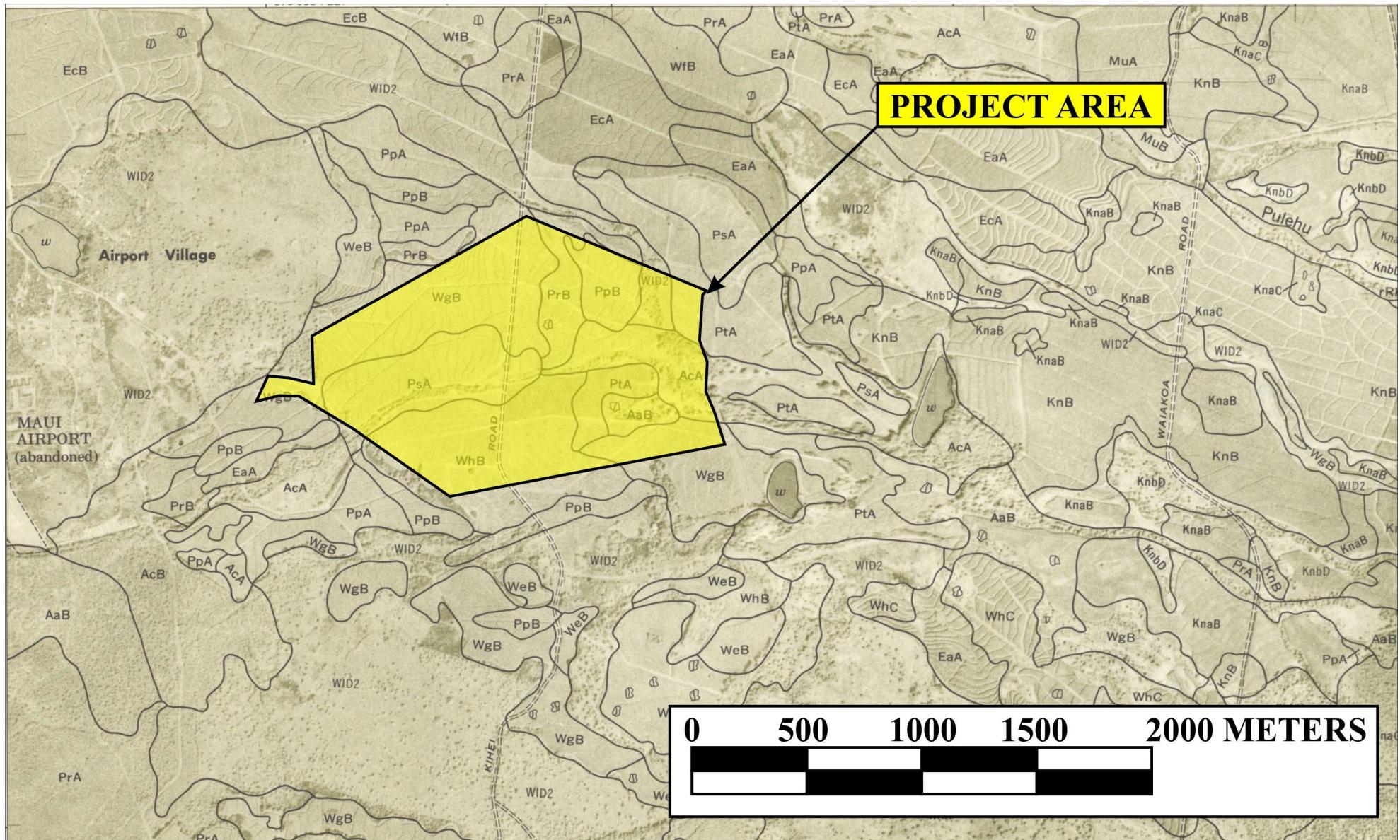


Figure 5: USDA Soil Survey (Foote et al. 1972: Sheet 106) map showing soil types in the vicinity of the project area.

TRADITIONAL AND HISTORICAL CONTEXT

Archaeological settlement data suggest that initial settlement of the Hawaiian Islands occurred on the windward shores of the main islands between 850 and 1100 C.E., with populations eventually extending to drier leeward areas during later periods (Kirch 2011:22). Environmental factors and resource availability heavily influenced Pre-Contact settlement patterns. Although an extensive population was occupied the uplands above the 30-inch rainfall line where crops could easily be grown, coastal settlement was also common (Kolb et al. 1997).

SETTLEMENT PATTERN

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupua‘a* across the Hawaiian Islands. Traditionally, there were two types of agriculture, wetland and dryland, both of which were dependent upon regional geographic conditions. River valleys provided ideal conditions for wetland *kalo* (taro, *Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinarum*) and *mai‘a* (banana, *Musa spp.*), were also grown in wetter areas, and where appropriate dryland crops such as ‘uala (sweet potato, *Ipomoea batatas*) were also produced. Traditionally, this was the typical agricultural pattern seen on the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985).

PAST POLITICAL BOUNDARIES

Traditionally, the Island of Maui was divided into twelve districts: Lāhainā, Kula, Honua‘ula, Kahikinui, Kaupō, Kīpahulu, Hāna, Ko‘olau, Hāmākualoa, Hāmākuapoko, Wailuku, and Kā‘anapali (Sterling 1998:3; Figure 6). The division of Maui’s land into districts (*moku*) and sub-districts was performed by a *kahuna* (“priest, expert”) named Kalaiha‘ōhia, during the time of the *ali‘i* (“chief”) Kaka‘alaneo (Beckwith 1979: 383); Fornander (1919-20, Vol. 6:248) places Kaka‘alaneo at the end of the 15th century or the beginning of the 16th century. Land was considered property of the king, or the *ali‘i ‘ai moku* (literally, “district eating chief”), and was thought to be held in trust for the gods by him. The title of *ali‘i ‘ai moku* ensured rights and responsibilities to the land, but did not confer absolute ownership. The king kept the parcels he wanted, while giving lands to his higher chiefs, who in turn distributed smaller parcels to lesser chiefs. The *maka‘āinana* (“commoners”) worked the individual plots of land.

In general, the terms *moku*, *ahupua'a*, *'ili* or *'ili 'āina* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupua'a*), which customarily continued inland from the ocean and upland into the mountains. Thus, people living in each *ahupua'a* were able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupua'a* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *'ili 'āina*, or *'ili*, were smaller land divisions administered by the chief who controlled the *ahupua'a* in which they were located (Lyons 1875: 33; Lucas 1995:40). The *mo'o 'āina* were narrow strips of land within an *'ili*. The land holding of a tenant, or *hoa 'āina*, residing in an *ahupua'a* was called a *kuleana* (Lucas 1995:61).

PRE-CONTACT PERIOD (PRE-1778)

The proposed Puunene Quarry Expansion Project area is located in the traditional District of Kula. Taken literally, “*kula*” means “pasture” and refers to open land or plains (Pukui and Elbert 1992:70).

The height of Haleakalā to the east prevents moisture from reaching its southern and western flanks, causing the semiarid conditions of leeward Maui, including the project area. According to Handy and Handy:

This is an essential characteristic of Kula, the central plain of Maui which is practically devoid of streams.

Kula was always an arid region, throughout its long, low seashore, vast stony *kula* lands, and broad uplands. [Handy and Handy 1972:510]

Kula is characterized by its dry, semiarid lands that are vacant of perennial streams. In fact, the word *kula* is also used in general to describe lands that are dry and inaccessible to water other than rainfall (Malo 1951). According to Handy and Handy (1972:510), the word was often used to differentiate between dry land and wet-taro land. Handy (1940:105) also stated that, “the bounds of cultivation … were strictly drawn by limitation of water for irrigation.” According to Kolb et al. (1997), the key component of the economy in the district of Kula was dryland agriculture in and near the upland forests. *'Uala* (sweet potato, *Ipomoea batatas*) does not grow in very wet areas, but was the primary staple of Kula. According to Handy and Handy:

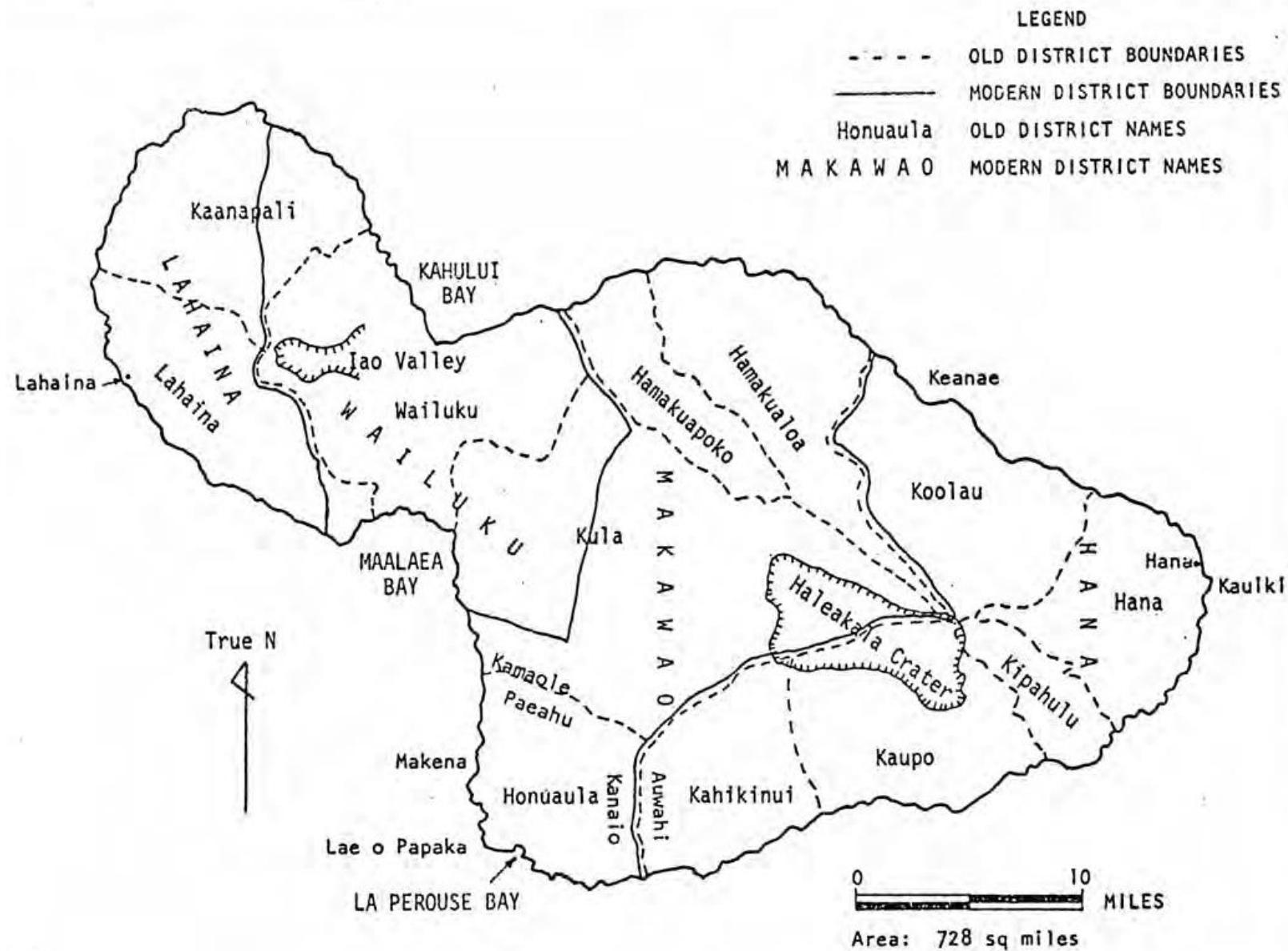


Figure 6: Traditional and modern districts of Maui (c. 1875; from Barrère 1975: 31).

Both on the coast, where fishing was good, and on the lower westward slopes of Haleakala a considerable population existed. So far as we could learn Kula supported no Hawaiian taro, and the fishermen in this section must have depended for vegetable food mainly on *poi* brought from the wet lands of Waikapu and Wailuku to westward across the plain to supplement their usual sweet-potato diet....Kula was widely famous for its sweet-potato plantations. ‘Uala was the staple of life here. [Handy and Handy 1972:510–511]

Handy and Handy also describe the planting methods in Kula’s drier sections:

Where potatoes are planted in crumbling lava with humus, as on eastern Maui and in Kona, Hawaii, the soil is softened and heaped carelessly in little pockets and patches using favorable spots on slopes. The crumbling porous lava gives ample aeration without much mounding. [Handy and Handy 1972:131]

An early witness to the lack of significant agricultural productivity on leeward Maui was Captain George Vancouver. During his second visit to Hawai‘i in 1793 he anchored in Mā‘alaea Bay, which he describes as follows (Vancouver 1984:852):

The appearance of this side of Mowee was scarcely less forbidding than that of its southern parts, which we had passed the preceding day. The shores, however, were not so steep and rocky, and were mostly composed of a sandy beach; the land did not rise so very abruptly from the sea towards the mountains, nor was its surface so much broken with hills and deep chasms; yet the soil had little appearance of fertility, and no cultivation was to be seen. A few habitations were promiscuously scattered near the water side, and the inhabitants who came off to us, like those seen the day before, had little to dispose of.

Not much had changed twenty-four years later (1817) when Peter Corney sailed this way bound for O‘ahu. He made special reference to Keālia Pond (now part of the Keālia Pond and Wildlife Refuge), located a short distance southwest of the project area:

Next morning we passed Morokenee (Molokini), and made sail up Mackerey (Maalaea) bay.... This bay is very deep and wide, and nearly divides the island, there being but a narrow neck of land and very low, keeping the two parts of the island together.... On this neck of land are their principal salt-pans, where they make most excellent salt [Corney 1965:70-71].

The project area is located in the *ahupua‘a* of “Pūlehu Nui.” Since *pūlehu* translates as “to broil” and *nui* means “large” (Pukui et al.:1974: 353), the name might refer to the intensity of the sun in this area. The *ahupua‘a* extends across the Kula plain up through Makawao, to the edge of Haleakalā and would have included agriculturally productive areas, and not just the semiarid plains. Of note is that historically the “ancient and true” western boundary of Pūlehu Nui Ahupua‘a was disputed by the owners of the adjacent land of Waikapū, and was settled in court by the Commissioner of Boundaries in 1897 (J. McCully cited in Sterling 1998: 254-257). The point of contention was the western boundary line claimed by the owners of Waikapū Ahupua‘a which cut Pūlehu Nui Ahupua‘a “off from the sea.” After listening to the testimonies of many witnesses, the Boundary Commissioner determined that the western boundary of Pūlehu Nui “includes about 2,000 feet along the sea coast from a sand spit known as Kihei to a point of rocks called Kalaepohaku” (J. McCully cited in Sterling 1998: 254-257, Figure 7).

In the Pre-Contact Period, Kula had several fishponds, primarily in the vicinity of Kīhei; Waiohuli, Kēōkea-kai, and Kalepolepo Pond (also known by the ancient name of Kō‘ie‘ie Pond, Kolb et al. 1997). These fishponds had been constructed on the boundary between Ka‘ono‘ulu and Waiohuli Ahupua‘a, and were some of the most important royal fishponds on Maui.

Keālia Pond National Wildlife Refuge is a coastal salt marsh located along the southern coast of central Maui, near the border between Wailuku District and Kula. At one time Keālia was a large fishpond fed by the water of Kolaloa Gulch located on the southern border of the project area. According to Ashdown (1970:69), a legend states that:

Kealia was the huge fishpond attributed to King Umi-a-Loa after the death of Piilani in Lahaina. The reason it was called the pond of Ka-lepo-lepo was, in one story, that Umi made his people carry him atop the huge *akua-stone* which was to be placed at one part of the pond. The load was so heavy that the workmen dropped it and the king fell into the dust (lepolepo). Others have insisted that the great chief never did suffer such an indignity, like a commoner, but that the name should be Kalepa, meaning the fluttering of the flags of canoes there when the area was a port of call since ancient times. The Kalepolepo name has remained in use because it is such a windblown and dusty area since the plowing of that whole central valley of Maui.

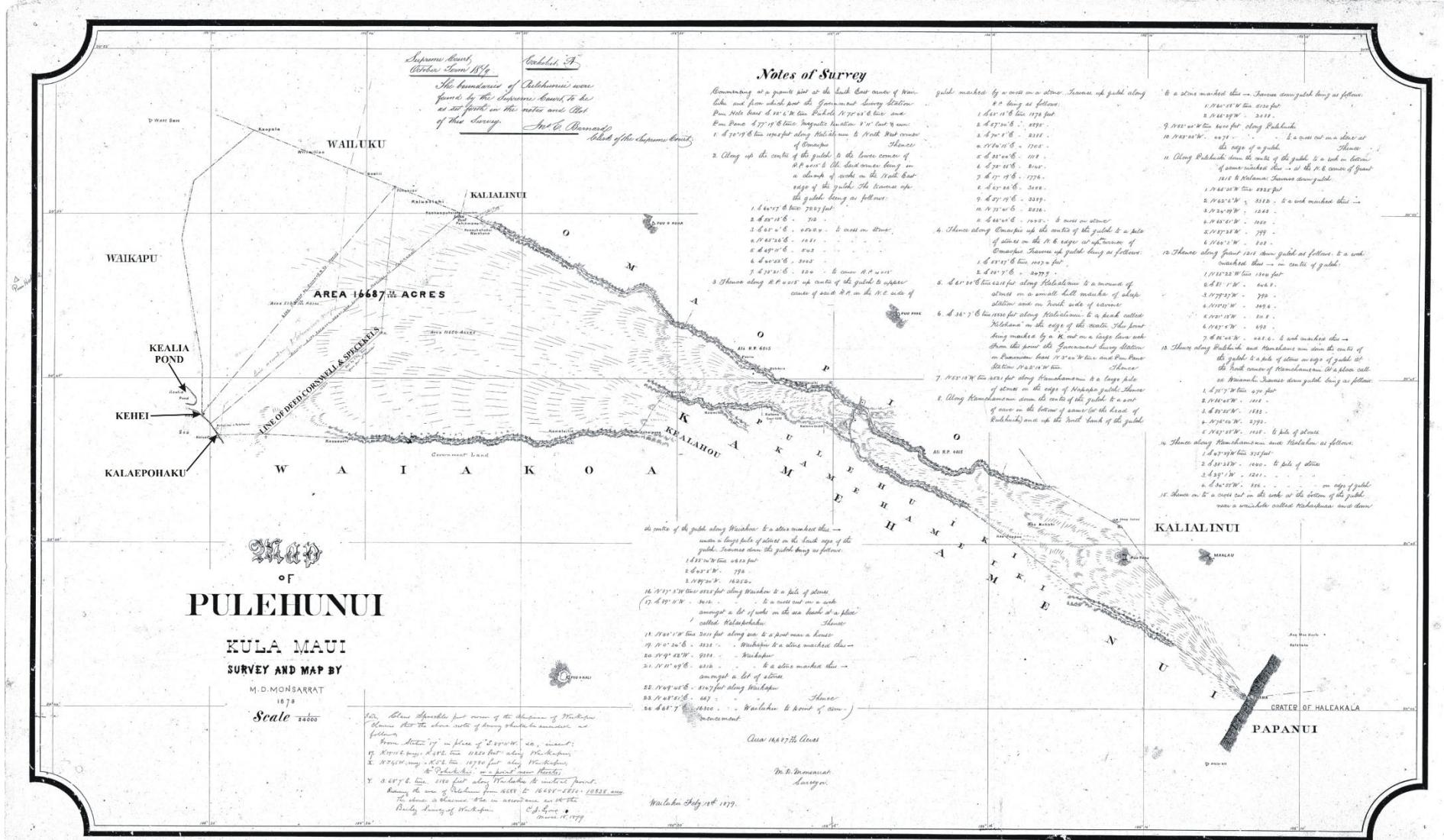


Figure 7: *Map of Pulehunui Kula Maui, survey and map by M.D. Monserrat, 1879.*

WAHI PANA (“LEGENDARY PLACES”)

“Wahi Pana” can be defined as celebrated or noted places or landmarks of historical significance (Pukui and Elbert 1986:313, 376). These places have distinctive features (such as mountain peaks, streams, wind, rain, etc.) that are given specific names. Legendary places participate in the history of an area, allowing it to be passed down from generation to generation through chants and legends.

S. W. Na‘ili‘ili (cited in Sterling 1998:243) states that the District of Kula was:

a land famed for the attempt (of some of the people) to scale off the suckers of the squid’s tentacles; for the Hau wind that blows the columns of smoke of Kula low over the ground, that go by so silently and swiftly. Arise, O ye native sons that shake the mamane trees [*Sophora chrysophylla*] of Kula.

A. von Tempski (cited in Sterling 1998:243) also mentions the famed winds of Kula:

I listened avidly while Makalii told me about the Cloud Warriors, Naulu and Ukiukiu—trade-wind-driven clouds split by the height and mass of Haleakala into two long arms. Naulu traveled along the southern flank of the mountain, Ukiukiu along the northern and they battled forever to possess the summit. Usually Ukiukiu was victorious, but occasionally Naulu pushed him back. Sometimes both Cloud Warriors called a truce and withdrew to rest, leaving a clear space between the heaped white masses of vapor looming against the blue of the sky. The space, Makalii told me, was called Alanui o Lani—The Highway to Heaven.

The Kama‘oma‘o Plains are the area known as an “*ao kuewa*” or “realm of the homeless or wandering souls” (Kamakau 1987:47), where a dead man who had “no rightful place” in the realm of the ‘*aumakua* (“ancestral deities”) wandered “amongst the underbrush,” feeding on moths and spiders. While there are no well-defined boundaries for the Kama‘oma‘o Plains, Kamakau (1987:156) identifies the area as the “plain on the isthmus between East and West Maui,” a definition that includes the project area and its vicinity.

Kumu Kī‘ope Raymond, formerly of the Hawaiian Studies Program in the Department of Humanities at the University of Hawaii, Maui College (personal communication September 9, 2020) confirms that the Kama‘oma‘o Plains is “one (of many) area where spirits wander.” Kumu Hokulani Holt, Director, Ka Hikina O Ka Lā Hawai‘i, Papa o Ke Ao University of Hawaii, Maui College (personal communication, August 10, 2020) further explains:

While there are no clear-cut delineation lines for the *ao kuewa* located in Kama‘oma‘o, the area known as Kama‘oma‘o is the "neck" part of Maui. It is the flatland that is arid and does not produce food, and where the spirits wander who have not been accepted into the *ao ‘aumakua*. The native families of an area know if the area is frequented by spirits or not. Those of us who were raised on Maui know that driving the Mokulele Highway, on dark nights was not good.

According to Beckwith (1970:154):

The worst fate that can befall a soul is to be abandoned by its aumakua and left to stray, a wandering spirit (kuewa) in some barren and desolate place, feeding upon spiders and night moths. Such spirits are believed to be malicious and to take delight in leading travelers astray; hence the wild places which they haunt on each island are feared and avoided. Such are the plains of Kama‘oma‘o In these desolate places lost spirits wander until some friendly aumakua takes pity upon them.

HISTORIC LAND USE (POST-1778)

In Hawai‘i, the Post-Contact Period began with the arrival of Captain James Cook and his British fleet in 1778. Within approximately 50 years, significant natural and cultural changes took place throughout the islands not only due to contact with westerners, but also because of internal social and environmental restructuring, and external social and environmental factors (e.g., introduced foreign ideologies and species). These combined to have a severe impact on Hawaiian environments, land-tenure, and social structures.

THE MĀHELE

During the mid-1800s, extreme modification to traditional land tenure occurred throughout the Hawaiian Islands. The transition from traditional communal land use to private ownership has commonly been referred to as the Māhele (from Hawaiian, “division”). The Māhele of 1848 set the stage for vast changes to land holdings on the islands as it introduced the concept of land ownership. Although it remains a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) established laws changing the traditional Hawaiian system of land tenure, which were intended to keep lands in the hands of the Hawaiians. The laws, however, provided an opportunity for foreigners to obtain land, resulting in unforeseen changes in land ownership (Kuykendall Vol. I, 1938:145 footnote 47, 152, 165–166, 170, Daws 1968:111, Kelly 1983:45, Kame‘elehiwa 1992:169–170, 176). Once Article IV of the Board of Commissioners to Quiet Land Titles was passed in December 1845, the legal process of private land ownership was begun.

The Māhele divided the lands of the Kingdom of Hawai‘i among the king (crown lands), the *ali‘i* and *konohiki* (*ahupua‘a* headman), and the government. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once they were made available and private ownership was instituted, through the Kuleana Act of 1850 the *maka‘ainana* (commoners), were able to claim land plots upon which they had been cultivating and living. These claims did not include any previously cultivated land that was left to fallow, stream fisheries, or many other resources necessary for traditional survival (Kelly 1983, Kame‘eleihiwa 1992:295, Kirch and Sahlins 1992). If commoners were able to prove occupation with the testimony of two witnesses, they were awarded the claimed LCA and issued a Royal Patent, after which they could take possession of the property (Chinen 1961:16). The process for foreigners was made possible by the Alien Landownership Act of 1850. Oftentimes, foreigners were simply given lands by the *ali‘i*. However, commoners would make claims only if they had first been made aware of foreign concepts and procedures (*kuleana* lands, land commission awards, etc.). Commoners claiming house lots in Honolulu, Hilo, and Lāhainā were also required to pay commutation to the government before obtaining a patent for their awards (Chinen 1961:16).

The Waihona Aina Database (2020) indicates thirteen Land Commission Awards (*kuleana*) were claimed in Pūlehu Nui during the Māhele. According to the Office of Hawaiian Affairs’ Kipuka Database (2020), “Keaweamahi claims ahupuaa of Pulehunui, minus LCA in Buke Mahele vol.9 pgs.675-6.” In 1902, the Land Commission awarded the entire *ahupua‘a* comprising 16,687.78 acres to Keaweamahi under LCA 5230/Royal Patent 8140 (Waihona ‘Aina Database 2020; Appendix D). The project area is located within LCA 5230 (Figure 8).

PLANTATION ERA

As the sugar industry developed in the mid-1800s, more and more land was leased or purchased for what had become an intensely profitable endeavor. Further impetus was given by the Reciprocity Treaty of 1875, which granted a duty-free market for Hawaiian sugar in the U.S. Since water was an issue, especially on leeward Maui, in 1876 the Hamakua Ditch Company (Alexander and Baldwin) was formed. Within two years, the company was bringing water from the streams of Haleakalā to four plantations in East Maui (Dorrance and Morgan 2000:68).

Also in 1876, the Reciprocity Treaty's ratification notice arrived by steamer, along with California sugar magnate Claus Spreckels. He evaluated the sugar market, and decided to return two years later and turn the dry plains of Maui into a garden of cultivated cane (Van Dyke 2008: 100). By various questionable means, he was able to acquire half interest in 16,000 acres of land in Waikapū commons and was able to lease 24,000 acres of Crown Lands on the Wailuku plains in central Maui for \$1,000 a year (Van Dyke 2008: 100).



Figure 8: A map of coastal Kula District showing major land owners and LCAs in the vicinity of the project area.

Having seen the success of Hamakua Ditch, which brought mountain water to the otherwise dry and unproductive East Maui fields, but having lost his battle to control this water, Spreckels started the Hawaiian Commercial Company and decided to construct his own ditch system (Wilcox 1996:62). Located above Hamakua, Haiku Ditch extended 30 miles from Honomanu Stream to the Kīhei boundary and carried water used to irrigate Spreckels' cane lands in the central Maui plains (Wilcox 1996:62). Haiku Ditch now ends at the Haiku Reservoir.

In 1882, Spreckels reorganized his company into a corporation called Hawaiian Commercial and Sugar Company, or HC&S (Wilcox 1996:62). Later, he constructed another water system known as the Waihee Ditch. It brought water over a stretch of 15 miles from an elevation of 435 ft. to Kalua, where it was emptied into Waiale Reservoir (Wilcox 1996:63).

The ensuing years brought trials and tribulations to Spreckels, his associates, and Maui sugar planters in general. In 1898 Spreckels sold his HC&S stock, which was at an all-time low, to James Castle in partnership with Alexander and Baldwin, and departed Hawai‘i (Dorrance and Morgan 2000:69). Henry Baldwin and Lorin Thurston formed the Kihei Sugar Company in 1899 to grow cane on their ranch lands, which included the project area (Dorrance and Morgan 2000:70). Sugar was sent to the mill at Pu‘unēnē to be ground, but, although production was high, it was not enough to cover the costs (Dorrance and Morgan 2000:71).

After the 1898 annexation, some Maui planters, including Alexander and Baldwin, decided to combine plantations to reap maximum profit. They formed the Maui Agricultural Company, a co-partnership that initially encompassed seven plantations and two mills. In 1904, five new plantations became part of it: the Kula, Makawao, Pulehu, Kailua and Kalianui Plantation Companies, formed by carving up the unprofitable Kihei Plantation land (Dorrance and Morgan 2000:71). Condé and Best (1973:230) describe it as a “relatively short-lived” “Annexation” plantation; in 1948, it merged with HC&S (Dorrance and Morgan 2000:59).

The import of foreign workers during the Plantation Era set the stage for the diverse ethnic makeup of modern Hawai‘i. Condé and Best (1973:211) state that in 1901 HC&S countered the labor shortage by bringing “Alabama Negroes” and considering “Puerto Rican Nationals” for the Kihei Plantation. Workers and their families lived in villages or camps owned by the plantations and distributed across the sugarcane fields. The camps were segregated by ethnicity, as well as by geography, and were usually named accordingly (i.e., Japanese Camp, Portuguese Camp, Filipino Camp, Kihei Camp 1, etc.; Figure 9). As shown in Figure 2, Kihei Camp 3 was located immediately adjacent and south of the Puunene Quarry. The historic Upper

PAIA and PUUNENE
plantation camps: 1930s

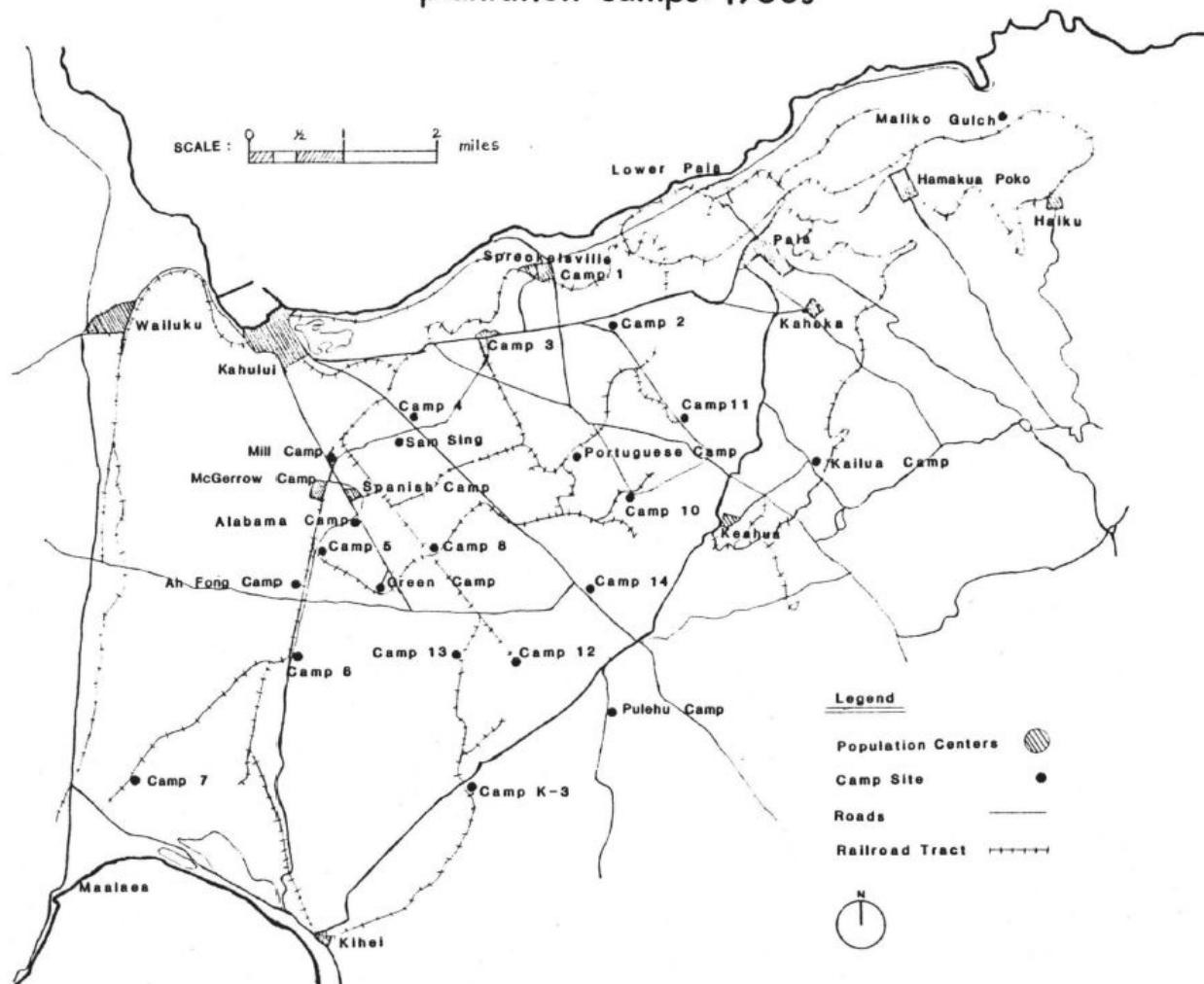


Figure 9: Paia and Puunene plantation camps circa 1930 (from an Ethnic Studies oral history project).

Kihei Road, which now bisects Puunene Quarry, was once one of the main roads used by HC&S to transport cane from the fields to their processing plant (mill) (Dave Gomes, General Manager of Hawaiian Cement, personal communication July 2020).

Kihei Plantation President H.P. Baldwin, noted in the annual report for 1899:

The Kihei Plantation, under contract, is to cut and load their cane on their own cars and deliver same to the main railway line to be drawn by HC&S Co. locomotives to the sugar factory, there to be ground and manufactured into sugar to be delivered to the Kihei Plantation. [Condé and Best 1973:210]

There is no record of the actual start date of the railroad which transported the raw sugarcane from the fields to the mill (Condé and Best 1973:230). However, the annual report for 1899 stated:

RAILROAD — It was our intention to complete the main road only as far as Camp #2, or for about two miles, but as the development of Camp # 3 required the pushing on of the road one and a half miles further, this has been done, having been completed the 15th of February. We also have two and a half miles of portable track, which we laid temporarily in the direction of the H.C.&S. Co.; also one half mile of track from the wharf to the Worthington pump station, making a total road completed at the present time six and one half miles. [Condé and Best 1973:230]

WORLD WAR II

A portion of the cane fields located west of the project area were turned into a civil airfield for the Territory of Hawai‘i in 1937, as the one located at Mā‘alaea had become too small to accommodate the demand. Two years later, Inter-Island Airways began service to Maui, conveniently landing at Puunene Airport. As war loomed on the horizon in 1940, the Navy began using the airport along with a small Army Air Corps support base at the airfield. At this time, the air station was being used to support Squadron VU-3 aircraft, to tow targets, and operate drones for the fleet. Shortly after the United States entered WWII, in 1942 land near the airport, including the project area (parcel 2-C), was condemned (Bureau of Conveyances, Honolulu). The airport was expanded and commissioned as Naval Air Station Maui (NAS). One hundred and six squadrons and carrier groups passed through NAS during WWII. By 1945, the base consisted of a total of 2,202 acres, supporting over 3,300 personnel and 271 aircraft. There were two paved runways, taxiways, ramps, hangers, and auxiliary buildings (Freeman 2016).

The Navy released the airfield to the Territory of Hawai‘i in 1947. It was apparently used as the official inter-island airport until at least 1952 when the Kahului Airport became available for civic use (Freeman 2016). However, the Maui/Pu‘unēnē airstrip serviced crop-dusters and other smaller aircraft, and was not abandoned as a landing strip until sometime between 1961 and 1977 (Freeman 2016).

PREVIOUS ARCHAEOLOGY

Professional archaeological studies on Maui began in the early 20th century under the auspices of the Bernice Pauahi Bishop Museum with work conducted by T. Thrum (1909), J. Stokes (1909–1916), and Winslow M. Walker (1931). These surveys also included areas of leeward Maui in the vicinity of the project area, and inventoried both coastal and upland sites of Kula District.

Walker's pioneering research (1933 cited in Sterling 1998:253) listed two *heiau* in Pūlehu Nui: Haleokane and Nininiwai. The former (Walker Site 221) is located 150 yards above the main road at Poonahoahoa. Walker (1933 cited in Sterling 1998:253) further described Haleokane Heiau (Walker Site 221) as:

A small heiau platform 22 by 30 feet.... In spite of its small size the natives attach considerable importance to it and report the noise of drums on the nights of Kane. The name Haleokane was given by the old woman on whose property the heiau stands but the other kamaainas did not regard her information as very accurate.

Walker (1933 cited in Sterling 1998:253) described Nininiwai Heiau (Walker Site 222 and 223) as located "on the mauka side of the main road near the branch road. It was destroyed in clearing the land for pineapples. The other heiau is located on a hill in the mist of the cactus a mile and a half below the main road and near the branch road." It was further described as:

A medium-sized walled heiau, 50 × 50 feet. It is double-terraced on the north side and the wall is here 10 feet thick. Elsewhere it is 6 feet thick. There is a small enclosure in one corner. Cattle are continually trampling over this heiau and will in a short time reduce it to a shapeless pile of rocks. [Walker 1933, cited in Sterling 1998:253]

A number of more recent archaeological projects have been conducted at Puunene Quarry and the surrounding environment (Figure 10). A brief summary of these works is presented below in a chronological order.

Archaeological Consultants Hawai'i (Kennedy 1990) conducted an archaeological reconnaissance survey of the area now used as the Hawaiian Cement Puunene Quarry located at Pūlehunui Ahupua'a, Wailuku (Kula) District, Maui Island, TMK: (2) 3-8-004:001 (por.) and 3-8-004:002 (por.). The archaeological walk-through did not identify any historically significant properties.

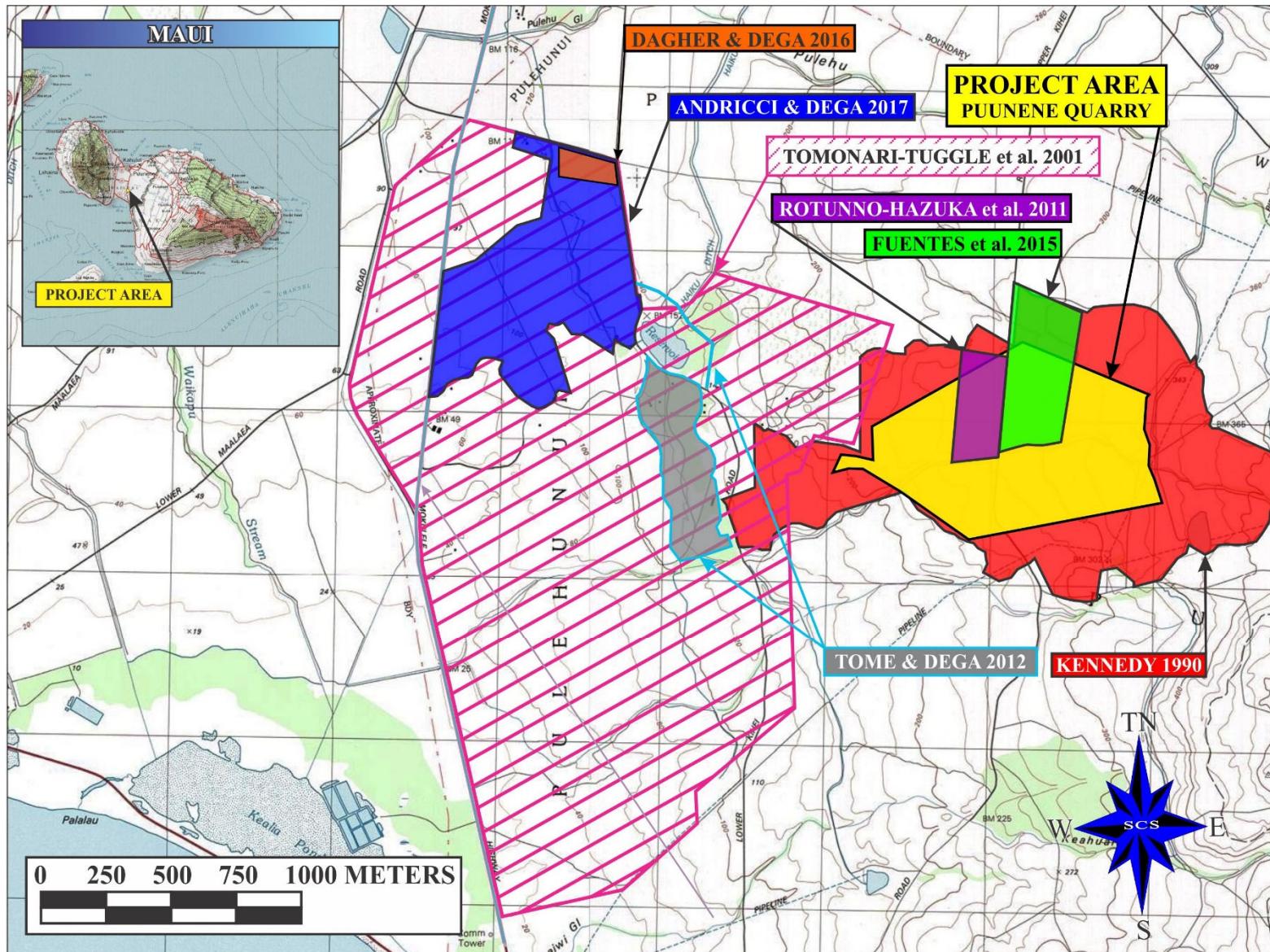


Figure 10: USGS quadrangle (Maalaea, HI 1996; 1:24,000) map showing locations of previous archaeology in the project area and its vicinity.

International Archaeological Research Institute, Inc. (Tomonari-Tuggle et al. 2001) conducted an archaeological inventory survey of the former Naval Air Station (State Site 50-50-09-4164) located in Pu‘unēnē, Pūlehu Nui Ahupua‘a, on lands adjacent to the west of the current project area. During the survey three sites were identified (State Site 50-50-09-4800, -4801, and -4802). State Site 50-50-09-4800 consisted of seven features associated with the Plantation-Era and two complexes of corrals, fences, troughs associated with Post-World War II ranching. State Site 50-50-09-4801 consisted of another Post-World War II cattle ranching site. State Site 50-50-09-4802 consisted of the Old Kihei Railroad Bed (State Site 50-50-09-4802) and 5 features associated with the Haiku Ditch and Reservoir (Tomonari-Tuggle et al. 2001).

Archaeological Services Hawaii, LLC (Rotunno-Hazuka et al. 2011) conducted an archaeological inventory survey of a 24.476-acre proposed rock quarry expansion site located on land partially overlapping with and adjacent to the project area in Pūlehu Nui Ahupua‘a, Kula Moku; Wailuku District, Island of Maui [TMK: (2) 3-8-004:001 pors.]. The survey consisted of surface investigation and twenty mechanically excavated backhoe test trenches. No historic properties were identified. The findings indicated the project area had been disturbed continuously, over the years, by intensive commercial sugar cane cultivation and rock mining (Rotunno-Hazuka et al. 2011).

In 2011, Scientific Consultant Services, Inc. (Tome and Dega 2012), conducted an archaeological inventory survey for the Puunene Heavy Industrial Subdivision Project on an approximately 917-meter long alternate access road corridor [TMK: (2) 3-8-008: pors. 005 and 006] and the surrounding 86.029 acres [TMK: (2) 3-8-008: 019] in Pūlehu Nui Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i. A portion of the Puunene Naval Air Station was located within the project area. Thus, portions of the former Puunene Naval Air Station (State Site 50-50-09-4164) and a post-World War II cattle ranching site (State Site 50-50-09-4801) were re-located during the survey (Tome and Dega 2012).

Archaeological Services Hawaii, LLC (Fuentes et al. 2015) conducted an archaeological inventory survey of 41.968 acres for the proposed Hawaiian Cement rock quarry expansion located within a larger 2008-acre property at Pūlehu Nui Ahupua‘a, Wailuku District, Kula Moku, Island of Maui, Hawai‘i [TMK: (2) 3-8-004:001 pors.]. This project area overlaps with increment 3 and is located immediately adjacent and west of the currently proposed quarry expansion site overlapping with increment 4 (see Figure 4). The survey consisted of a surface investigation and the mechanical excavation of seventeen backhoe trenches and two dozer cuts. No historic properties were identified (Fuentes et al. 2015).

Scientific Consultant Services, Inc. (Dagher and Dega 2016) conducted an archaeological inventory survey of a 20.3-acre property in Pu‘unēnē, Pūlehu Nui Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i [TMK: (2) 3-8-008:001 por.]. The project area is in the vicinity of the current project area and is located on lands owned by the State of Hawai‘i, Department of Land and Natural Resources. Full pedestrian survey was conducted, as and 20 stratigraphic trenches (ST-1 through ST-20) were mechanically excavated. No historic properties were identified on the ground surface or in subsurface contexts (Dagher and Dega 2016).

Finally, Scientific Consultant Services, Inc. (Andricci and Dega 2017) conducted an archaeological inventory survey of 285 acres inclusive of the area surveyed by Dagher and Dega (2016) for the DLNR Industrial and Business Park in Pu‘unēnē, Pūlehu Nui Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i [TMK: (2) 3-8-008: 001]. One historic property was identified and interpreted as a Post-Contact irrigation ditch associated with sugar cane cultivation (State Site 50-50-04-8481). Subsurface testing yielded negative findings (Andricci and Dega 2017).

CONSULTATION

Consultation was conducted via telephone, e-mail, the U.S. Postal Service, and via Zoom. No in-person individual interviews, group interviews, or inter-island travels were conducted because of the ongoing COVID-19 epidemic. Information pertaining to traditional cultural practices conducted within the project area or in Pūlehu Nui Ahupua‘a in general was sought from the following 41 individuals and organizations:

1. Roy Newton, Office of Hawaiian Affairs
2. Kai Markell, Compliance Manager, Office of Hawaiian Affairs
3. Lui K. Hokoana, President, Central Maui Hawaiian Civic Club
4. Thelma Shimaoka, Community Outreach Coordinator III, Office of Hawaiian Affairs
5. Mr. William Ho‘ohuli, community member
6. Leimana DaMate, Executive Director, Aha Moku Advisory Committee
7. Chris “Ikaika” Nakahashi, Cultural Historian, State Historic Preservation Division
8. Andrew “Kealana” Phillips, Burial Sites Specialist, State Historic Preservation Division

9. Albert Perez, Executive Director, Maui Tomorrow Foundation
10. Lucienne de Naie, Vice-President, Maui Tomorrow Foundation
11. Maui Sierra Club
12. Hale Mahaolu
13. Kapulani Antonio, Former Chair, Maui/Lāna‘i Island Burial Council
14. Ke‘eaumoku Kapu, CEO, Aha Moku O Maui, Inc.
15. Timothy Bailey, Kula Mauka Moku Representative, Na Hono A‘o Pi‘ilani
16. Randall Moore, former HC&S employee
17. Kamika Kepa‘a, Native Hawaiian Preservation Council
18. Patty Nishiyama, Nā Kupuna O Maui
19. Johanna Kamaunu, Wailuku District Representative, Maui/Lāna‘i Islands Burial Council
20. Kaniloa Kamaunu, Na Hono A‘o Pi‘ilani
21. James “Jay” Carpio, community member and cultural practitioner
22. Hōkūao Pellegrino, Hui o Nā Wai ‘Eha, cultural practitioner and cultural and lineal descendant of Waikapū and Wailuku Ahupua‘a, Wailuku Moku, Maui
23. Foster Ampong, formally recognized cultural descendant of inadvertently discovered iwi kupuna (“ancestral bones”) of Wailuku Ahupua‘a, a lineal and cultural descendant of ‘ōiwi (“native”) ancestors who lived in Wailuku Moku, Maui, Hawai‘i
24. Clyde Kahalehau, Po‘o, Wailuku Moku, Na Hono A‘o Pi‘ilani
25. Vernon Kalanikau, Kula Kai District Representative, Aha Moku O Maui, life-long resident of Kula Kai (coastal Kula)
26. Jade “Alohalani” Smith, Kaupo Moku Representative, Aha Moku O Maui, born and raised in Kula Kai
27. Torrie Nohara, Na Ala Hele Program, Department of Land and Natural Resources, Division of Forestry and Wildlife

28. Bob Hobdy, Botanist and Environmental Consultant
29. Carol “Kaonohi” Lee, Honua‘ula Moku Representative, Aha Moku O Maui
30. Kyle Nakanelua, Maui Po‘o- Moku O Kahekili, Aha Moku Advisory Council
31. Jill Pridemore, Director, Alexander and Baldwin Sugar Museum
32. Dr. Scott Fisher, Associate Executive Director of Conservation, Hawai‘i Island Land Trust
33. Darla Palmer-Ellingson, Former Director, Alexander and Baldwin Sugar Museum
34. Kumu Hokulani Holt, Director, Ka Hikina O Ka Lā Hawai‘i, Papa O Ke Ao, University of Hawaii Maui College, cultural practitioner
35. Holly Buland, Assistant Director, Alexander & Baldwin Sugar Museum
36. Maui Historical Society
37. Bailey House Museum
38. Maui News Index
39. Robert Hill, Archaeologist
40. Kumu Kī‘ope Raymond, Formerly of the Hawaiian Studies Program, Department of Humanities, University of Hawaii, Maui College
41. Jon Kamakawiwo‘ole Osorio, Dean, Hawai‘inuiākea School of Hawaiian Knowledge, University of Hawai‘i at Mānoa

The initial letters of inquiry (Appendix A) were mailed between October 17, 2019, and October 31, 2019, to the above-listed individuals and organizations. The follow-up letters of inquiry were sent via e-mail and USPS on November 14, 2019. An example follow-up letter is attached as Appendix B. A Cultural Impact Assessment Notice was published in the November 2019 issue of the OHA newsletter, *Ka Wai Ola* (Appendix C). The notice stated that Scientific Consultant Services, Inc. is seeking information on cultural resources and traditional activities in the area of the proposed project, provided locational information (the *ahupua‘a*, traditional and modern names of the District, Island, State, and property Tax Map Key designations), and requested that responses be sent within 30 days to Cathleen Dagher

SITE VISIT

At the request of several of the cultural consultants, and with the permission of Dave Gomes, General Manager of Hawaiian Cement, Scientific Consultant Services, Inc. invited those among the people and organizations listed above who had indicated interest in participating in a site visit of the Puunene Quarry. The purpose of the visit was to obtain additional perspective and understanding of the land, its vegetation, and the location of roads. On August 17, 2020, SCS sent an email notifying the following individuals that the site visit would be conducted on Saturday, August 29, 2020, at 8 am:

- Vernon Kalanikau, Kula Kai District Representative, Aha Moku O Maui, life-long resident of Kula Kai
- Lucienne de Naie, Vice-President, Maui Tomorrow Foundation
- Carol “Kaonohi” Lee, Honua‘ula Moku Representative, Aha Moku O Maui
- Jade “Alohalani” Smith, Kaupo Moku Representative, Aha Moku O Maui, born and raised in Kula Kai
- Darla Palmer-Ellingson, Former Director, Alexander and Baldwin Sugar Museum
- Foster Ampong, formally recognized cultural descendant of inadvertently discovered *iwi kupuna* (“ancestral bones”) of Wailuku Ahupua‘a, a lineal and cultural descendant of ‘ōiwi (“native”) ancestors who lived in the Wailuku Moku, Maui, Hawai‘i

In addition to:

- Trevor Yucha, Project Manager, Cultural Surveys Hawai‘i, who graciously agreed to guide the site visit and answer various questions.

Those who attended the site visit to Puunene Quarry were:

- Vernon Kalanikau
- Lucienne de Naie
- Jade “Alohalani” Smith
- Trevor Yucha

In addition to:

- Dave Gomes, General Manager of Hawaiian Cement, who kindly allowed the visit.

The site visit was conducted on August 29, 2020. In an email dated September 1, 2020, Mr. Yucha, Project Manager, Cultural Surveys Hawai‘i, provided the following summary of it:

Hello Cathy,

I was glad to participate in the site visit. Thank you for coordinating everything! I agree that it went well. Vernon, Lucienne, and Alohalani seemed to enjoy the opportunity to see the entire area and learn about the quarrying operation. The site visit took about 3 hours (8-11AM) starting with an orientation inside Dave’s [Gomes, General Manager of Hawaiian Cement] office conference room, followed by a 4WD tour of the property. The participants expressed concerns about the gulch area and that it may have archaeological sites. Vernon was also concerned with any impacts to drainage downslope toward Kealia Pond and Kula kai. The participants were interested in the place name of the gulch “Kolaloa” and the intent of its meaning “much sexual excitement” – Pukui et al. (1974). Dave confirmed that the gulch will be preserved with a buffer throughout the quarrying operation. Any work in the gulch would require review/permitting by the Army Corps.

All three participants also expressed concerns about the potential for archaeological sites/burials that could be disturbed by quarrying. I explained that the previous archaeological surveys found no evidence of archaeology or burials in the project area and that future work in Expansion Areas 2 and 4 will be addressed by the archaeological monitoring plan that CSH has prepared. To date, the SHPD has not reviewed future work in Expansion Area 5 (location of former Kihei Camp 3).

The participants did not share any knowledge of on-going cultural practices in the project area with me.

Let me know if you need any additional details.

Thank you,

Trevor Yucha

Project Manager

Cultural Surveys Hawai‘i

Note: Efforts to protect Kolaloa Gulch and the drainage system, archaeological sites, and human burials from potential impacts associated with quarrying activities are currently in place.

An archaeological monitoring plan (Yucha and Hammatt 2020) has been prepared in advance of quarry activities in Quarry Mining Site Increments 2 and 4. Dave Gomes, General Manager of Hawaiian Cement, stated via an email dated September 28, 2020, that there are access roads on either side of Kolaloa Gulch and berms are located between the roads. The berms were created to keep the HC&S trucks from entering the gulch. The berms will be kept in place to act as “buffers” between the quarry operations and the gulch. In a subsequent telephone conversation, on November 6, 2020, Mr. Gomes further explained that the existing roads are the buffers and the existing berms, located between the roads and the quarry, are standard federal regulatory safety measures to keep people from falling into the quarry.

RESULTS OF CONSULTATION

No responses were received as a result of posting a CIA notice in the OHA newsletter *Ka Wai Ola*. However, consultation yielded responses from 17 individuals via e-mail, one telephone interview, and one Zoom interview (see Interview section). Based on these responses and interviews, assessment of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

WRITTEN REONSES

CHRIS “IKAIAKA” NAKAHASHI, CULTURAL HISTORIAN, STATE HISTORIC PRESERVATION DIVISION

Mr. Nakahashi responded via an e-mail dated November 1, 2019. In his e-mail, Mr. Nakahashi provided the following recommendations:

Aloha Cathy,

Mahalo for contacting me regarding the CIA for the proposed Puunene Quarry Expansion Project in the ahupua‘a of Pūlehunui, in the Moku of Kula, Maui.

I recommend SCS to utilize the media (e.x. OHA’s Ka Wai Ola, Maui News, etc.) to solicit additional information for this CIA.

I recommend SCS to meet with:

- Ke‘eaumoku Kapu – ‘Aha Moku o Maui Inc.
- Hōkūao Pellegrino – Hui o Nā Wai ‘Eha

I recommend SCS to meet with the native tenants and people that currently live or previously lived in the ahupua‘a of Pūlehunui on Maui for information about the cultural resources and practices for this CIA.

Please let me know if I can assist with anything else.

A hui hou,

Christopher “Ikaika” Nakahashi, M.S.

Cultural Historian

Department of Land & Natural Resources

State Historic Preservation Division

Concerns: No concerns were expressed at this time.

Note: Ke‘eaumoku Kapu, ‘Aha Moku o Maui Inc., and Hōkūao Pellegrino, Hui o Nā Wai ‘Eha, were included in the consultation process for this project and invited to participate. Unfortunately, SCS did not receive responses from them.

ANDREW “KEALANA” PHILLIPS, BURIAL SITES SPECIALIST, STATE HISTORIC PRESERVATION DIVISION

Mr. Phillips provided the response below via an email dated February 25, 2020: “I will forward to burial council.”

Concerns: No concerns were expressed at this time.

LUCIENNE DE NAIE, VICE-PRESIDENT, MAUI TOMORROW FOUNDATION

Ms. de Naie sent the email below on July 9, 2020:

Mahalo Cathy,

I will check it out and pass around to folks who may be familiar with the area.

The map is too limited to place the project area, but I have attached a larger and older (c. 1950’s) map that shows the same area [Figure 11].

Just off the top of my head I would ask what happens to the Historic Upper Kihei road? Will there be research done to find former families who lived in Camp K-3?



Figure 11: Portion of USGS (c. 1950s) Quadrangle Map (Courtesy of Lucienne de Naie, personal communication July 9, 2020).

Will there be research done on the history of Kolaloa Gulch which runs right thru the proposed quarry area and may be completely altered by the quarrying operations?

Will the relationship of Kolaloa gulch to Kealia Pond be discussed? It appears that the Gulch at one time flowed into the pond/wetlands

Is there a site tour of the area proposed, by landowners, where interested cultural users can share information.

Lucienne de Naie

And in an email dated July 15, 2020, Ms. de Naie provided guidance and helpful suggestions:

Mahalo for the studies.

Historic roads, and access to them have a strong policy for protection in many of our Community plans. That's why a site visit would make sense.....

Site tours are being done by others. I am going on one of the proposed Kamaole solar site this Friday.

I would like to request that one be offered for this site, as part of CIA consultation.

As for Camp K-3 residents. Here's a few ideas, if you haven't already pursued them.

Did you check old Maui News index? Maybe an article on when the Camp was shut down?

Did you check Bailey House files?

HC&S Plantation Camp info that may be available [sic] at Maui Sugar Museum?

Give the director a call they have a Camp registry: A number of years ago, the Sugar Museum displayed the plantation camp maps of the Hawaiian Commercial & Sugar Co. (HC&S) in Puunene, and Maui Agricultural Co. (MACo) in Paia in its gallery, along with a registry form inviting former camp residents or their families to contribute information. This was the start of the Plantation Camp Registry. The registry also includes plantation camps in Spreckelsville, Hamakua Poko, Kihei, Wailuku and Lahaina....

Best

Lucienne

Concerns: No concerns were expressed at this time. Please see the Interview section of this report.

Note: SCS followed-up on Ms. de Naie's suggestions. However, the Maui News Index was not available on-line. Scientific Consultant Services, Inc. contacted the Maui Historical Society, Bailey House Museum via telephone. The Bailey House Museum voice message indicated they were closed indefinitely due to the COVID-19 epidemic. SCS contacted Darla Palmer-Ellingson, Former Director of the Alexander and Baldwin Sugar Museum, via email, Jill Pridemore, Director, Alexander and Baldwin Sugar Museum, and Holly Buland, Assistant Director, Alexander & Baldwin Sugar Museum, regarding the Museum's registry of former plantation camp residents. In addition, SCS contacted Randal Moore, former HC&S employee, in an effort to obtain information about K-3, the Plantation Village. A site visit of the Puunene Quarry was conducted on August 29, 2020, and Ms. de Naie attended.

Ms. de Naie sent the email below on August 29, 2020, following the August 29, 2020, Puunene Quarry site visit. "Thanks. I may have some ideas. We had a good tour of the Puunene quarry today. I am willing to be interviewed for that CIA. Lucienne de Naie."

Concerns: Ms. de Naie did not express any concerns at this time. She was subsequently interviewed for this CIA report (see Interview section).

HOLLY BULAND, ASSISTANT DIRECTOR, ALEXANDER & BALDWIN SUGAR MUSEUM

Ms. Buland provided the email below on August 8, 2020:

Aloha Cathy,

Thank you for your inquiry. We only have information attached:

Kihei Camp 3 map from early 1950s [Figure 12].

An HC&S retiree named Randall Moore commented on our Facebook page:

The camp was located near Well 3, above North Kihei. The camp area was cleared and planted in sugarcane in 1956 according to field maps.

Location on Google map: 20°48'34.1"N 156°25'57.1"W [Figure 13] <https://goo.gl/maps/8pwHw1mGRqhtDkDg7>.

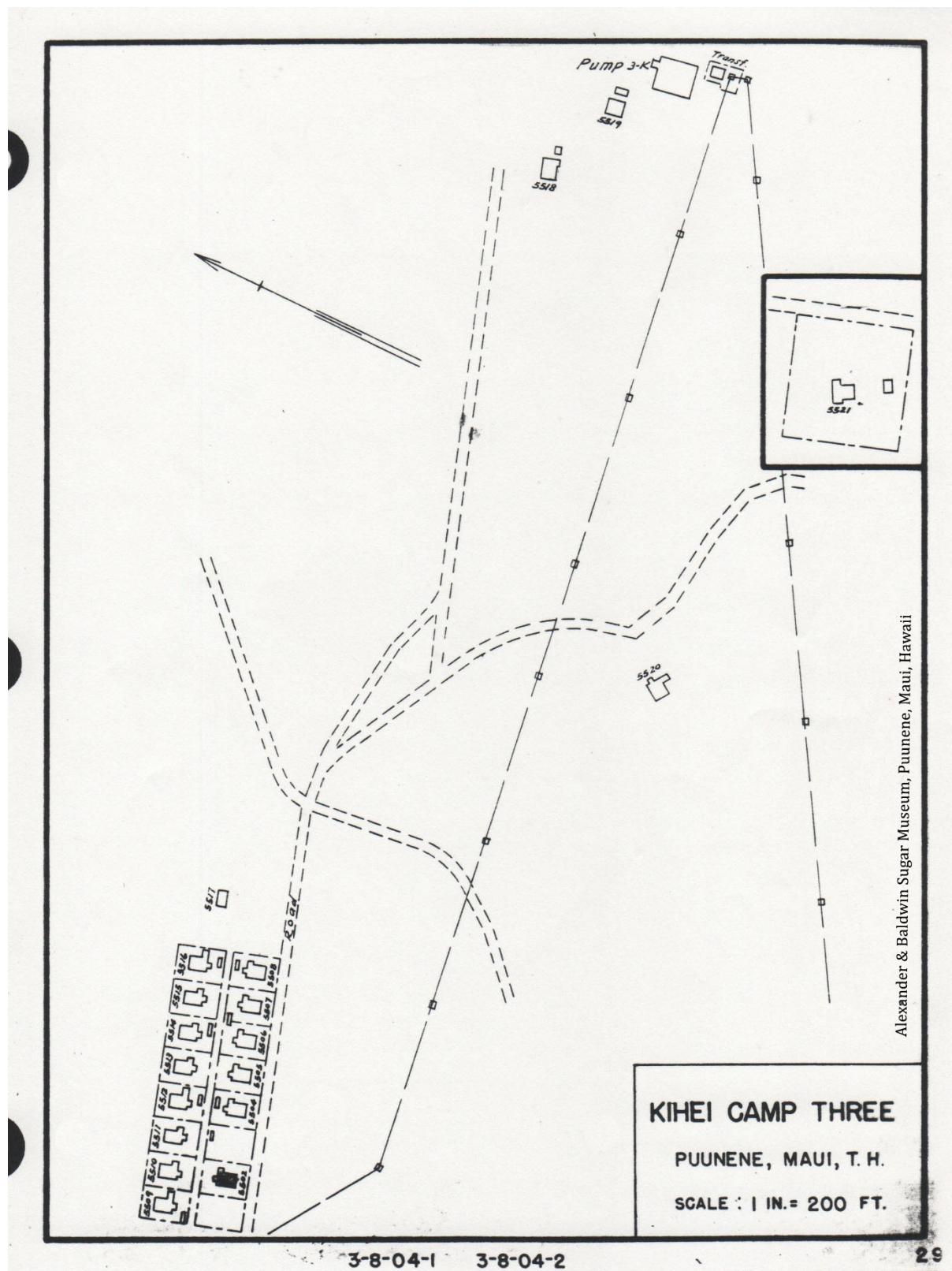


Figure 12: Kihei Camp 3, Puunene, Maui, T.H. (Alexander and Baldwin Sugar Museum, Puunene, Maui, Hawaii; Courtesy of Holly Buland, Assistant Director, Alexander & Baldwin Sugar Museum, personal communication August 8, 2020).

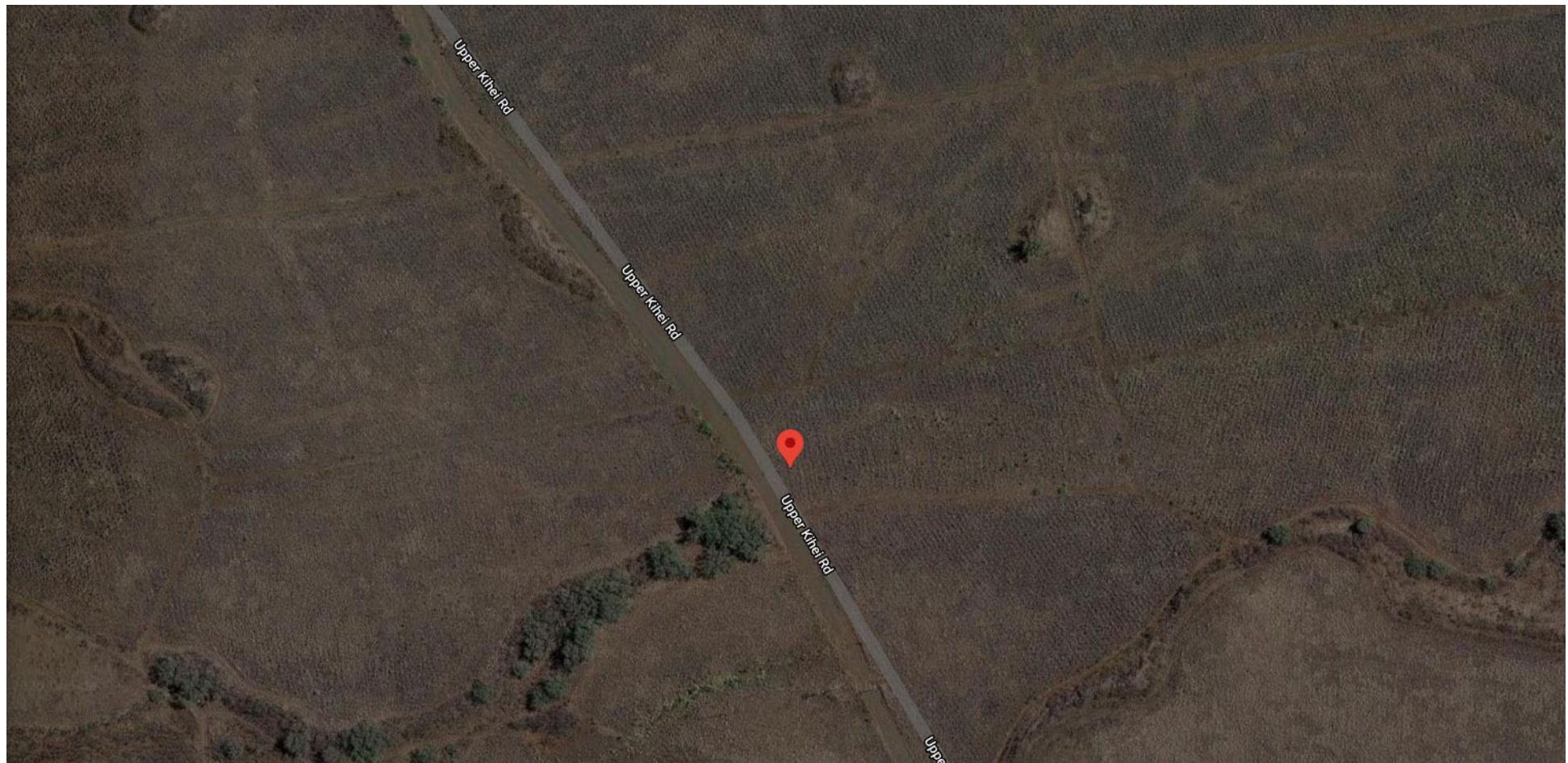


Figure 13: Satellite Image (Google; Courtesy of Holly Buland, Assistant Director, Alexander & Baldwin Sugar Museum).

Have you tried the Maui Historical Society? They may have information pertaining to Hawaiian cultural uses.

Holly Buland

Assistant Director

Alexander & Baldwin Sugar Museum

Concerns: No concerns were expressed.

RANDALL MOORE, FORMER HC&S EMPLOYEE

Mr. Moore provided the comments via an email dated October 28, 2019:

Cathy,

This area was in sugar cultivation while I was working at HC&S from 1974 to 2011. I do not know about any cultural resources that might be affected by the quarry expansion.

Let me know if you need more information.

Sincerely,

Randall Moore

Concerns: No concerns were expressed at this time.

JAMES “JAY” CARPIO, COMMUNITY MEMBER AND CULTURAL PRACTITIONER

In an email dated February 24, 2020, Mr. Carpio said, “Aloha Cathy, Mahalo for the opportunity to assist again. I will review and get back to you expeditiously. Jay.”

In a subsequent email dated April 7, 2020, Mr. Carpio, reiterated: “Mahalo Cathy i want to help. Let me review the next two nights.”

Concerns: No concerns were expressed at this time. Mr. Carpio did not respond to SCS’s follow-up emails, which were sent to him between November 15, 2019 and September 3, 2020.

CAROL “KAONOHI” LEE, HONUA‘ULA MOKU REPRESENTATIVE, AHA MOKU O MAUI

Ms. Lee sent the email below on August 3, 2020:

Aloha Ahiahi e Cathy,

I'm doing well given the current "new normal" which is annoying at times but thankful for less visitors and special places having the chance to "breath". Hope you are doing well.

Thank you for reaching out on this project. I am looking at the attachments and can't really pinpoint the exact spot of this project. Therefore, I would very much like to be a part of the site visit. I will also reach out to others who may be interested in providing information on the project and depending on the specifics regarding the site visit, they may want to participate.

Look forward to hearing from you.

Me ka ha‘aha‘a,

Ka‘onohi

Concerns: No concerns were expressed at this time.

Ms. Lee was notified via email of the site visit scheduled for August 29, 2020, but in a subsequent email dated August 18, 2020, she indicated that she would be unable to attend:

Aloha Cathy and Vernon

Thank you Cathy for setting this up. Unfortunately because it took a while for this site visit to be set up, I now have a meeting scheduled for that day that I cannot reschedule.

Vernon, I hope you will be able to participate and if we (you and & I) can get together to debrief about the site visit and so I can get an idea of where this place is!

me ka ha‘aha‘a,

Ka‘onohi

DARLA PALMER-ELLINGSON, FORMER DIRECTOR OF THE ALEXANDER AND BALDWIN SUGAR MUSEUM

Darla Palmer-Ellingson, Former Director of the Alexander and Baldwin Sugar Museum, sent the email below on August 3, 2020:

I am the former director of the A & B Sugar museum, and have been out of touch with them for a while, but I would be happy to contact the new director...The museum has a close relationship with Alexander and Baldwin company, the landowner of the subject property. As such it would be ideal to look at community sources for input. I will reach out to a couple of contacts to see if they might have cultural information regarding the area you are researching.

Perhaps then I could give you some better leads on who to contact.

Best regards,

Darla Palmer-Ellingson

Concerns: No concerns were expressed at this time.

FOSTER AMPONG, FORMALLY RECOGNIZED CULTURAL DESCENDANT OF INADVERTENTLY DISCOVERED *IWI KUPUNA* OF WAILUKU AHUPUA‘A, LINEAL AND CULTURAL DESCENDANT OF ‘OIWI ANCESTORS WHO LIVED IN WAILUKU MOKU, MAUI, HAWAI‘I

In an email received July 27, 2020, Mr. Ampong stated:

Aloha, Cathy

Yes. We are indeed fortunate no harm came to us as a result of Hurricane Douglas.

Yes. I am be interested on this site visit [sic]. Please include me.

Mahalo

Foster

Concerns: No concerns were expressed at this time.

Note: Mr. Ampong was unable to attend the site visit conducted on August 29, 2020. He was subsequently interviewed for this CIA report. However, he did not provide a permission for SCS to publish his interview.

JADE “ALOHALANI” SMITH, KAUPO REPRESENTATIVE, AHA MOKU ISLAND COUNCIL

Ms. Smith provided the following comments via an email:

Hi Cathy,

Glad our Islands were spared and we can continue to move forward.

I would love to join you folks on a site visit. I believe it’s important. Thank you for coordinating this visit should we be granted.

J. Alohalani Smith

Concerns: The Puunene Quarry site visit was conducted on August 29, 2020, and Ms. Smith was in attendance. No concerns were expressed at this time.

**TORRIE NOHARA, NA ALA HELE PROGRAM, DEPARTMENT OF LAND AND NATURAL RESOURCES,
DIVISION OF FORESTRY AND WILDLIFE**

On August 6, 2020, Ms. Nohara provided the following information via email:

Cathy, thank you for contacting Na Ala Hele for information about cultural resources and cultural practices in the vicinity of the quarry. I'm sure at some time there were some trails that went through the area, but we were unable to locate anything on the old maps we have. So at this time, we have no comments. Good luck with your projects.

Torrie Nohara, Trails & Access Specialist

Na Ala Hele Program

Concerns: No concerns were expressed at this time.

**VERNON KALANIKAU, KULA KAI DISTRICT REPRESENTATIVE, AHA MOKU O MAUI AND LIFE-
LONG RESIDENT OF KULA KAI**

Mr. Kalanikau sent the comments below via email on July 22, 2020:

Aloha Cathy

I'm contacting you on the Quarry Expansion to where it is at as far as the CIA, etc.

First the proposed project is in Moku 'O Kula in the Pulehunui Ahupua'a and not in Moku 'O Wailuku.

Next, who have you consulted with for the CIA? I'm not sure if you did reach out to me or others from our Moku. Please relive if I missed anything.

Please contact me when you have a chance.

Included in this thread are consultants to me:

Foster Ampong from Wailuku

Jade Smith from Kaupo

Mahalo,

Vernon Kalanikau

Concerns: No concerns were expressed at this time.

A subsequent email sent by Mr. Kalanikau on July 27, 2020, stated:

Aloha Cathy

E mahalo for the info. I'm just learning about this CIA request has been in the oven for some time. I appreciate the invite to possibly weight in [sic] to this proposed project.

The request I have is there anyway [sic] we can do a site visit?

Mahalo,

Vernon

Concerns: No concerns were expressed at this time. The Puunene Quarry site visit was conducted on August 29, 2020, and Mr. Kalanikau was in attendance.

Mr. Kalanikau provided the email below on August 31, 2020, following the site visit to Puunene Quarry.

Hi Cathy

For me I don't have any cultural related or traditional practices to the proposed quarry expansion project. The concern I had was the gulch which we all did have a chance to view which is quite small but noticeable. Will the gulch be compromised from quarry work? Mr. Gomes indicated a distance barrier will be set up between mining and the gulch which will be enough apart so the gulch will not be impacted at all.

Of course plenty Uhaloa [*Waltheria* sp.] throughout the areas we visited [sic]. Saw some tobacco plants [*Nicotiana glauca*] here and there both on Mahi Pono and Hawaiian Cement parcels.

Other than that the visit was educational. Had no idea the work that is involved to make cement and technology to make it all work. Amazing!!

Mahalo for the opportunity to participate, along with Lucienne and Jade.

Vernon

Concerns: Mr. Kalanikau expressed concern that Kolaloa Gulch may be compromised by the quarrying operations.

Note: In an email dated September 28, 2020, Dave Gomes, General Manager of Hawaiian Cement, provided the following comment, concerning the placing of protective buffers during mining operations:

Currently on both sides of the gulch there is an access road that was used by HC&S pickup trucks. Between that road and the gulch was a small berm made from either dirt or rocks. I believe it was there to ensure the pickup trucks could not enter the gulch. We intend to keep this in place, thus providing a “buffer” between our operations and the gulch.

In a subsequent telephone conversation, on November 6, 2020, Mr. Gomes further explained that the roads are the buffers and the berms, which are located between the roads and the quarry, are a standard federal regulatory safety measures that they are obligated to have in place to keep people from falling into the quarry.

INTERVIEWS

SCS conducted three interviews, two via telephone, and one via Zoom. Dr. Scott Fisher, Associate Executive Director of Conservation, Hawai‘i Island Land Trust; Ms. Lucienne de Naie, Vice-President, Maui Tomorrow Foundation; and Mr. Foster Ampong, formally recognized cultural descendant of inadvertently discovered *iwi kupuna* of Wailuku Ahupua‘a, a lineal and cultural descendant of ‘ōiwi ancestors who lived in Wailuku, graciously allowed SCS to interview them. Dr. Fisher’s signed information release form, granting permission for his interview summary to be included in this document is likewise presented below (Figure 14). Ms. de Naie granted permission via an email dated November 11, 2020, which is presented below. Unfortunately, Mr. Ampong did not respond to SCS’s emails requesting he review and edit his interview summary or provide his permission for his interview summary to be included in this document. Thus, only Dr. Fisher’s and Ms. de Naie’s interview summaries are reproduced here.

DR. SCOTT FISHER, ASSOCIATE EXECUTIVE DIRECTOR OF CONSERVATION HAWAI‘I ISLAND LAND TRUST

Dr. Fisher was interviewed via Zoom on August 7, 2020, by SCS Senior Archaeologist Cathleen Dagher, B.A. Dr. Fisher began the interview by stating that he had looked over the materials SCS sent him and that the area in which the Puunene Quarry is located was the ao kuewa, the place of wandering spirits. In traditional Hawaiian spiritual after-life thinking, there was the ao [day] and there was the po [night]. The world we live in is the ao and the po is the after-world. But that middle ground where spirits who had lost their connection to their ‘ohana [family], specifically to their ‘aumakua [deified ancestors], were caught in this ao kuewa. Samuel Kamakau talks about the ao kuewa as where the spirits of the dead would live off of moths and spiders. This is a dark place and not a place where you would want to end up. So, not that it’s not worthy of being treated respectfully as ‘aina [land], but it is relatively devoid of cultural resources.

Up until probably around World War II, or maybe even more recently, the general area was a plantation. When Dr. Fisher was in graduate school, he did an oral history project with Maui

residents' recollections of World War II. One of his informants may have lived in Kihei Camp 3 [Camp K-3], because he said it was located right around the Puunene Naval Air Station. He actually joined the army and fought in World War II with the 442nd. But, he had some descriptions of what camp life was like at Camp 3. Unfortunately, the Bailey House can't seem to locate those documents. The Bailey House has oral histories from people who are now gone, people who have passed on.

The main cultural resource to protect there would be the Puunene Naval Air Station. Some fairly famous people flew in and out of there, like Lieutenant Commander Butch O'Hare, medal of honor recipient in World War II, naval aviator who shot down five planes in the Battle of the Coral Sea, and the O'Hare International Airport was named in his honor. Lieutenant Commander O'Hare flew in and out of the Puunene Naval Air Station and some of Dr. Fisher's oral history informants talked about how they had met him and were able to get his autograph.

Dr. Fisher's father was a manager at Hawaiian Commercial and Sugar (HC&S). He was in charge of irrigation and later he oversaw the harvesting of the sugarcane. Dr. Fisher frequently drove up and down the cane haul roads and he and his father would often drive from the HC&S mill to Kīhei on all of the back roads. Dr. Fisher stated he is familiar with area and does not recall any traditional cultural resources in the area. In 2013, some live ordinance was found in the general area of the Puunene Quarry. Dr. Fisher's understanding is that the ordinance was found a little bit closer to Puunene Mill. Dr. Fisher went on to say that following World War II, the military left open pits throughout the area, not necessarily within the proposed project area, but in the area. Dr. Fisher wasn't sure if the pits were naturally occurring features or were intentionally excavated. But anything that was pit-like, the military immediately filled up with trash and did not back-fill them. When Dr. Fisher's father encountered these open pits, he would go down into them and find them filled with tons and tons of trash from the World War II era. It is possible that these pits also contain live ordinance.

Dr. Fisher did not identify any traditional cultural practices in close proximity to the Puunene Quarry or express any concerns pertaining to them. However, Dr. Fisher did identify the area in which the quarry is located as part of a larger cultural landscape, i.e., the ao kuewa. Dr. Fisher also identified the Puunene Naval Air Station and Kihei Camp 3 (Camp K-3) as near-by historic properties.

Concerns: Dr. Fisher did not express any concerns pertaining to traditional cultural practices or cultural resources. However, Dr. Fisher did make the following recommendations pertaining to the landscape and environment:

- Aesthetic remediation (i.e., smoothing the excavated areas over) should be done on the existing mined out areas of the quarry
- It should be made sure that Kolaloa Gulch is not infilled with any materials during mining operations
- The public should be aware of materials that may have been discarded during World War II, in particular, pits containing refuse materials and potentially unexploded ordinance
- Scientific Consultant Services, Inc. should include Robert Hill in the consultation process, as according to Dr. Fisher, Hill is a foremost authority on the history of the Puunene Naval Air Station.

Note: See the email dated September 28, 2020, by Dave Gomes, General Manager of Hawaiian Cement on pages 39 and 51 of the current document.

In a subsequent telephone conversation on November 6, 2020, Mr. Gomes further explained that the roles for the buffers and the berms (see pages 39 and 51 of the current document).

Scientific Consultant Services, Inc. has included Robert Hill in the consultation process for the current CIA. His *mana 'o* (“opinions”) are presented in the Additional Written Response section of this document. Yucha and Hammatt (2020) have prepared an archaeological monitoring plan which includes the area in which Kihei Camp 3 (Camp K-3) is located (see Figure 9). Please see the relevant discussion in the Conclusions and Recommendations section concerning the treatment of World War II refuse materials and associated pit features.

In a telephone conversation between Mr. Gomes and the Ms. Dagher on November 23, 2020, Mr. Gomes stated that Alexander and Baldwin LLC has a reclamation plan in place, which was prepared with the intent to restore the property back for agricultural use so that HC&S could plant sugar cane once the quarry mining excavations were completed.

INFORMATION RELEASE FORM

I, the undersigned, personally participated in a virtual interview with Cathleen Dagher, B.A., of Scientific Consultant Services, Inc., via Zoom, on August 7, 2020

I understand that the information I have provided to Scientific Consultant Services, Inc., shall be submitted as part of a Cultural Impact Assessment report prepared in advance of the proposed Puunene Quarry Expansion Project. The proposed project area will be located in Pūlehu Nui Ahupua'a, Wailuku (Kula) District, Island of Maui, Hawai'i [TMK: (2) 3-8-004:001 por. and 002 por.]. This information will be subject to publication which will be submitted to the public for general review.

I have read the summary of the interview and the information is true and accurate to the best of my knowledge. By signing this release form, I am providing my approval for the release of the information to Scientific Consultant Services, Inc., for the purpose outlined above (i.e., making the contents of this interview available for publication to the general public).

Print Name: Scott Fisher

Signature: Scott G. Fisher

Release Dated: October 8th 2020

Figure 14: Dr. Scott Fisher's written permission for the publication of his statement to SCS, Inc.

LUCIENNE DE NAIE, VICE-PRESIDENT, MAUI TOMORROW FOUNDATION

Ms. de Naie was interviewed via Zoom on September 8, 2020, by SCS Senior Archaeologist Cathleen Dagher, B.A. Ms. de Naie granted permission for publication via an email dated November 11, 2020 (on file at SCS).

Ms. de Naie started the interview by stating she was glad they got the site visit in, because there was a huge fire the next day. She said it did not burn the quarry, but it did kind of burn the edges around it. It burned the existing baseyard – the area around the SOS Metals Island Recycling of Maui, Hawai‘i [now Schnitzer Steel], to the northwest of the Puunene Quarry. The fire burned about 1,000 acres of Mahi Pono farmland that are former sugarcane land where the sugarcane remnants and weeds haven’t been tilled or plowed into the soil. So, it’s just dried brush, basically.

Ms. de Naie reiterated that she really enjoyed the site visit. She further stated that Dave [Gomes, General Manager of Maui Cement] was great and very gracious and that Trevor Yucha [Project Manager, Cultural Surveys Hawai‘i] was very helpful. She, also, was very appreciative of the opportunity for Vernon [Kalanikau], Alohalani [Jade Smith], and herself to be able to participate in the site visit.

During the site visit, they looked at specific areas. They looked at Kolaloa Gulch and drove on the historic Upper Kihei Road [which bisects the Puunene Quarry]. They saw several pūnāwai [agricultural freshwater storage reservoirs] and portions of East Maui Irrigation’s (EMI’s) Lowrie ditch system. They drove over to the area where it is likely that the Kihei Camp 3 (Camp K-3) Plantation Village was located, Ms. de Naie observed some glass and pottery fragments on the ground surface, as did Mr. Yucha.

Ms. de Naie said that the first thing she noticed was that there seemed to be inconsistencies in terms of the level of review [archaeological coverage] that was done for the quarry because a number of the areas designated for impact were not covered in the Fuentes et al. (2014) archaeological inventory survey report. Trevor [Yucha] did indicate that he has been asked to conduct a form of archaeological coverage for Quarry Mining Site Increment 5 [see Figure 4], which is where the K-3 Village was located. Ms. de Naie adds that people always assume that because these lands were covered in sugarcane “there’s no more nothing” and they also assume “that no one ever lived here anyway because it’s so dry and terrible and this and that.” However, she said, they did discuss with Trevor [Yucha] and Dave [Gomes] the cultural importance of the gulches because even if people did not live along them, they often walked along them. So, there are traditional trails and stories associated with them. Trevor [Yucha] looked up the meaning of the name of Kolaloa Gulch [“much sexual excitement,” Pukui et al.

1974:116]. That is a very strange name, so it would be very worthwhile to try to find out any knowledge among traditional practitioners if there are other interpretations of that name and if there is a kaona [“hidden meaning,” Pukui and Elbert 1986: 130] about what that really means. The name of that gulch is an important cultural clue.

Ms. de Naie understands the mining operations “is not going to directly disturb the gulch.” During the site visit, Ms. de Naie walked a significant section of the gulch, as much as she could, starting from the historic Upper Kihei Road, she walked approximately 400 or 500 feet in each direction. It appeared to her that as she went further uphill, there were some beautiful rock formations. There were things that suggested to her that people could have utilized the gulch as a transport area because there were [geographical] markers identifying where you were and where you were going. It looked like the gulch had been silted-in over time from both the nearby fields and probably from upslope, as well. The bottom of the gulch was just full of this very, very loose, very, very fine dirt that was finer than the surrounding dirt. She had also walked out into the surrounding fields and examined the soil.

Those are some of the things that she was taught - you notice the type of soil, did the soil change, did the kinds of rock change. These are clues. While there is no water in the gulch, at present, Ms. de Naie thought it was obvious that the gulch still gets some flowing water because in the areas along the road, it is now shored-up with cement and rock-like buttresses. That shows her they need to protect the roadbed. So, there is currently water that flows in the gulch during storms and passes through drainage pipes under the road, to the downhill part of the Kolaloa Gulch. She doesn’t think the water flows over the road. Ms. de Naie said it is obvious the gulch would have some flow, because it originates on a mountain. Kolaloa Gulch, at one time, fed the Keālia Pond area. If you look on the old maps, the gulch ran all the way to Keālia Pond and it was one of those mauna [mountain] water sources. You had the streams from Pōhākea and Waikapū on the Mauna Kahālāwai-side and on the Haleakalā-side, you had this gulch and several other gulches that flowed towards the Keālia Pond. So, the gulch is kind of an important part of the cultural landscape, whether or not it had cultural modifications. So, the quarrying activity should definitely have protective buffers. They mentioned that they would, but she would like to reiterate that. It would be interesting to take core samples in those gulches just to see where they start and where they end. Ms. de Naie said she knows these guys don’t want to do any more archaeology but, maybe if they’re working on Quarry Mining Site Increment 5 [see Figure 4], if they’re having anyone going out there to do any trenching, they could have someone come in with a coring machine and take a couple of core samples to see what it looks like. That would be a recommendation from Ms. de Naie, who is a person that is a researcher with very, very deep roots in receiving instructions from kupuna in “how to observe natural areas and look for cultural things.” Those are her roots. Ms. de Naie never had an archaeology class, she took

one anthropology class in college, but she has spent hundreds, and hundreds, and hundreds of hours with Hawaiian people who have shared their mana‘o [ideas or thoughts] while working on cultural sites. She spent every Saturday for two years working at Honokōwai and Hanaka‘ō‘ō Valleys, in West Maui, with Maui Cultural Lands to locate, clear, and analyze archaeological sites. She has no credentials, other than that. She has no degrees, no nothing, but she does hope in some small way, since most of the people who shared this knowledge with her are no longer on this planet, but a few are, she does hope in some small way their mana‘o can get passed on. That is why she volunteers to be interviewed for some of these studies. She doesn’t pretend to be a Hawaiian cultural practitioner. She is not Hawaiian and it is not her culture. But she certainly can speak to what she has heard Hawaiians say they see as important things to know about their history when you are walking land and looking at land.

An example of a gulch that had changed through time is Kūlanihāko‘i Gulch, on Kīhei-side, in the Kula Kai area. Ms. de Naie walked this gulch with cultural practitioners, Auntie Lani and Uncle Brian Nae‘ole. Auntie Lani had told Ms. de Naie that she used to walk that gulch with her brother (Brian’s dad) and her dad, who had both worked for Kaonoulu Ranch. Auntie Lani said that Brian had ridden his horse down there, in Kūlanihāko‘i Gulch, and that she had walked in the gulch. Ms. de Naie relayed that both Auntie Lani and Uncle Brian were amazed at how deep Kūlanihāko‘i Gulch is now because, the big water has eroded the gulch away. They said, “Wow! When we were younger and we walked this in the ‘60s and ‘70s, you could reach up almost to the top of the [gulch] wall,” which was about 6 or 7 feet high and is now about 15 or 20 feet deep.

Ms. de Naie said she had a chance to witness the flooding of Kūlanihāko‘i Gulch a few years ago when she and her husband and a few friends walked up there to see what they thought might be a traditional quarry site. They got a phone call while they were walking in the gulch from a friend who lives in Kula that they had invited to come on the walk, but couldn’t come. The friend had called to tell them it was starting to rain in Kula and they were having terrible flooding in the gulch right by their house. He warned them that if they were still in the gulch, they should get out immediately! They got out of the gulch and about 15 minutes later, this wall of brown water came down. Ms. de Naie said there was not a cloud in the sky in Kīhei that day, it was bright and sunny. So, they could see how the gulch got scoured out.

Kolaloa Gulch, obviously, has not had that happen at that level. Instead, it probably had been gradually filling in as a result of all the wind – it's very windy there – and from the tilling that's been happening for years. Ms. de Naie's point is that the gulches can really shift and she has seen this, first hand.

During the Puunene Quarry site visit, they noticed an area that would be towards the Puunene Mill, to the north of the quarry. Ms. de Naie said they drove along the Upper Kihei Road and then they cut over to the [north] edge of the existing quarry site, probably along the edge Quarry Mining Site Increments 3 and 4 [see Figure 4]. There was a fence line there and Mahi Pono land was on the other side of the fence line. Trevor [Yucha] told them that the Lowrie Ditch, which is at the east end of the existing quarry, formed the eastern boundary of the quarry, separating the quarry from the Mahi Pono lands. Along that northern edge of the quarry boundary were areas that looked like a rock wall. They stopped and climbed up there in order to take a closer look and to take photographs. Ms. de Naie said this was not a formally constructed wall, but there appeared to be evidence of some stacking. The stacked rocks did not appear to be the result of bulldozer push, as there was no evidence of scarring. The stacked rocks appeared to have been there a long time and were located along the edge of a ridge. The feature was too irregular to be a wall, even a disturbed wall. It appeared to be more like a series of intermittent areas of naturally occurring pohaku [rock] formations with loosely stacked rocks filling in between them, which Ms. de Naie interpreted as a cultural feature. However, it is not located in close proximity to the quarry. You just hate for things to be dismissed because the prevailing opinion is that “oh, no one ever lived there” and “no one ever used it because it was too dry,” or “only the haoles came in and made it productive.” Ms. de Naie would like to get rid of all those stories and look at what we see and see if it tells us a different story. Ms. de Naie suggests that this feature could have contained shelters for people who walked along that ridge, but she wasn’t there long enough to really tell a lot about it.

Before all of the fields were altered by all of the grazing, that was a dryland forest out there. There are accounts from the 1820s, or so, talking about the isthmus and how it has these sparse shrubs and these different looking trees, which were *wiliwili* trees [*Erythrina sandwicensis*]. So, this area functioned as a traditional dryland forest. The vegetation wasn’t thick, it was sparse. And then when all of the grazing animals came in they let all these goats and sheep roam the land and they modified the landscape by eating the naturally occurring vegetation. In one of the historic accounts Ms. de Naie read from the early part of the 1800s, someone was fearful that the deforestation was going to lead to dust storms and erosion because the goats and sheep were just chewing up everything and that area was really dry.

These were totally western comments, but one of the things her Hawaiian kumu always taught her was, “do not to look at a place like it is today, or even the way it was the last 50 years of your lifetime, but go back.” 500 years ago you could have had different water patterns, different wind patterns, and different vegetation patterns. It could have been a very different landscape. Not necessarily as different as day and night, but somewhere in between. Ms. de Naie references Michael Kolb’s (1997) work on the Hawaiian Homelands in Kahikinui, but there were very different plant communities identified in his core samples, pollen, and phytoliths that dated back to the 1300s and 1400s, from what you see out there today. There were big loulu [*Pritchardia spp.*] forests and so forth. We don’t see that now and may never see it again. It was very different times.

Ms. de Naie references data collected from core samples at Keālia Pond that date back 5,000 years ago. The plant data collected there originated in the mountains on East and West Maui, because the water rushed in and carried those pollens and so forth. There were just a lot of things growing where we see barren, empty, slopes and barren, empty fields. Ms. de Naie states that she just thinks it’s important that this information is brought up, even if the Hawaiians don’t bring it up, that it be brought up through Hawaiians who have passed on their knowledge to non-Hawaiians.

Ms. de Naie also noticed during the site visit, as they were driving back near Quarry Mining Site Increments 3 and 4 [see Figure 4] along the Lowrie Ditch, on the Mahi Pono-side of the Lowrie Ditch, there were quite a lot of the native tree tobacco [*Nicotiana glauca*] that is used as the host habitat for the *Manduca* [spp.] [an endemic moth.]. Some of the native tree tobacco [*Nicotiana glauca*] was growing on Quarry Mining Site Increment 4 [see Figure 4], too, as you got nearer to Kolaloa Gulch.

Ms. de Naie mentioned that she didn’t know if this information was noted in any botanical survey. It certainly wasn’t mentioned in the Fuentes et al. (2014) archaeological inventory survey report. Ms. de Naie pointed out that at the time the inventory survey was conducted, the areas under survey were in active sugarcane fields and that it appeared the only place the test units were placed was under the cane haul roads. Trevor [Yucha] pointed out that testing in the cane roads provided a good representative sample of cultural materials. However, Ms. de Naie has found that even in cultivated areas, that remnants of cultural activities have been identified in subsurface contexts.

Ms. de Naie mentions that Theresa Donham found artifacts, including an adze blank, some sort of pounding stone, and flakes, in subsurface contexts in the old pineapple fields above Māliko Gulch. Ms. de Naie has always urged that agricultural areas not just be written off as “nothing’s there,” as that is not necessarily true. Ms. de Naie mentions Wes Wong’s dad who used to be our State Forester. Mr. Wong had a huge collection of Hawaiian artifacts that he had collected from the sugarcane fields. Ms. de Naie said the she, Vernon, and Alohalani all said that the monitoring that was going to be conducted at the quarry be conducted as the soil is removed. So, Trevor [Yucha] explained that as the soil was being removed, there would be an archaeological monitor on site watching the excavation. Vernon [Kalanikau] asked if that dirt would be screened. Trevor [Yucha] wasn’t sure. Ms. de Naie expressed her opinion that during the quarry excavations any sub-surface features that were present would not be seen. She adds that over in Wai‘ale, SCS did come across one subsurface hearth. The ground surface had been previously altered, as it had been under sugarcane at one time and later it was grazing land. That area had terrain similar to the terrain in the vicinity of the quarry. Ms. de Naie adds that at the Grand Wailea, burials were encountered well over two meters deep, they were about 10 to 15 feet deep. These were intentional burials, placed in prepared burial pits with capstones. Ms. de Naie believes subsurface cultural features are more likely to be encountered in these deeper deposits in areas that have been subjected to shifting weather patterns, i.e., in areas where there have been hurricanes, extreme flooding, etc.

Ms. de Naie stated that she has concerns as an historical researcher and as a person who reads a lot of reports and knows what gets found under different conditions. Ms. de Naie would like it on record that for this project, monitoring the dirt by sight only [i.e., not screening the excavated materials], it is possible subsurface cultural features will be missed. We have no guarantees. There are no stories to say whether there are or whether there aren’t any subsurface cultural features. The quarry has been in operation for years and no one knows if subsurface features were present because monitoring was not conducted in the old days. That’s more of a new thing.

Concerns: While Ms. de Naie did not express any concerns pertaining to traditional cultural practices, she made the following suggestions:

- In an effort to know more about the K-3 plantation village, Ms. de Naie suggested excavation in the form of trenches there
- An effort should be made to contact the families of the former residents, as it is difficult for the public and families who might have stories to learn when development is planned

- Core samples or mechanical trenching in Kolaloa Gulch should be conducted to examine the depths and types of deposits
- Excavated materials from the archaeological monitoring should be screened
- Buffers should be in place during mining activities in an effort to protect Kolaloa Gulch
- In effort to know more about the meaning of the name of Kolaloa Gulch, Ms. de Naie suggested contacting Kumu Kī‘ope Raymond, formerly of the Hawaiian Studies Program Department of Humanities at the University of Hawaii, Maui College, or John Osorio, Dean of the University of Hawai‘i at Mānoa, Hawai‘inuiākea School of Hawaiian Knowledge.

Note: SCS followed-up on Ms. de Naie’s suggestions:

In an effort to obtain information on the K-3 Plantation Village, SCS checked Maui News Index, which was not available online. SCS contacted the Maui Historical Society, Bailey Houses Museum via telephone. The Bailey House Museum voice message indicated they were closed indefinitely due to the COVID-19 epidemic. SCS contacted via email Darla Palmer-Ellingson, Former Director, Jill Pridemore, Director; and Holly Boland, Assistant Director of the Alexander & Baldwin Sugar Museum regarding its registry of former plantation camp residents. In addition, SCS contacted Randal Moore, former HC&S employee.

Yucha and Hammatt (2020) prepared an archaeological monitoring plan for mining operations conducted in Quarry Mining Site Increments 2 and 4. Further determination recommendations for archaeological coverage (screening of excavated materials and conducting core sampling in Kolaloa Gulch) will be made by the State Historic Preservation Division.

In response to Ms. de Naie’s suggestion for protective buffers during mining operations, Dave Gomes provided a comment dated September 28, 2020 and previously referenced on pages 39 and 51 of this report. In a subsequent telephone conversation from November 6, 2020, he gave a further explanation referenced on pages 39 and 51.

In an effort to find out more about the deeper poetic meaning of the name of Kolaloa Gulch, SCS contacted Kumu Kī‘ope Raymond, formerly of the Hawaiian Studies Program in the Department of Humanities at the University of Hawaii, Maui College, Kumu Hokulani Holt, Director of Ka Hikina O Ka Lā Hawai‘i Papa O Ke Ao, University of Hawaii Maui College, and John Osorio, Dean of the University of Hawai‘i at Mānoa, Hawai‘inuiākea School of Hawaiian Knowledge. SCS sent an email to Dean Osorio on September 27, 2020, requesting the same information. To date, SCS has not received a response from Dean Osorio. Kumu Holt’s and Kumu Raymond’s responses are presented below:

In response to an email SCS sent Ms.de Naie on November 11, 2020, requesting her permission to include her interview summary in this report, she stated in an email of the same date, “YOU HAVE MY PERMISSION. MAHALO.”

KUMU HOKULANI HOLT, DIRECTOR, KA HIKINA O KA LĀ HAWAII, PAPA O KE AO, UNIVERSITY OF HAWAII MAUI COLLEGE

Kumu Holt was asked via an email dated September 8, 2020, if she had information about the poetic meaning or Hawaiian mythology associated with Kolaloa Gulch and the intent of its meaning “much sexual excitement” (Pukui et al. 1974:116). Kumu Holt responded via email on the same day, “I do not know the true translation for this word. You can look it up and figure out whether you like that definition for kola or one of the others.” In a subsequent email dated September 9, 2020, Kumu Holt was asked if she knew if Kolaloa Gulch is associated with any Hawaiian legends or song. In an email dated from the same day, she responded, “No I don't.”

KUMU KI‘OPE RAYMOND, FORMERLY OF THE HAWAIIAN STUDIES PROGRAM DEPARTMENT OF HUMANITIES UNIVERSITY OF HAWAII, MAUI COLLEGE

Kumu Raymond was asked the same question via an email dated September 8, 2020. On September 9, 2020, he provided the response below:

Aloha Cathy,

Mahalo for asking me to comment. I think highly of Lucienne and am honored she referred you to me.

The word kola has numerous meanings; not only in the Pukui-Elbert dictionary but also Andrews and Parker. It would take some research and time to come up with possible translations, though, certainly, “much sexual excitement” as Pukui-Elbert translates is one of them. The word “much” is added when the suffix “loa” is added to the word “kola”. I have not seen any references, that I recall, that speak to why it would be so named.

Kama‘oma‘o is the plains area mentioned in Kamakau’s Ka Po‘e Kahiko: The People of Old when describing one (of many) area [sic] where spirits wander. This too, would need, further research regarding impact on Hawaiians today who might feel pain if the area where these spirits wander is disturbed.

Mahalo,

Ki‘ope

SCS followed up on Kumu Raymond's suggestions and consulted Andrews (1865), whose work was subsequently revised by Reverend Henry H. Parker (1922).

Andrews (1865) defines “*kola*” as:

KO-LA

- s. See KOOLA. The tail feathers of a cock
- 2. Kola is written for kohola, the whale; nui na lawaia i kii i na ia a pau, koe nae ke kola.

KO-LA

- v. To spread out; to grow; to enlarge; to be thick together; to extend beyond, as the tail of a cock.

- 2. To be excited, as the animal passions.

And

KO-LA

adj. Unripe; used in reference to bananas put into the ground which do not ripen.

Parker (1922) defines Kola as:

Kola (kō'-la), adj.

- 1. Hard; rigid.
- 2. Unripe; said of any fruit which can not be ripened.

Kola (kō'-la), n.

- 1. The tail feathers of a cock.
- 2. Sexual excitement.
- 3. A wedge; a cleat.

and:

Kola (kō'-la), v.

1. To be spread out; to grow; to be enlarged; to be thick together; to extend beyond, as the tail of a cock.

2. To be excited, as the animal passions.

ADDITIONAL WRITTEN RESPONSE

Following upon Dr. Scott Fisher's suggestion, SCS obtained an additional written commentary by archeologist Robert Hill, B.A. His response is reproduced below.

ROBERT HILL, ARCHAEOLOGIST

Regarding: Traditional Background

Hawaiian Cement Facility, Pulehu Nui Ahupua'a, Maui.

Being a portion of Royal Patent 8140, Land Commission Award 5230 to Keaweamahi.

PULEHU NUI 17, Project Year 2020.

Pulehu Nui Ahupua'a

Hawaiian Cement Quarry Mining Site expansion at the Kolaloa Gulch.

Nearest traditional populations:

Native Hawaiian settlements were established at the shoreline of Ka'ono'ulu Ahupua'a, where the intermittent stream named Kūlanihāko'i flowed. A system of three fishponds were constructed here. [Kō'ie'ie fishpond investigation; Kikuchi, W.K. 1973. Hawaiian Aquacultural Systems. Thesis, University of Arizona. 229 pp.]

Early reference to the place-name "Kalepolepo."

Missionary Herald, For the Year 1829, Vol. XXV (25),

Boston, Crocker and Brewster, No. 47, W A. St.

"Tour Around Maui"

[An expedition by William Richards, Lorrin Andrews and Jonathan Green, which commenced on Monday, August 18, 1828, when the group left Lahaina to examine the government schools of the island of Maui. After completing a circuit of East Maui, the group stopped at Kalepolepo.]

"On August 29, the large canoe, which we regarded as most safe [departed Honua'ula]. About 8 o'clock, a.m., we arrived at Kalepolepo, a small village, on the neck of land which unites East and West Maui. Here we examined a small school. This concluded our examinations, and we soon

set off, by water, for Lahaina. We were now about twenty miles from home. We crossed, soon after our departure, a very spacious bay [Ma‘alaea a], not without apprehension of danger, as the wind became exceedingly strong, before we reached the opposite shore. We had a pleasant and prosperous passage, and, about three o'clock, p.m., reached Lahaina" (pp 250).

[David Malo was ordained to lead a church at the ocean in Kēōkea Ahupua‘a, as well as the Haleakala Church in Kēōkea Mauka.]

Missionary Herald, For the Year 1853

As received in Boston, under "Recent Intelligence" for January 1853:

"On the 2nd of September [1852] David Malo was ordained pastor of the church at Kēōkea, Kula. The services were as follows: - Introductory prayer by Mr. Dwight of Molokai, sermon by Mr. Green of Makawao, consecrating prayer and charge to the pastor by Mr. Baldwin of Lahaina; right hand of fellowship by Mr. Kauwealoha of Kauipale; charge to the people by Mr. Alexander of Lahainaluna; benediction by the new pastor."

Traditional and Historic Land Use:

The project site is located within Pulehu Nui Ahupua‘a, within the isthmus connecting Kahului and Ma‘alaea. The traditional translation for Pulehu Nui is given as "Great ash mound." [Ulukau Place Names Collection]

Other Traditional Land Use:

According to Theresa Donham, (consulted July 2001, during the use of a portion of the former NAS Puunene site as a transportation hub of the helicopter service to and from Kaho‘olawe Island during the UXB clearance project); the traditional activities of the region of the former Naval Station Puunene were confined to the use of trails used to traverse the region known as Ka-ma‘oma‘o. The threat of encountering wandering spirits of the dead was enough to keep most people from the region.

ESTABLISHMENT PERIOD

Naval Air Station Puunene

Historic Land Use:

In 1938, the Civilian Aviation Authority (C.A.A.) of the Territory of Hawaii called for a new airport for the island of Maui; as well as closing the airport facility at Ma‘alaea a Bay. In that same year, C.A.A. Engineer D. F. Balch approved new plans for a new civilian airport. Early in 1940, representatives of the U.S. Navy arrived on Maui to inspect the site of the new aircraft landing field planned at Puunene. By June 1940, the

Pacific Naval Air Base contractors had begun building the military quarters and messing facilities required to support the U.S. Navy operations at NAS Puunene. ["Building the Navy's Bases in World War II," Bureau of Yards and Docks, Civil Engineer Corps 1940-1946, Vol. II, U.S. Government Printing Office, Washington, D.C.] The full-scale expansion of the base to accommodate a U.S. Navy Air Group, meant the addition of facilities for up to 100 aircraft and 5,000 men. The number of civilians required to work on the new air base was also expected to be greater than originally forecast.

At the outbreak of WWII, all Japanese-Americans living in Camp Six, located close to an access gate to NAS Puunene, were relocated to other plantation camps away from the Air Station. In time, the entire camp was moved away from the air base. [Interview with John Arisumi, in "Fire on the Land," archaeological survey of NAS Puunene by Myra Tomonari-Tuggle, November 2001, International Archaeological Research Institute, Inc.]

NEXT: Plan View of NAS PUUNENE

History of the Naval Air Base NAS Puunene. (continued)

The resident population of the air base at Puunene changed with the number of work projects undertaken at the site. Pacific Naval Air Base construction contractors arrived in mid-1940 to construct Navy-designed housing for the air base personnel. These contractors were assisted by heavy equipment operators from the Hawaiian Commercial & Sugar Company. In December 1941, after war was declared, [following the Japanese attack at Pearl Harbor], different U.S. Navy Construction Battalions (C. B. or "SeaBees") were assigned to the various work projects on each of the Hawaiian Islands.

By March 1942, engineers from the U.S. Army based on Oahu had taken over all work at NAS Puunene. This included the relocation of a plantation camp away from the area of the Naval Air Station, to a location closer to the Puunene Mill, where other plantation camps were located.

In February 1943, the 39th SeaBees arrived at Maui. Top priority was given to the construction of a rock crusher, in the vicinity of the NAS, from which volcanic rock could be crushed to cinder, and used to pave the new runways at NAS Puunene. [NOTE: construction cinder for NAS Puunene came from Pu'u Hele, a small cinder cone at Ma'alaea Bay.] The 39th C.B.s left Maui in September 1944, for the combat zone of the Marianas Islands. In March 1943, the 48th SeaBees arrived on Maui. This construction battalion built the runways and taxiways for the new airfield at Puunene, as well as the

water and sewer systems of the camp. They also rotated into duty stations in the combat zone of the Marianas Islands [most notably Guam, where they built a hospital.]. The 48th SeaBees were replaced by the 127th Seabees in June 1944. The 127th moved into the combat area of the Philippine Islands in May 1945. This construction battalion built additional facilities to add more personnel to NAS Puunene, including special barracks for the U.S. Navy WAVES who arrived at NAS Puunene in December 1944.

DEVELOPMENT PERIOD

With the arrival of thousands of servicemen at the air base at Puunene, a twice-monthly newspaper was started. The Navy published the NAS Puunene "Island Breeze." NAS Puunene was not only populated by aviators and U.S. Navy staff, but were joined in late 1944 by U.S. Navy WAVES (Women Accepted for Volunteer Emergency Services) as an aid to manpower shortages caused by the wartime draft. Civilians were also essential to the war effort at the military air bases on Maui. According to the NAS Puunene records, as of 1 July 1945, eight WAVE officers and 92 WAVE enlisted personnel were based there, out of the 565 officers and 2,798 enlisted personnel remaining on the base. Aircraft on hand on the eve of the end of WWII: 271.

DISESTABLISHMENT

The last year of WWII, in 1945, the air base continued to function as a training center for aircraft carrier air groups, as the aircrews completed additional combat training. By July 1945, NAS Puunene had on hand 565 officers and 2,798 enlisted men. WAVE women numbered 8 officers and 92 enlisted. Once the two atomic bombs had been deployed in Japan in August 1945, some equipment was moved to the newer, larger and more modern Naval Air Station Kahului. By September, after the surrender of Japan, the air base had been marked for closure. The formal deactivation of the base occurred 1 November 1945.

POST-WAR

Navy housing constructed during the war in "Area A" of the base plan view map, was converted to civilian plantation housing after the NAS Puunene base was abandoned. This became known as "Airport Camp." In some cases, civilians were allowed to purchase these structures and move them to lots at Kahului, where fee simple lots were sold by Alexander & Baldwin after the war.

Concerns: Mr. Hill did not provide any concerns.

CULTURAL RESOURCES IDENTIFIED

As stated elsewhere in this document, the purpose of a CIA is to identify the possibility of on-going cultural activities and resources within a project area, or its vicinity, and then to assess the potential for impacts on these cultural resources. The OEQC Guidelines (1997:11) state that the geographic extent of the CIA study area should be greater than the area over which the proposed project extends in order to ensure that potentially vulnerable cultural practices occurring outside of it are included in the assessment. Thus, this CIA considers the entire *ahupua‘a* in addition to the project area more narrowly in identifying the relevant cultural resources.

During the consultation process, two types of botanical cultural resources were identified on lands leased by Hawaiian Cement for the quarry: ‘*uhaloa* (*Waltheria* sp.) and tree tobacco (*Nicotiana glauca*). ‘*Uhaloa* was found to be plentiful throughout the area, while tree tobacco plants were scattered on both the Mahi Pono property and the land leased by Hawaiian Cement.

‘*Uhaloa*, also known as *hala ‘uhaloa*, *‘ala ‘ala pū loa*, *hi ‘a loa* and *kanaka loa*, is a small shrub that is native to tropical America (Neal 1965:575). It has traditionally been used by Hawaiians as a medicinal plant. According to Neal (1965:575), “the bitter root is used medicinally by the Hawaiians, for it has the same effect as aspirin, for example, the juice relieves sore throats.” Pukui and Elbert (1986: 363) state that the “leaves and inner bark of the root are... used for tea or chewed to relieve sore throat.” According to legend, the ‘*uhaloa* plant is one of the many plants in which Kamapua‘a, the pig demi-god, manifests himself (Pukui and Elbert 1986: 363).

Tree tobacco, also known as wild tobacco, *makahala*, and *paka*, is a smooth shrub or a small tree that is native to Argentina and Uruguay, although it also grows wild in Hawai‘i (Neal 1965:751). This plant has no known traditional use to Hawaiians and is considered to be poisonous to man and several species of mammals and birds (Neal 1965:571).

Following Pukui and Elbert (1986:313, 376), “*Wahi Pana*” has been defined on page 23 of this document as “celebrated or noted places or landmarks of historical significance.” Although the boundaries of the Kama‘oma‘o Plains have not been definitively ascertained, the lands currently leased by Hawaiian Cement for the Puunene Quarry have been identified as possibly within them. The larger Kama‘oma‘o Plains are considered *ao kuewa*, or “realm of the homeless or wandering souls” (Kamakau 1987:47).

According to Slaiby and Mitchell (2003:10), a “cultural landscape,” as currently used by the U.S. National Park Service, is defined as:

a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. (Cultural Resource Management Guidelines, NPS-28).

While not located within the formal boundaries of NAS, the Hawaiian Cement quarry at Puunene is on adjacent lands that have been associated with WWII military activities.

CULTURAL IMPACT ASSESSMENT SUMMARY

This CIA was prepared in accordance with the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). The Guidelines recommend that a CIA consult relevant individuals and organizations, conduct ethnographic interviews and archival and historical research, identify cultural resources and practices located within the project area or in proximity, and finally, assess the impact of the proposed action and its mitigation measures on the cultural practices or resources identified.

Letters of inquiry were sent to 41 individuals and organizations that may have knowledge or information pertaining to the collection of cultural resources and/or practices currently, or previously, conducted in the vicinity of the proposed project area. In addition, a Cultural Impact Assessment Notice was published in the November 2019 issue of the OHA newsletter, *Ka Wai Ola* (see Appendix C).

The consultation process resulted in SCS receiving responses from 17 individuals via e-mail, and conducting three interviews. Two of the interviews were conducted via telephone, and one was conducted via Zoom. Permission to include the interview summaries in this document was obtained from two of the individuals, while the third did not respond to SCS's attempts to acquire permission. In addition, a site visit was conducted on the Puunene Quarry, which was attended by three of the cultural participants.

The information obtained during the consultation process indicates that the land leased by Hawaiian Cement for the Puunene Quarry is located in an area rich with legends and customary activities spanning the Pre-Contact Period, the Plantation Era of the Post-Contact Period, and the World War II Era, and currently contains a native plant traditionally used for medicinal purposes. However, based on historical research, the negative results of archaeological studies previously conducted within and near the Puunene Quarry, and the above listed responses, it is reasonable to conclude that there is no evidence of traditional cultural practices related to the gathering of, or seeking access to, resources (i.e., medicinal plants), or other customary activities (i.e., burials) in the currently proposed quarry expansion area or its adjacent lands leased by Hawaiian Cement for Puunene Quarry.

Based on the information obtained during the consultation process portion of the current CIA, ground altering activities associated with the proposed Puunene Quarry Expansion Project may have the potential to impact the landscape (i.e., Kolaloa Gulch, the drainage within Kolaloa Gulch, and the excavated quarry lands will be an eyesore to the community). Such activities may also impact remnants of previously conducted cultural materials (i.e., traditional and historic artifacts, traditional Hawaiian burials, and remnants of NAS Puunene activities) encountered within subsurface contexts and in Kolaloa Gulch during quarrying activities. Note that the archaeological work conducted within the Puunene Quarry (Kennedy 1990, Rotunno-Hazuka et al. 2011, Fuentes et al. 2015) yielded negative results (see the Previous Archaeology section), and that the section of Kolaloa Gulch adjacent to Puunene Quarry has not been subjected to an archaeological inventory survey.

CONCLUSIONS AND RECOMMENDATIONS

The findings of the current CIA did not identify any traditional cultural practices previously or currently conducted within the Puunene Quarry Expansion project area, nor were valued cultural and natural resources identified within the proposed expansion project area. This determination has been substantiated by traditional and historical background, summarized results of prior archaeological studies in the quarry, and in the concerns expressed by the cultural informants during the consultation process of the current CIA. Thus, the current analysis finds that specific cultural activities are not currently conducted on lands within the Puunene Quarry Expansion project area which may potentially be impacted by the proposed project.

However, the consultation process did identify specific concerns pertaining to the potential for human burials and cultural materials associated with the continuous use of the area from the Pre-Contact Period through the Plantation Era (including Camp K-3), and WWII Era that may still be present in subsurface contexts. The archaeological monitoring plan prepared by Yucha and Hammatt (2020) has been prepared to document and provide appropriate recordation and treatment of any cultural properties inadvertently encountered in subsurface contexts during ground altering activities associated with the quarry expansion project. Thus, it is recommended the tenets specified in the archaeological monitoring plan (Yucha and Hammatt 2020) are followed.

Other concerns identified during the consultation process pertain to potential impacts to Kolaloa Gulch, its drainage, and traditional and historic cultural materials, including human burials which may be present in the gulch. Efforts to protect them are currently in place. General Manager of Hawaiian Cement Dave Gomes stated that there are access roads on either side of Kolaloa Gulch and berms are located between the roads created to keep the HC&S trucks from entering the gulch. The berms will be kept in place to act as buffers between quarry operations and the gulch. In a subsequent conversation Mr. Gomes explained that the existing roads and berms are standard federal regulatory safety measures implemented to prevent people from falling into the quarry.

The final concern identified through the CIA consultation process pertained to the excavated quarry being perceived as an eye-sore. As part of their lease agreement, Hawaiian Cement has a reclamation plan, which is in place to return the property back for agricultural use once the quarry mining excavations have been completed. The plan was prepared with the intent was to restore the property back for agricultural use so that HC&S could plant sugar cane again.

It is recommended that the measures specified in the reclamation plan prepared by Alexander and Baldwin LLC are followed.

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APPENDIX A: EXAMPLE LETTER OF INQUIRY

Aloha kāua:

At the request of David Gomes, General Manager of Hawaiian Cement, Scientific Consultant Services, Inc. (SCS) is preparing a Cultural Impact Assessment (CIA) in advance of the proposed Puunene Quarry Expansion Project. The proposed project area will be located in Pūlehu Nui Ahupua`a, Wailuku (Kula) District, Island of Maui, Hawai`i [TMK: (2) 3-8-004:001 por. and 002 por.]. The 336-acre project area is situated on lands owned by Alexander and Baldwin LLC.

The purpose of this Cultural Impact Assessment (CIA) is to identify and understand the importance of any traditional Hawaiian and/or historic cultural resources or traditional cultural practices associated with the proposed project area and the surrounding ahupua`a. In an effort to promote responsible decision-making, the CIA will gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about the area in order to assess potential impacts to the cultural resources, cultural practices and beliefs identified as a result of the proposed Project. We are seeking your kōkua and guidance regarding the following aspects of our study:

- General history as well as present and past land use of the project area
- Knowledge of cultural resources which may be impacted by future development of the project area (i.e. historic and archaeological sites, as well as burials)
- Knowledge of traditional gathering practices in the project area, both past and ongoing
- Cultural associations of the project area, such as legends, traditional uses and beliefs
- Referrals of kūpuna or elders and kama`āina who might be willing to share their cultural knowledge of the project area and the surrounding ahupua`a
- Due to the sensitive nature regarding iwi kūpuna or ancestral remains discovered, mana`o regarding nā iwi kūpuna will be greatly appreciated
- Any other cultural concerns the community has related to Hawaiian cultural practices within or in the vicinity of the project area.

Enclosed are maps showing the proposed project area. I invite you to contact me at the Scientific Consultant Services, Honolulu, office at (808) 597-1182 or send me an email at cathy@scshawaii.com, within 30 days, with any information or recommendations concerning this Cultural Impact Assessment. I would greatly appreciate hearing from you!

Mahalo and Aloha,



Cathleen Dagher
Senior Archaeologist
Enclosures (3)

APPENDIX B: EXAMPLE FOLLOW-UP LETTER

Aloha kāua,

This is our follow-up letter to our October 16, 2019, letter which was in compliance with the statutory requirements of the State of Hawai‘i Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law, and in accordance with the State of Hawai‘i Department of Health’s Office of Environmental Quality Control (OEQC) Guidelines for Assessing Cultural Impacts as adopted by the Environmental Council, State of Hawai‘i, on November 19, 1997.

At the request of David Gomes, General Manager of Hawaiian Cement, Scientific Consultant Services, Inc. (SCS) is preparing a Cultural Impact Assessment (CIA) in advance of the proposed Puunene Quarry Expansion Project. The proposed project consists of expanding an existing and active quarry located in Pūlehu Nui Ahupua‘a, Wailuku (Kula) District, Island of Maui, Hawai‘i [TMK: (2) 3-8-004:001 por. and 002 por.]. The 336-acre project area is situated on lands owned by Alexander and Baldwin LLC.

The purpose of this Cultural Impact Assessment (CIA) is to identify and understand the importance of any traditional Hawaiian and/or historic cultural resources or traditional cultural practices associated with the project area and the surrounding ahupua‘a. In an effort to promote responsible decision-making, the CIA will gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about the area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the proposed project. We are seeking your kōkua and guidance regarding the following aspects of our study:

- General history as well as present and past land use of the project area
- Knowledge of cultural resources which may be impacted by future development of the project area (i.e. historic and archaeological sites, as well as burials)
- Knowledge of traditional gathering practices in the project area, both past and ongoing Cultural associations of the project area, such as legends, traditional uses and beliefs
- Referrals of kūpuna or elders and kama‘āina who might be willing to share their cultural knowledge of the project area and the surrounding ahupua‘a
- Due to the sensitive nature regarding iwi kūpuna or ancestral remains discovered, mana‘o regarding nā iwi kūpuna will be greatly appreciated
- Any other cultural concerns the community has related to Hawaiian cultural practices within or in the vicinity of the project area.

The CIA is in compliance with the Hawai‘i Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law and in accordance with the State of Hawai‘i Department of Health’s Office of Environmental Quality Control (OEQC) Guidelines for Assessing Cultural Impacts as adopted by the Environmental Council, State of Hawai‘i on November 19, 1997 (and revised in 2012).

According to the Guidelines for Assessing Cultural Impacts (Office of Environmental Quality Control 2012:12):

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs...The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural which support such cultural beliefs...

Please contact me within 30 days at (808) 597-1182 or via e-mail (cathy@scshawaii.com) with any information you would like to share or recommendations concerning this Cultural Impact Assessment.

Sincerely yours,



Cathleen Dagher
Senior Archaeologist

APPENDIX C: CIA NOTICE PUBLISHED IN THE NOVEMBER 2019 ISSUE OF KA
WAIOLA

**BURIAL NOTICE: HALEWAI'OLU,
HONOLULU AHUPUA'A
O'AHU, HAWAII**

NOTICE TO INTERESTED PARTIES IS HEREBY GIVEN that human skeletal remains were identified by Cultural Surveys Hawai'i, Inc. during the course of an archaeological inventory survey related to the Halewai'olu Senior Residences, Honolulu Ahupua'a, Honolulu (Kona) District, O'ahu, TMK: [1] 1-7-060:120.

Following the procedures of Hawai'i Revised Statutes (HRS) Section 6E-43, and Hawai'i Administrative Rules (HAR) Chapter 13-300, these remains are considered "previously identified." Based on the context of the finds, they are over 50 years old and most likely Native Hawaiian.

Background research indicates that this burial was located in the 'ili of Kala wahine, within the boundaries of a Land Commission Award (LCA) to Huanu for Lahilani, daughter of Francisco Manini (Francisco Marin). On an 1871 Lyons map this particular award is identified as LCA 3:189; on an 1893 Dodge and Wall map it is identified as LCA 2938. Nearby LCAs include an award to Kaukoke (identified variously as LCA 2:1025 'Āpana 3 and LCA 11082), an award to Makahopu (LCA 141-2), and an award to Keikueni no Makahopu (LCA 141-3).

The project proponent is the City and County of Honolulu—contact the Department of Land Management, ATTN: Director,

558 S. King Street, Honolulu, Hawai'i 96813 [Tel: (808) 768-4277].

The project proponent has proposed preservation in place for these remains; however, the decision to preserve in place or relocate these previously identified human remains shall be made by the O'ahu Island Burial Council in consultation with the State Historic Preservation Division (SHPD) and any recognized lineal and/or cultural descendants, per the requirements of HAR Section 13-300-33. Appropriate treatment shall occur in accordance with HAR Section 13-300-38.

All persons having any knowledge of the identity or history of these human remains are requested to immediately contact Ms. Regina Hilo, SHPD Burial Site Specialist, at 601 Kamokila Boulevard, Room 555, Kapolei, Hawai'i 96707 [Tel: (808) 692-8015, Fax: (808) 692-8020, Email: Regina.Hilo@hawaii.gov].

All interested parties shall respond within thirty (30) days of this notice and file descendants claim forms and/or provide information to the SHPD adequately demonstrating lineal descent from these designated burials or cultural descent from ancestors buried in the same ahupua'a (district).

ĪAO VALLEY

Scientific Consultant Services, Inc. (SCS) is preparing a Cultural Impact Assessment for the 'Īao Valley Master Plan Project. The area of focus consists of lands owned by the State of Hawai'i, the County of Maui, and the Hawai'i Nature Center in 'Īao Valley, Wailuku Ahupua'a, Wailuku District, Island

of Maui, Hawai'i [TMK: (2) 3-3-003:005, 006, 008, 012, 013, and 019]. SCS is seeking information on cultural resources and traditional cultural practices, previously or currently, conducted within or near the 336-acre proposed project area, located within Pūlehu Nui Ahupua'a, Wailuku (Kula Moku) District, Island of Maui, Hawai'i [TMK: (2) 3-8-004:001 por. and 002 por.]. Please respond within 30 days to Cathleen Dagher, Senior Archaeologist, at (808) 597-1182 or via email (cathy@scs-hawaii.com).

LAHAINA

Scientific Consultant Services, Inc. (SCS) is preparing a Cultural Impact Assessment in advance of the proposed Lahaina, Front Street Sidewalk, Railing and Seawall Project. We are seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed project area, located along the southwest (ma kai) edge of Front Street, from Lahainaluna Road to just north of Dickenson Street and from Baker Street to just south of Pāpalaua Street, in Historic Lahaina Town, Paunau Ahupua'a, Lahaina (Lāhainā) District, Maui Island, Hawai'i [TMK: (2) 4-6009 and 4-5-002]. The proposed project area corridor is located on lands owned by the County of Maui. The project area is within the Lahaina National Historic Landmark, National Park Service (NPS reference number 66000302) (State Site 50-50-03-3001).

PU'UNENE QUARRY

Scientific Consultant Services, Inc. (SCS) is preparing a Cultural Impact Assessment (CIA) in advance of the proposed Pu'unene Quarry Expansion Project. SCS is seek-

ing information on cultural resources and traditional cultural practices, previously or currently, conducted within or near the 336-acre proposed project area, located within Pūlehu Nui Ahupua'a, Wailuku (Kula Moku) District, Island of Maui, Hawai'i [TMK: (2) 3-8-004:001 por. and 002 por.]. Please respond within 30 days to Cathleen Dagher, Senior Archaeologist, at (808) 597-1182.

**DEPARTMENT OF DEFENSE
INSTRUCTION (DODI) 4710.03:
CONSULTATION WITH NATIVE
HAWAIIAN ORGANIZA-
TIONS (UPDATE PLANNED)**

The Department of Defense (DoD) is in the beginning stages of updating its consultation policy titled, Department of Defense Instruction (DoDI) 4710.03: Consultation With Native Hawaiian Organizations, by October 2021.

DoD looks forward to hearing ideas from Native Hawaiian Organizations (NHOs) about how the Department can improve this consultation policy and help ensure pre-decisional, meaningful, and respectful consultation with the Native Hawaiian community.

DoD invites all NHOs to submit written comments about the policy. The current DoD policy is available to download at www.denix.osd.mil/na/policy. Please submit comments to DoD_NativeAffairs@keresnm.com by December 30, 2019. ■

APPENDIX D: LAND COMMISSION AWARD 5230

Number: 05230

Claim Number: **05230**

Claimant: **Keaweamahi**

Other claimant:

Other name:

Island: **Maui**

District: **Kula,Lahaina**

Ahupuaa: **Pulehunui, Polaiki**

Ili:

Apana: **5**

Awarded: **1**

Loi: **7**

FR:

Plus:

NR: **252v6**

Mala Taro:

FT: **181v7**

Kula: **2**

NT: **63v5**

House lot:

RP: **8140, 8252**

Kihapai/Pakanu:

Number of Royal Patents: **2**

Salt lands:

Koel/Poalima: **No**

Wauke:

Loko: **No**

Olona:

Lokoia: **No**

Noni:

Fishing Rights: **No**

Hala:

Sea/Shore/Dunes: **Yes**

Sweet Potatoes:

Auwai/Ditch: **No**

Irish Potatoes:

Other Edifice: **No**

Bananas:

Spring/Well: **No**

Breadfruit:

Pigpen: **No**

Coconut:

Road/Path: **No**

Coffee:

Burial/Graveyard: **No**

Oranges:

Wall/Fence: **No**

Bitter Melon/Gourd:

Stream/Muliwai/River: **No**

Sugar Cane:		Pali:		No
Tobacco:		Disease:		No
Koa/Kou Trees:		Claimant Died:		No
Other Plants:		Other Trees:		
Other Mammals:	No	Miscellaneous:		Kula and Lahaina

No. 5230, Keaweamahi, Lahaina, 29 January 2848

N.R. 252v6

Greetings to you, the Land Commissioners, William L. Lee, J.S. Smith, Z. Kaauwai, John Ii, and N. Namaau: I hereby state to you may claim for land on Maui. Its name is Pulehu, it is a land at Kula, and I am the one with the right there, forever.

Also, at Lahaina are seven mo'o. One lo'i is in this land. Kanaina is the one who has the land and we are the people on the land.

There is a pauku of land inland, named Puuopapai. the mo'os are there with this pauku of land. The land in Lahaina, is at Polanui. That is where the aforesaid things are.

KEAWEAMAH

F.T. 181-182v7

Cl. 5230, Keaweamahi

Kaiakeakua, sworn - Nothing intelligible could be got out of this witness.

Paulo Kauhihope, sworn, The claimant has 3 pieces of lands in "Polanui," Lahaina and one piece of kula called Pulehu which I do not well know.

No. 1 is a pauku of land.

No. 2 consists of 7 moos.

No. 3 is one loi.

The claimant received these lands from Kakaulia in 1837 and his title has never been disputed.

No. 1 is bounded:

Mauka by Malaekahana's land
Olowalu by "Kamani"
Makai by Rabati J. White's land
Kaanapali by "Kooka."

No. 2 is bounded:

Mauka by Kuhalake's land
Olowalu by "Kamani"
Makai by Rabati J. White's land
Kaanapali by "Kooka."

No. 3 is bounded:

Mauka by Kui's land
Olowalu and Makai sides by the same
Kaanapali by "Kooka."

Z. Kaauwai, sworn, I know the claimant's kula Pulehu in East Maui. I have always understood that the claimant received this from the King in 1843 and I never heard his title disputed (he, Keoni Ana and the King in reference to this land)

It is bounded:

Mauka by the "Haleakala" mountains
Honuaula by "Palehuiki"
Makai by the sea shore
Makawao by Omaopio.

There are a great many natives on this land.

N.T. 63-64v5

No. 5230, Keaweamahi

Kaiakekaua, sworn, this witness was unaware of the inaccuracy of his statement, he has been sworn again as indicated below.

P. Kauhihape, sworn, He has seen 3 sections in the Polanui ahupuaa which were from Makaulia in 1837, no objections to the present time.

No. 2 - Pasture.

Mauka by Kuhalake's land
Olowalu by Kamani land
Makai by Polaiki land
Kaanapali by Kooka land.

No. 3 - Patch.

Mauka, Olowalu and Makai Kini's land
Kaanapali by Kooka land.

No. 1 - A patch and pasture.

Mauka by Malae Kahana's land
Olowalu by Kahaia
Makai by Kaalokai
Kaanapali by Wainee 2 land.

SEE 316, vol. 10.

Z. Kaauwai, sworn, he has seen the Pulehu ahupuaa in Kula, Maui, Keaweamahi had received it in 1843, no one had objected to him.

The boundaries of that ahupuaa are:

Mauka by Haleakala mountain
Honuaula by Pulehu iki ahupuaa
Makai by Kekai
Makawao by Omaopio ahupuaa.

Many people live in here.

N.T. 316v10

No. 5230, Keaweamahi, 28 September 1853

Keaweamahei's land in the Book of the Mahele.

Pulehu ahupuaa, Kula, Maui.

True Copy

A.G. Thruston, Clerk, Interior Department

28 September 1853

[Award 5230; Land Patent 8140 Pulehunui Kula; 1 ap. (ahupua`a; Ap. 2); 1668.78 Acs; Land Patent 8252; Polanui Lahaina; 4 ap.1 Ac. 1 rods]