

Stephen K. Yamashiro
Mayor



Virginia Goldstein

Director

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County of Hawaii

OFFICE OF ENVIRONMENTAL QUALITY CONTROL PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
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October 5, 1993

Mr. Brian Choy, Director
Office of Environmental Quality Control
220 South King Street, Fourth Floor
Honolulu, HI 96813

Dear Mr. Choy:

Final Environmental Assessment (Negative Declaration)
Applicant: The Homeowners Association of the Keauhou-Kona
Surf and Racquet Club
Request: Placement of Riprap Rock Barriers Within the
40-Foot Shoreline Setback Area
Tax Map Key: 7-8-13:Portion of 3; Keauhou 1st, North Kona

Enclosed please find four copies of the Final Environmental Assessment (Negative Declaration), including one set of original photographs, for the placement of riprap rock barriers within the 40-foot shoreline setback area. These barriers are to act as wave energy dissipators, reducing the effect of wave impact on Buildings No. 4 & 5 and their residents therein. In the vicinity of the barriers, the applicant also proposes to level an 8 feet arde pathway for pedestrian passage. The proposed improvements would affect the minimum 40-foot shoreline setback area, therefore, triggering the Chapter 343, HRS, relating to the Environment Impact Statement.

We have completed a 30-day draft Environmental Assessment (Negative Declaration Anticipated) review period of which publication was made in the OEQC Bulletin dated May 8, 1993. Therefore, we are submitting these attachments as a Final Environmental Assessment (Negative Declaration) with the inclusion of all pertinent information. All documents and comments have been reviewed and it is determined that the proposed project will not have significant impacts on the environment. This determination is based on the contention that concerns and issues, as stated by reviewing agencies, community groups and others in their correspondences, will be addressed and mitigated through conditions of the Shoreline Setback Variance and the Special Management Area Minor Use Permit review process, should the project be approved.

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Comments on the Final EA should be submitted to:

Ms. Virginia Goldstein
Planning Director
County of Hawaii
25 Aupuni Street, Room 109
Hilo, Hawaii 96720

A copy of the comments should be sent to:

Mr. Joseph N. Castelli, President
The Homeowners Association of the Keauhou-Kona Surf and
Racquet Club
78-6800 Alii Drive
Kailua-Kona, Hawaii 96720

For your information, we have received responses from the following
consulted agencies:

Federal: Army Corp. of Engineers
Kona Soil and Water Conservation District

State: Department of Health
Department of Land and Natural Resources

County: Civil Defense Agency
Police Department
Department of Public Works
Department of Water Supply

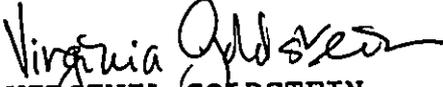
Agency comments and responses, if appropriate, are attached for
your review. In addition, public comment was received during the
30-day draft review period from the Sierra Club-Hawaii Chapter, to
which the applicant responded and which is attached. An additional
letter received after the 30-day draft review period from John
Moore, Engineer from the Keauhou Kona Resort Company is also
included for informational purposes.

This report is submitted for publication in your October 23, 1993
bulletin.

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Should you have any questions, please contact Susan Gagorik or
Daryn Arai of this office at 961-8288.

Sincerely,


VIRGINIA GOLDSTEIN
Planning Director

SG:mjh
FEACASTE.skg

Enclosures

xc: Mr. Joseph N. Castelli
West Hawaii Office

1993-10-23-HI-FEA-Keauhou-Kona Surf

OCT 23 1993

and Racquet Club Homeowners Assn.

FINAL ENVIRONMENTAL ASSESSMENT-NEGATIVE DECLARATION

Description of the Property

The property on which the proposed project is to be located is the Keauhou-Kona Surf and Racquet Club in Keauhou-Kona, Hawaii.

This property is that as given on the Tax Map Key (TMK 7-8-13). The property area is approximately 16 acres upon which are located 76 townhouse units contained in 19 buildings and 117 condominium apartments contained in 9 buildings. As well as the 28 residential buildings located on the property, there are 2 pavilions, a work shed, 1 swimming pool and 3 tennis courts.

The land area is relatively level. It is bounded on the south and southeast sides by Otaka, Inc. Kona Country Club Golf Course. It is bounded on the north side by Asabu USA's Kona Lagoon Hotel property, and on the west side by the ocean.

For property location within the Kahalu'u Keauhou area, refer to the vicinity map on the Triad Engineering drawing, entitled "Final Site Plan of Proposed Work Area".

The portion of this land upon which the proposed project will be constructed is the extreme southwest tip of the property area. The proposed work area is approximately 260 feet long abutting the ocean by approximately 60 feet wide.

Description of Proposed Project

The project proposed by the applicant is designed to protect property and provide safety for residents of a building in the proposed project area. This building (Building 5 of the Keauhou-Kona Surf and Racquet Club) has been hit by storm waves several times during the past years causing damage to ground floor units and hospitalization of some of its residents.

The storm waves which hit this area do not occur every year and are unusual locally generated Kona winter storms. These storms hit the shoreline from December through February. South swell storms, which are generated by winter storms in the Indian Ocean also hit the shoreline during the early summer months.

The project consists of the placement of a series of wave energy dissipators mounted on top of the lava ledge within the 40 foot setback mauka of the certified shoreline. This lava ledge in the proposed work area is 16 to 18 feet above the mean high water line.

The wave energy dissipators will consist of a series of rock barriers strategically placed on top of the lava ledge oceanside of

buildings 4 and 5. These rock barriers would act as wave energy dissipators, protecting buildings 4 and 5 by breaking up the waves as they pass over this washboard-like barrier. Eleven of these barriers will be required. They will consist of piles of pahoehoe lava rocks keystone trench cemented into the existing lava ledge. The barriers will measure approximately 15 to 25 feet long by 8 feet wide by approximately 6-8 feet high. The height is determined by the maximum allowable so as not to block the ocean view of the ground floor apartments. An attempt to keep the appearance of these rock barriers as natural as possible, cementing 2 to 5 feet diameter pahoehoe rocks together with black colored cement in an effort to blend in with the existing lava.

The amount of rock that we will need will be approximately 400 cubic yards with about 125 cubic yards of cement.

Construction material will be transported to the site via the opening between Building 4 of the Keauhou-Kona Surf and Racquet Club and the Inikiwai Heiau. This opening is approximately 19 feet wide. A temporary roadway will be constructed in this area to accommodate the heavy construction equipment. This roadway will consist of coarse gravel fill several feet in depth.

Reference the enclosed letter to the Planning Department from the DLNR State Preservation Division date February 16, 1993. One of the conditions for their approval was that in order to prevent inadvertent damage to the heiau during the project, that a temporary and durable fencing be installed along the base of the outcrop of the heiau. The fence along with the roadfill will be removed after the project is completed. Another condition of approval was that Mr. Castelli act as Supervisor of this access construction to insure that no adverse affect will occur at this significant historic site.

Both of these requests will be compiled with. In another letter to the County Planning Department from Keith Ahue of the DLNR dated June 15, 1993, (copy attached), concern was expressed for the possibility of construction contaminants from the work site entering the aquatic environment.

As requested in the February 16, 1993 letter from the DLNR State Preservation Division that Mr. Castelli supervise the access to the construction site, who will also monitor the construction of the Wave Energy Dissipators to insure that no construction contaminants enter the aquatic environment.

The objective to be accomplished by the aforementioned project is to protect property and lives in the affected area. The cost of the project is estimated to be less than \$50,000.00. The proposed construction start date is approximately April 1994.

Compliance with Rule 8 of Section 8-14

This request for the proposed project complies with Rule 8 of the Planning Commission Section 8-14 criteria for approval of a variance. See sections (b) 2, 3-A, b and Section (c) 2 and 4.

Flood Hazard Engineering Studies

The Federal Emergency Management Agency (FEMA) has made a flood study in the area of the proposed project site. This study is given in their Flood Insurance Rate Map Panel 928 of 1900 Community Panel No. 155166 0928C. A copy of this map is enclosed.

As can be seen from the map and the VE Flood Sub Zone Line, the flood level in the proposed work area is 13 feet above sea level. Since the base elevation of the proposed wave energy dissipators ranges from 16 feet to 23 feet, all construction will be well above the 13 foot flood zone area. See topography drawings of contours before and after project completion.

In a memorandum dated February 11, 1993 to the Planning Director from the Department of Public Works Engineering Division (enclosed), the Engineering Division asked for a verification that the proposed structures were to be located above the base flood elevation. Their concern was alteration of water flow and impacting adjoining properties negatively.

A second memorandum to the Planning Director dated June 6, 1993 (enclosed) from the Department of Public Works Engineering Division, stated they had reviewed the variance application and had the following comment;

"Based on the plan submitted all structures will be located above the base flood elevation of 13 feet and therefore are exempt from Chapter 27 requirement of The Hawaii County Code"

The Corp of Engineers also reviewed this application and in a letter to the County Planning Department dated April 22, 1993 (enclosed) stated;

- a) "The project does not involve work in waters of the U.S., therefore, a DA Permit will not be required."
- b) "The flood hazard information provided in the Environmental Assessment is correct."

After reviewing our application in the OEQC Bulletin, Nelson Ho of the Sierra Club sent a response to the County Planning Department.

One concern in his letter was to supply evidence to the statement that "no wave deflection will occur." Their concern was that nearby homes, surfing spots and a boat harbor will not be adversely affected.

The following are submitted:

- a) The prererferenced statement Corp of Engineer letter.
- b) The prererferenced statement from the Department of Public Works, who after their study concluded that the structures were above the base flood elevation and exempt from the Chapter 27 requirement.
- c) Statement form a Marine Engineer who was retained by the Keauhou-Kona Surf and Racquet Club to study if wave deflection can occur. A copy of his study is attached.

Project's Impact on Adjacent Properties

Since the elevation of the Wave Energy Dissipators is well above sea level, only waves from infrequent and unusual storms will ever hit these devices. During these storms, which occur approximately every two (2) to three (3) years, only one to four waves per storm will have sufficient height to wash over the pali. Thus in a ten (10) year period The Association is attempting to protect the buildings from only five (5) to (20) waves.

The design and placement of the Wave Energy Dissipators is not to deflect the waves but to disseminate them. Those barriers closest to the sea will shear off the bottom of the waves causing the tops of the waves to collapse in the trough between the first and second barriers. Spacing between the barriers is such that water from the decimated waves can quickly drain back into the sea. No wave deflection will occur.

The closest structure of neighboring property to the north is the Kona Lagoon Hotel, which is approximately 2,500 feet away. The closest structure to the south of the work area is the Kanaloa condominium complex, which is also about 2,500 feet distant, separated from the work area by the Otaka, Inc. Keauhou Golf Course.

Archaeological Survey

The policy of the State is to identify, maximize and retain historic information through preservation of remains and artifacts. An ancient stepping stone trail once existed across the proposed

work area but because this area is washed by wave action during unusual winter storms all evidence that this stepping stone trail ever existed has been eliminated. There is no evidence of any other archaeological sites within the work area. The project will not impede the existing access from the shoreline to the significant historic sites which exist on the grounds of the Keauhou-Kona Surf and Racquet Club. These remains are being preserved in their natural state by the Homeowners Association. The sites include a Hale Mua, the Lonoikamakahiki Residence and the Inikiwai Ku'ula Fishermen's Heiau. Although none of these sites are within the work area, construction material will have to be transported to the work site through a space opening of 19 feet between the Inikiwai Heiau and Building 4 of the Keauhou-Kona Surf and Racquet Club. This is the only usable access to the work site and will not present a problem of risk to the heiau (see copy of the letter form DLNR Historic Preservation Division to the Planning Department giving their field inspection opinion).

In the archaeological survey of Kahalu'u and Kona, Report No. 71-4 by the Bernice Pauahi Bishop Museum Department of Anthropology dated May 1971, the Inikiwai Heiau was identified as Site D3-24, the Lonoikamakahiki Residence as Site D4-56, and the Hale Mua as Site D4-51.

The Inikiwai heiau is adjacent to the proposed work area. This heiau is a Ku'ula shrine and is sometimes known as the Pahe'ehe'e Ku'ula Heiau. It is an ancient shrine whose exact construction date is unknown.

This heiau was originally larger than it is at present and was rectangular in shape. It's original north to south dimension was 40 feet, while it's east to west dimension was 20 feet. It had a 4 foot high lava wall around it and was entered from the southwest end via a declining area of rough pahoehoe. It was modified by erosion and negligent bull-dozing. The heiau was built on a knoll of brittle lava with chunks of a'a. The height is about 10 feet above ground level and the top is paved with hand placed 'ili 'ili pebbles (small ocean-polished stones such as is used on Kanone game boards).

Hawaiian fishermen built these shrines on promontories along the seashore or near ponds and streams. These shrines are a place for prayer and offerings to the fish god Ku'ula or the fisherman's personal family gods ('Aumakua). Ku'ula was the most prominent god of fishing. His wife, Hina, and son, Aiai, were also fishing gods. The shrine itself is also called a Ku'ula.



KU'ULA STONE FISH GOD ON TOP OF INIKIWAI HEIAU

Fishermen prayed to the Ku'ula stone image at these Ku'ula heiaus for an abundant catch before they went fishing. When they returned, they addressed the gods and placed the first fish caught on top of the heiau as an offering to Ku'ula or to their own 'Aumakua. Sometimes the first fish caught was marked in some way such as cutting its tail or keeping it in the bow of the canoe, separated from the rest of the catch until they returned.

Mounted on top of this heiau platform is the Ku'ula stone fish god. These Ku'ula stones were usually ocean tumbled-polished stones, odd shaped stones, or sometimes hand carved stones.

Fishing "hot-spots" were located out in the sea. These spots were called Ko'a and were the best locations where an abundance of fish might be caught. Fishermen were taught to locate the Ko'a by taking sightings with prominent land objects, sometimes using Ku'ula shrines as part of the alignment.

In a letter from Robert K. Yanabu, Division Chief, Engineering Division of the Department of Public Works, dated February 11, 1993 (copy enclosed), a question was raised as to the possibility of some of the barriers blocking the view of the Inikiwai Heiau from the sea. Heiau view blockage from the sea was also taken into consideration during the design and placement proposal of these barriers. The cement base pad of Building #4 is at a 25' elevation; the base of the heiau is approximately 2' higher. The top of the highest barrier is at a 27' elevation. This places the

base of the heiau at the same elevation as the highest point of any of the barriers. Since the heiau is 8' tall, the top of the 2 1/2' ku'ula stone is at an elevation of 37 1/2'. No portion of the heiau will be blocked from ocean view by the barriers. At present, as in the past, there has been a 4' growth of Naupaka bushes along the makai side of the heiau. The top of the Naupaka is at approximately 29' elevation; thus as it now stands, 2' of the base of the heiau is not visible from ocean view.

Joe Castelli, President of the Association, is very sensitive to the preservation of the Inikiwai Heiau and its function. This heiau was used by ancient Hawaiians to locate ko'a (fishing grounds) at sea by lining up the heiau with some distant land feature. Mr. Castelli has met Hawaiian fishermen who still use this heiau today. He has frequently found "first fish caught" offerings at the base of the ku'ula stone. Since this heiau is within the Keauhou-Kona Surf and Racquet Club area he has designated himself custodian of this heiau. He has previously researched the heiau, cleared it of bushes and trees which were causing damage to the heiau and have built a podium-like glass display case at the base of the heiau with an interpretive description of the heiau. This was done in order to achieve recognition and respect of the heiau. Mr. Castelli will be personally maintaining this heiau and protecting it from damage from all sources in order to keep it in its original configuration and for its intended use.

DESCRIPTION OF IMPACTS

I) Description of the area involved including existing uses, structures, vegetation and other features:

- a. The area involved in the project is primarily within the shoreline setback area. This area is completely devoid of vegetation. There are no structures or other manmade devices within this setback area. The project work area is at a height of 16 to 20 feet above sea level. The topography slopes toward seashore with irregular and variable heights of the rough lava level. The point at which the proposed construction area meets the sea is a pali with a minimum height of 16 feet.

II) Description of surrounding area and land uses:

- a. The area surrounding the affected area is barren lava rock and has been used for pole fishing at certain times during the year. The lack of shade or other comforts discourages many people from using the affected area.

The condominium buildings are further in from the shoreline. There was a prior shoreline walkway on a portion of the area to be constructed but surface erosion on the top of this lava ledge caused by past storms has completely removed all evidence that this pathway ever existed. In the area south of the adjacent proposed work site, severely damaged, unusable portions of this walkway still exist. North of the proposed work site a portion of this walkway was restored by work performed during SMA Minor Use Permit No. 90-5.

III) Description of how the proposed Project will affect the area involved and surrounding areas:

- a. The proposed project will significantly reduce the damage to residential buildings 4 and 5 which are mauka of the proposed work area. No significant change of area use will occur by the proposed project. The configuration of the proposed barriers are such that they will not impede access to the ocean or through to adjacent areas. The project will allow condominium owners, occupiers and other to view the ocean in a safe manner. The project will also help reduce surface erosion on the top of this lava ledge. There will be no detrimental effects on the area involved or on surrounding areas.

IV) Description of impacts which cannot be avoided and mitigating measures proposed to minimize that impact:

- a. There will be no major impacts caused by the project. There will be no visual impact because the project will use existing lava rock from the surrounding areas to construct the proposed barriers. These rocks will be cemented together with black colored cement and the barriers will be made to look as natural as possible. There will be no impact on the flora and fauna of the area as the area is devoid of flora and fauna.

V) Alternatives to the proposed Project:

- a. There are no alternatives to the project except for the construction of a massive seawall in an attempt to block the waves from damaging the buildings. As well as limiting and blocking ocean views, this unsightly seawall would channel the waves to another location. This alternative would have far greater and more negative impacts than the proposed Wave Energy Dissipators which seek to minimize the impacts.

VI) Irreversible and irretrievable commitments of resources:

- a. There will be no irreversible or irretrievable commitments of resources in the construction and implementation of this project. The use of natural materials as the building material for the project will ensure that there are no irreversible commitments of resources. The project seeks to preserve the existing resources, not to commit them to some other use alien to the area.

WRITTEN STATEMENT OF OBJECTIVES AND POLICIES

A. Recreational Resources. The policy of HRS 205A is to provide adequate, accessible and diverse recreational opportunities in the coastal zone management area. The proposed project would not interfere or change recreational activities as they exist at present. These activities might include fishing along the seashore or walking along the shoreline. The proposed lava rock protective devices would occupy a small percentage of the proposed area, leaving extensive room for walking around or between these devices. The project will provide shoreline access consistent with conservation of natural resources. A walkway will be cut in the ledge through the proposed area.

B. Historic Resources. The policy of the State is to identify and maximize information retention through preservation of remains and artifacts in the area. Because this is an area that has been constantly washed by the wave action during unusual winter storms, an ancient Hawaiian stepping stone trail existed across this area years ago but today, due to wave action, all evidence of this ancient trail has been eliminated. The project will not impede the existing access from the shoreline to the significant historic sights which exist on the grounds of the Keauhou-Kona Surf and Racquet Club. These remains are being preserved in their natural state by the Association. The sites include a Hale Mua, the Lonoikamakahiki Residence, and the Inikiwai Ku'ula Fishermen's Heiau. Although none of these sites are within the work area, construction material will have to be transported to the work site through a space opening of 19 feet between the Inikiwai Heiau and Building 4 of the Surf and Racquet Club. This is the only usable access to work site and will not present a problem of risk to the heiau.

C. Scenic and Open Space Resources. The project is consistent with the policy of the State toward the scenic and open space resources. The project will make safe and available the vistas of the ocean along the rocky shores of Keauhou. There will be no visual impact of the project from surrounding neighbors because the project barriers will be constructed from rocks similar to the existing lava ledge. The rocks will be cemented together

with black colored cement to blend them in with the lava. The project does seek to preserve, maintain and improve the shoreline area. This is one of the policies and goals of Hawaii Revised Statutes 205A.

In the letter from Nelson Ho of The Sierra Club to the County Planning Department dated June 5, 1993, The Sierra Club raised the following question in reference to the setback variance application as published in the OEQC Bulletin;

"An assessment of the impacts to scenic resources is required...What effects will the proposed project have on shore view?"

This is a legitimate concern. During the design of the Wave Energy Dissipators, special consideration was incorporated into the design to ensure that the on-shore view was not affected by the protection devices.

Refer to the Final Site Plan of the Proposed Work Area dated March 10, 1993 prepared by Triad Engineering. This drawing shows the base pad of the buildings to be at 23.5 foot elevation while the top elevation of the dissipators fronting the buildings are at 23-25 feet; thus in the worst case 1 1/2 feet of view of the bottom of the buildings will be blocked.

In the opening between Buildings 4 and 5, the Inikiwai Heiau encompasses the entire area. The pad elevation of Building 4 is at a 25 foot elevation while the base of the Inikiwai Heiau is 2 feet higher, or 27 feet. The maximum elevation of the dissipator fronting this area is designed to be at the same elevation as the base of the Inikiwai Heiau, or 27 feet. The top of the heiau is at an elevation level of 35 feet with the top of the Ku'ula stone at an elevation of 37 1/2 feet. Since the base of this heiau is at the same elevation as the elevation of the highest dissipator, blockage of the heiau or on-shore view in this area will not occur.

Upon completion of the Wave Energy Dissipators the view of one and a half feet of the bottom of our buildings will be the only view blocked as seen from the ocean.

D. Coastal Ecosystems. The proposed project will assist in the objectives and policies of the coastal ecosystem areas. The objective is to protect valuable coastal ecosystems and to minimize disruption of the coastal water systems. The project will protect the shoreline area from further disruption caused by surface erosion of the lava ledge in the proposed project area which has a detrimental effect on the ecosystem in the area.

Dissipating the waves, during severe storms, before they reach the shoreline vegetation line will prevent contaminants such as soil and vegetation from entering the aquatic environment. Also, during

these severe ocean storms, the Wave Energy Dissipators will prevent a certain amount of construction material from the damaged buildings such as glass, plaster, lumber, cabinets, doors, appliances as well as rugs and furniture, from entering our pristine aquatic ecosystem.

A letter was sent to the County Planning Director from the State Department of Health dated May 4, 1993. Their concern was that the proposed construction may need to address permit and or certification requirements of the Federal Corps of Engineers and The State Department of Health to insure water quality certification requirement as described in Department of Health Rules, Title II, Chapter 54, of Water Quality Standards, Section 11-54-09.102, are complied with.

In a phone conversation that Mr. Castelli, President of the Association, had with Mr. Eugene Akazawa of the Department of Health Clean Water Branch Mr. Akazawa stated;

"Since the Clean Water Branch of the Department of Health is contingent on the Corp of Engineer's (COE) requirements, if the COE does not require a permit, then The Health Department requirements do not apply."

E. Economic Uses. The objective of the management area in the field of economic uses is to provide public or private facilities or improvements important to the State's economy, with the policy being the direction of the location and expansion of coastal dependent development area. The current project is situated in an area that has been zoned resort and is currently composed of condominium units and golf courses. The project provides for private facilities that encourage the public to utilize Hawaii's natural resources; in this instance, the shoreline. The project does not modify or introduce any large scale economic use other than as a passive area in which tourists and resident alike can enjoy the shoreline.

F. Coastal Hazards. The objective is to reduce the hazard to life and property from natural forces, including storm waves. The policy of the coastal zone management area is to control development in areas subject to flood, erosion and storm waves. The current project would assist in the realization of the objectives and policies. The project does not introduce foreign material but it does provide for a method of curtailing the erosion in an area that is already developed as condominiums. It also allows unimpeded access along the shoreline. The project will not only alleviate some of the erosion that occurs naturally along the shoreline but will assist in minimizing the damage done by storm waves. It will not add any additional hazard to the community surrounding it but will provide safety for pedestrians and homeowners alike.

FLORAL AND FAUNAL SURVEY

The proposed work area involved in the project is primarily within the shoreline setback area. The topography consists of a solid pahoehoe lava ledge starting from a minimum of 16 feet above sea level at the shoreline and sloping inland with variable and irregular heights of rough lava to a maximum height of approximately 25 feet. During storms or high surf this ledge is continually subjected to salt spray. This lava ledge is a barren area completely devoid of floral or faunal life. See photographs included in this application.

After the draft setback application publication in the OEQC Bulletin, The Sierra Club questioned the statement that the proposed work area is devoid of all life. This question was raised in their letter to The County Planning Director dated June 5, 1993 (copy enclosed).

This statement is true. The area is solid black pahoehoe lava ledge 16 to 20 feet above sea level, exposed to the hot sun all day, which is not conducive to any form of life. There is absolutely no single blade of grass or any signs of animal life in this area. No mollusks, algae or crustaceans. Nothing. It is possible that an occasional A'ama crab may cross this area to shed its shell.

An occasional small pool of stagnant water can be found on top of this ledge. The pools average one foot in diameter and one inch deep. They are caused from salt-mist spray and rain water. These pools dry up rapidly with lack of rain or salt mist. During the short time period that these pools exist, close examination of these small pools with the naked eye reveals no existence of any type of floral or faunal life.

It is also possible that there may be microscopic life in some of the crevices but this is highly unlikely due to the intense heat from daytime sun.

JUSTIFICATION OF THE PROJECT

Following is the justification of the project as set forth in the criteria and conditions of Section 8-14.

Applicant Hardship Without and Approved Variance

Over years certain major high surf storms have hit the Kona Coast including the applicant's shoreline. On several occasions storm waves have smashed through the sliding glass door panels of the

ground floor units of Building 5, washing in and out of these units, overturning furniture and causing structural damage to the building. The February 23, 1986 locally generated Kona storm waves overturned a bed in one of the apartments resulting in hospitalization of its two occupants. Without approval for these protective Wave Energy Dissipators, the building, along with its residents, will be in continuous jeopardy from these types of ocean storms.

Public Interest

In 1984 a new cartway-pathway-easement through the Surf and Racquet Club complex was approved and recorded with the state. The old shoreline cartway-pathway-easement 7, 8, 35 and 36 as shown on File Plan No. 1506 and Easement 2 as shown on File Plan No. 1583 was abandoned. The reason for the abandonment was the destruction of the original cartway-pathway by severe ocean winter storms.

The new cartway-pathway-easement is shown on the attached map of the Surf and Racquet Club and shows the public easement through the Surf and Racquet Club complex.

Although the public has a right of passage along the shoreline and through the work area site, the entire surface consists of irregular, jagged pahoehoe lava rock, thus creating a danger to the public utilizing this passage.

During the barrier construction, a pathway will be leveled through the jagged irregular surface to enable a safer pedestrian passage through this area. This pathway is shown on our design plan drawing by Triad Engineering. This will not be a paved pathway as the pavement could be used like cannon fodder against the buildings during severe storms.

This unpaved pathway will connect to a paved pathway which continues north through the Surf and Racquet Club complex along the shoreline. This paved pathway section was restored by work performed during SMA Minor Use Permit No. 90-5. Completion of the project will enable a safer right of way passage through the area than had previously existed.

SHORELINE CERTIFICATION

A letter was sent from Nelson Ho of The Sierra Club to the Director of the County Planning Department in response to the Draft Set Back Variance Application which appeared in the May 8, 1993 OEQC Bulletin. This letter, (copy attached), was dated June 5, 1993. Included in this letter was the following comment:

"We suspect also that the shoreline may have been improperly surveyed. Any competent analysis of the shoreline deposits should have produced D.E. evidence that the 'shoreline' should have determined to be several dozen feet back from the cliff's edge. Why did the State Survey Office fail to perform this elementary analysis? Because of this, we citizens are being asked to allow unsightly piles of riprap to be placed on the natural shoreline—one more in the growing series of structures rapidly creating an ugly artificial shoreline along our beautiful natural coast."

Steps toward establishment and certification of the shoreline, according to the applicant, was a long and involved process.

1. Wes Thomas and Associates Inc. was retained to survey the shoreline in the proposed site area. They completed this survey in December 12, 1991. Since no land boundary with the sea had been lost in recent years the old nail and pipe survey points that were placed during the last survey certification over 20 years ago were still in place. In many cases the new certification points were exactly the same as the last survey point.
2. On February 3, 1992, Wes Thomas and Associates sent 9 copies of their survey drawings to Mr. William Paty, Chairman of The Board of the Department of Land and Natural Resources, for their review and certification.

Also contained was a letter of authorization from the owner of the shoreline land in question, Kamehameha Investment Corp. (KIC) for certification of the shoreline as surveyed.

3. Early in April, an on-site meeting was held to determine if the shoreline as surveyed by Wes Thomas and Associates should be certified.

At this meeting were; Chrystal Thomas of Wes Thomas and Associates, two DLNR representatives and activist Jerry Rothstein from P.A.S.H.. Neither the applicant, nor KIC, the land owner, were invited.

At this meeting Jerry Rothstein negotiated a compromise shoreline which was approximately 30 feet closer to the buildings for a distance of over 400 feet. This would have

severely disrupted the plans to place natural looking lava protective devices between the ocean and the buildings. Allowed, this would have been a massive, ugly cement deflection type sea wall concaved toward the ocean. Just the type of structure the Association was trying to avoid.

4. In late April, The Association initiated an appeal with the DLNR to the Rothstein-compromise shoreline and notified the land owner, KIC, of what had been done.
5. KIC requested a meeting with the DLNR in Honolulu. This meeting was held early in May 1993. The result of this meeting was that the Jerry Rothstein-compromise shoreline was thrown out and a new Shoreline Certification Meeting was scheduled to be held at the work site with surveyors from the DLNR Honolulu office present.
6. On Thursday, June 18, 1992 at 10:00 AM an on-site meeting was held to determine if the shoreline as surveyed by Wes Thomas & Associates, Inc. was proper. Among those present at this meeting were Paul Nuha, State Land Surveyor (Honolulu office); Andrew Hirata RLS, State Survey Office (Hilo); Chrystal Thomas Yamasaki RLS of Wes Thomas & Associates, Inc.; Jerry Rothstein, PASH Representative, representatives from Glen Taguchi's DLNR Hilo office, DLNR Representatives from the Honolulu office, the applicant, Joseph K Spencer III Representing KIC the land owner, David Grenier Project Engineer and Keith Burley Managing Agent of Keauhou-Kona Surf & Racquet Club. A total of 18 people were present.

Discussed at this meeting was the fact that the elevation of the pali fronting the work area is 16 to 18 feet above sea level. Only ocean waves of greater than 16 to 18 feet in height can wash over the pali. This is not normal winter surf. Also observed was that there was absolutely no trace of any shoreline deposits or ocean debris anywhere on top of the pali in the proposed work area.

7. At further meetings of the State Surveyor's Office, without representation of The Association, it was determined that the original survey as submitted by Wes Thomas & Associates was the true shoreline and this is the shoreline that should be certified.
8. Notification of this certification was sent in a letter dated August 3, 1992 from William Paty, Chairman of the DLNR, to Wes Thomas & Associates, Inc.
9. Additional Comments:
The state's criteria for the establishment of a shoreline is the point of high wash of normal winter surf as evidenced by a vegetation or other ocean debris line. Based on this

criteria, the shoreline as certified is proper. Normal winter or storm surf never rises above the pali.

The state was not negligent in the analysis of shoreline deposits as absolutely none existed - not even one straw or single piece of seaweed. Ocean debris was conspicuously absent and helped to provide the proof that the shoreline as originally surveyed was correct.

PHOTOGRAPHS OF THE PROPOSED WORK AREA

Following are photographs of the barren lava ledge upon which the building protection barriers of the proposed project will be placed.



View of the proposed work area looking south; also showing Building #5.
This picture was taken from the south end of Building #4.



Proposed project area looking north. Taken from the south end of Building #5. Building #4 is shown on the right.



Java ledge of the proposed project area taken from center top floor condominium of Building #5.

AGENCY COMMENTS AND APPLICANT'S RESPONSES



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440



April 22, 1993

Planning Division

County of Hawaii
Planning Department
25 Aupuni Street, Room 109
Hilo, Hawaii 96720-4252

Dear Sir:

Thank you for the opportunity to review and comment on the Environmental Assessment for the Shoreline Setback Variance Application for the Keauhou-Kona Surf and Racquet Club, Hawaii (TMK 7-8-13: 3). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. The project does not involve work in waters of the U.S.; therefore, a DA permit will not be required.

b. The flood hazard information provided in the Environmental Assessment is correct.

Sincerely,

Kisuk Cheung, P.E.
Director of Engineering

04954

Stephen K. Yamashiro
Mayor



Harry Kim
Administrator
Bruce D. Butts
Assistant Administrator

County of Hawaii

CIVIL DEFENSE AGENCY

920 Ululani Street • Hilo, Hawaii 96720
(808) 935-0031 • Fax (808) 935-6460

doc07990

TO: Virginia Goldstein, Planning Director
FROM: Harry Kim, CD Administrator H.K.
DATE: April 22, 1993
SUBJECT: Shoreline Setback Variance Application
Joseph Castelli, Keauhou-Kona Surf and Racquet Club
TMK 7-8-13: Por. of 3

Following is in response to your memo dated April 5, 1993:

The project is located in an area that exposes it to damaging and destructive waves during winterstorms from the north and from tropical cyclones during the summer and fall months. The last storm to impact the facility occurred during Hurricane Iniki (September 1992).

Other than damages caused by the waves, the major concern for property owners has been the inadequate advance warnings so as to give some time to take protective actions. Unfortunately, advanced warnings will remain a problem for some time to come. Although the wave dissipator will not protect the facility from major storm or tsunami waves, it will minimize the impact from most of the winter and tropical storm waves that impact the area on a regular basis.

Thank you for the opportunity to input.

dy

C4817





DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

25 AUPUNI STREET • HILO, HAWAII 96720
TELEPHONE (808) 969-1421 • FAX (808) 969-6996

April 23, 1993

TO: Planning Department
FROM: H. William Sewake, Manager
SUBJECT: SHORELINE SETBACK VARIANCE APPLICATION
APPLICANT: KEAUHOU-KONA SURF AND RACQUET CLUB HOMEOWNERS ASSOCIATION
TAX MAP KEY: 7-8-13: POR. OF 3

We have no objections to the subject variance.


H. William Sewake
Manager

WA

copy - Homeowners Association of the
Keauhou-Kona and Racquet Club

J4966

... Water brings progress...

JOHN WAIHEE
GOVERNOR OF HAWAII



JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 916
HILO, HAWAII 96721-0916

DATE: May 4, 1993
TO: Planning Director, County of Hawaii
FROM: Chief Sanitarian, Hawaii District
SUBJECT: Shoreline Setback Variance Application
Joseph Castelli, President of Homeowners Association
of the Keauhou-Kona Surf and Racquet Club
Request: Proposed Construction of Wave Energy
Dissipators
Tax Map Key: 7-8-13: Por. of 3

The proposed construction of wave energy dissipators may need to address permit and/or certification requirements of the Federal Corps of Engineers and the Hawaii State Department of Health. The latter water quality certification requirements are described in our Administrative Rules, Title 11, Chapter 54, Water Quality Standards, Section 11-54-09.1.02. If there is need to discuss the Water Quality Certification requirements please call Mr. Eugene Akazawa, Ph. 586-4309 at our Clean Water Branch in Honolulu.

Harold Matsuura
HAROLD MATSUURA
Chief Sanitarian, Hawaii District

05406

TO: Virginia Goldstein

FROM: Joseph N. Castelli, President, Homeowners Association of the
Keauhou-Kona Surf and Racquet Club

DATE: June 14, 1993

SUBJECT: Response to letter from Harold Matsumura, Dept. of Health, dated
May 4, 1993, to Planning Director, County of Hawaii, regarding
construction of wave energy dissipators at the Surf and Racquet Club.

The construction site for the proposed wave energy dissipators at the Surf and Racquet Club is 17 to 25 feet above sea level. A pali exists at the shoreline of the proposed site that is 17 feet in height.

Refer to the April 22, 1993 letter from the Corp of Engineers attached; they state, "The project does not involve work in waters of the US; therefore a D.A. permit will not be required.

In a phone conversation that I had on June 8, 1993 with Mr. Eugene Akazawa of the Dept. of Health Clean Water Branch he stated, "Since the Clean Water Branch of the Dept. of Health is contingent on the Corp of Engineers' (COE) requirements, if the COE does not require a permit then the Health Dept. requirements do not also apply".

Joseph N. Castelli

cc: Harold Matsumura, Dept. of Health

PM

JOHN WAIHEE
GOVERNOR OF HAWAII

COPY



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

WILLIAM W. PATY, CHAIRPERSON
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HISTORIC PRESERVATION

DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

LOG NO: 7458

DOC NO: 9302ks19

February 16, 1993

Ms. Virginia Goldstein, Director
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Ms. Goldstein:

**SUBJECT: SMA Application 40-foot Shoreline Setback Variance, Keauhou Kona Surf and Racquet Club
Keauhou 1, North Kona, Island of Hawaii
TMK: 7-8-13: 003 (por.)**

Our Hilo Office staff member, Marc Smith, conducted a field inspection of the subject site on February 3, 1993, accompanied by Mr. Joseph Castelli, President of the Keauhou Kona Surf and Racquet Club (KKSRC) Tenants Association. KKSRC is proposing to construct a number of wave energy suppression barriers on the top of the low sea cliffs fronting Building 5 in the property. The proposed barriers will be constructed of basalt boulders and cement, and will be approximately 7 feet high by 5 feet wide at the base, and 30-40 feet long. The construction site is a rough pahoehoe lava surface on the 10-20 foot sea cliffs which are frequently washed by high surf. No significant historic sites were observed in the construction site.

On the other hand, an access road for transporting the building materials to the construction site has potential to adversely affect Inikiwai Heiau. The heiau is located on top of a large 'a'a lava outcrop. The proposed access road will be constructed of a 3-foot coarse gravel fill and it will cross through a point that is only 17 feet wide between the Inikiwai Heiau outcrop and an adjoining structural building. An adequate and desirable buffer zone around the heiau would be impossible to enforce in such a narrow space; however, our office feels that inadvertent damages to the heiau during the project can be avoided if a temporary and durable fencing is installed along the base of the outcrop for the duration of the project. The fence and road fill would then be removed after the project. Also it is our understanding that Mr. Castelli, who has been responsible for the clearing, interpretation, and maintenance of the historic sites, will be monitoring the construction activity. Mr. Castelli is very familiar with the preserved historic site and should be able to anticipate and forestall any threat of damage to the heiau. Hence, with the

Virginia Goldstein
Page 2

condition that a fenced barrier be constructed along the base of the outcrop on top of which is situated Inikiwai Heiau and with the general supervisor of the construction project by Mr. Castelli, our office is able to determine that the access road construction will have "no adverse effect" on significant historic sites.

If your office should have any further questions, please contact Kanalei Shun at 587-0007.

Sincerely,



DON HIBBARD, Administrator
State Historic Preservation Division

KS:amk

c: Joseph N. Castelli

TO: Virginia Goldstein, Planning Director, County of Hawaii

FROM: Joseph N. Castelli, President, Homeowners Association of the
Keauhou-Kona Surf and Racquet Club

DATE: June 10, 1993

SUBJECT: Response to letter of February 16, 1993 from DLNR State Historic
Preservation Division, to Planning Director Virginia Goldstein

Log No. 7458 Document No. 9302KS 19, regarding construction of wave
energy dissipators at the Keauhou-Kona Surf and Racquet Club

The referenced letter from Don Hubbard of the State DLNR Historic Preservation Division states that there are no historic sites within the construction site area of the proposed Surf and Racquet Club project. In this letter concern was expressed for the Inikwai Ku'ula Shrine Heiau since heavy equipment will have to pass within a few feet of this historic site to access the work site. The letter suggests that a durable temporary fence be installed along the base outcrop of this heiau to isolate it from the access roadway to the site area.

Before any work site construction begins I will have this durable temporary fencing installed using chain link fencing or similar durable fence construction. As well as supervising the fence construction, I will also oversee the entire construction progress to ensure that no damage is caused to this heiau.

I assure you that I am extremely sensitive to the preservation of the Inikiwai Heiau. I had previously researched the heiau, cleared it of bushes and trees, and have constructed an interpretive podium-type display case at the base of this heiau. This was done in order to achieve recognition and respect of the heiau. I have also taken it upon myself personally to maintain this heiau in order to keep it in its original configuration.

Joseph N. Castelli

cc: Don Hubbard, DLNR Historic Preservation Division

✓

JOHN WAHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621
HONOLULU, HAWAII 96809

REF: OCEA: SKK

KEITH W. AHUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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AQUACULTURE DEVELOPMENT
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HISTORIC PRESERVATION
LAND MANAGEMENT
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WATER AND LAND DEVELOPMENT

MAY 7 1993

File No.: 93-558
DOC. ID.: 2734

The Honorable Virginia Goldstein, Director
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Ms. Goldstein:

Subject: Shoreline Setback Variance (SSV) Application by
Joseph N. Castelli for Proposed Wave Energy Dissipators,
Kailua-Kona, Hawaii, TMK: 7-8-13: por. 3

We have reviewed the SSV application information for the proposed project transmitted by your memorandum dated April 5, 1993, and would like to reiterate the concerns of our Historic Preservation Division contained in their letter of February 16, 1993 (application item 13).

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,

Handwritten signature of Keith W. Ahue in cursive.
KEITH W. AHUE

cc: OEQC

65628

JOHN WAHEE
GOVERNOR OF HAWAII



KEITH W. AHUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JOHN P. KEPPELER, II
DONA L. HANAIKE

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

REF:OCEA:SKB

P. O. BOX 621
HONOLULU, HAWAII 96809

File No.: 93-558a
DOC. ID.: 2916

AQUACULTURE DEVELOPMENT
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

The Honorable Virginia Goldstein, Director
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

MAY 15 1993

Dear Ms. Goldstein:

Subject: Shoreline Setback Variance (SSV) Application by
Joseph N. Castelli for Proposed Wave Energy Dissipators,
Kailua-Kona, Hawaii, TMK: 7-8-13: por. 3

The following are our Division of Aquatic Resources' (DAR) comments on the subject project which supplement those forwarded in our previous letter dated May 7, 1993.

Division of Aquatic Resources

No significant impact to aquatic resources values is expected from this activity.

The rock barriers would be on fast land within the applicant's certified shoreline, on a wave washed lava ledge completely devoid of floral or faunal life. However, precautions should be taken to prevent debris, construction materials, cement and other possible contaminants from entering the aquatic environment.

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,

Handwritten signature of Keith W. Ahue in cursive script.
KEITH W. AHUE

01702

TO: Virginia Goldstein, Planning Director, County of Hawaii

FROM: Joseph N. Castelli, President, Homeowners Association
Keauhou-Kona Surf and Racquet club

DATE: August 24, 1993

SUBJECT: Response to Department of Land and Natural Resources (DLNR) letter to
the County Planning Director, dated June 15, 1993, File No. 93-558a,
Doc. I.D. 2916.

This letter is in reference to the Keauhou-Kona Surf and Racquet Club's application for a shoreline setback variance.

The DLNR letter contained the comments of their Division of Aquatic Resources (DAR). The DAR acknowledged that there would be no significant impact to aquatic resource values, but expressed concern about possible construction contaminants, cement and other debris entering the aquatic environment during the installation of the proposed wave energy dissipators.

Reference the DLNR letter of February 16, 1993 Log No. 7458, Doc. No. 9302 KS 19 from Don Hibbard, State Historic Preservation Division to Ms. Virginia Goldstein, Director of the Planning Department.

A condition of their approval was that I supervise the construction of the road access to the work site to ensure that no damage is caused to the inikiwai Heiau.

I will also monitor the construction of the wave energy dissipators to ensure that no construction contaminants such as cement, rocks or other debris enters the aquatic environment.

It is anticipated that construction material will consist only of large pahoehoe rocks and lamp black-darkened cement.

Joseph N. Castelli

✓
C5211

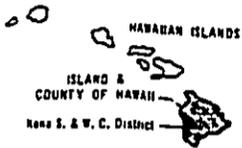


Kona

Soil and Water Conservation District

P.O. Box 2262 - Kealahou, Hawaii 96750

May 12, 1993



Mr. Norman K. Hayashi
Planning Director
Planning Department
25 Aupuni Street, Rm. 109
Hilo, HI 96720

Subject: Shoreline Setback Variance Application ✓
Joseph Castelli, President of Homeowners Association
of the Keauhou-Kona Surf and Racquet Club
Request: Proposed Construction of Wave Energy Dissipators
TMK: 7-8-13: Por. of 3

Change of Zone Application (REZ 93-5)
Applicant: Oceanside 1250
Request: A-5a & Unplanned to A-1a
TMK: 7-9-06: Por. of 1; 7-9-12: Pors. of 3, 4 & 5;
and 8-1-04: Por. of 3

Dear Mr. Hayashi:

The directors of the Kona Soil & Water Conservation District have reviewed the above land development reviews and have no comments to offer at this time.

Thank you for the opportunity to review these documents. If you have any further questions, please feel free to contact our office.

Sincerely,

William E. Cowell

William E. Cowell
Chairman, Kona SWCD

WEC:ib

05783

DEPARTMENT OF PUBLIC WORKS
COUNTY OF HAWAII
HILO, HAWAII

DATE June 7, 1993

Memorandum

TO : Planning Director

FROM : *Galen Kuba*
Galen Kuba, Acting Division Chief
Engineering Division

SUBJECT:

Shoreline Setback Variance Application
Applicant: Joseph Castelli
Location: Keauhou, North Kona, HI
TMK: 7-8-13: Portion of 3

We have reviewed the subject application and our comments are as follows:

1. Please refer to our February 11, 1993 memo for comments on the applicant's SMA Use Permit application.
2. Based upon the plan submitted, all "structures" will be located above the base flood elevation of thirteen (13) feet and, therefore, are exempt from Chapter 27 requirements of the Hawaii County Code.

TWP:sls

Engineering - Hilo
Engineering - Kona
Planning - Kona

✓

DEPARTMENT OF PUBLIC WORKS
COUNTY OF HAWAII
HILO, HAWAII

DATE February 11, 1993

Memorandum

TO : Planning Department

FROM : Robert K. Yanabu, Division Chief, Engineering Division *pk*

SUBJECT: SMA USE PERMIT ASSESSMENT APPLICATION
Keauhou-Kona Surf & Racquet Club
TMK: 7-8-13: 3

The ground elevations shall be verified to confirm if existing ground is above the Base Flood Elevations. If it is, then the structures can be placed. If the existing ground elevations are below the Base Flood Elevations, the structures cannot be placed since it will alter the flow and may impact adjoining properties negatively.

The structures should not be placed for archaeological reasons. From the public hearing for the condominiums, our understanding is that the Inikiwai Heiau was a fisherman's heiau and must be visible from the ocean. That is why the buildings were separated. If the 7-ft. tall structures were to be built, it may be wrong archaeologically.

DHM:byf

cc: Tom Pack

✓

TO: Virginia Goldstein, Planning Director, County of Hawaii

FROM: Joseph N. Castelli, President, Homeowners Association
Keauhou-Kona Surf and Racquet Club

DATE: August 23, 1993

SUBJECT: Response to the following letters from the Department of Public Works to the County Planning Director

- a. February 11, 1993 from Robert K. Yanabu, Division Chief, Engineering Division, in reference to SMA Use Permit
- b. June 7, 1993 from Galen Kuba, Acting Division Chief, Engineering Division, in reference to Shoreline Setback Variance application

The February 11 letter expressed concern about the proposed structures in the base flood 13' elevation zone. Engineering drawings and surveys show the bases of the structures to be 17' to 20' above sea level.

In the June 7 letter, after reviewing the flood map, engineering drawing and surveys, the engineering division acknowledged that based on the plan submitted, all structures are above the base flood elevation zone and are exempt from Chapter 27 requirements of the Hawaii County Code.

Also in the Department of Public Works' February 11 letter, a question was raised as to the possibility of some of the barriers blocking the view of the Inikiwai Heiau from the sea. Heiau view blockage from the sea was also taken into consideration during our design and placement proposal of these barriers. The cement base pad of Building #4 is at a 25' elevation; the base of the heiau is approximately 2' higher. The top of the highest barrier is at a 27' elevation. This places the base of the heiau at the same elevation as the highest point of any of our barriers. Since the heiau is 8' tall, the top of the 2½' ku'ula stone is at an elevation of 37½'. No portion of the heiau will be blocked from ocean view by the barriers. At present, as in the past, there has been a 4' growth of Naupaka bushes along the makai side of the heiau. The top of the Naupaka is at approximately 29' elevation; thus as it now stands, 2' of the base of the heiau is not visible from ocean view.

I assure you that no one is more sensitive to the preservation of the Inikiwai Heiau and its function than I. This heiau was used by ancient Hawaiians to locate ko'a's (fishing grounds) at sea by lining up the heiau with some distant land feature. I have met Hawaiian fishermen who still use this heiau today. I have frequently found "first fish caught" offerings at the base of the ku'ula stone. Since this heiau is within the Surf & Racquet Club area I have designated myself custodian of this heiau. I have previously researched the heiau, cleared it of bushes and trees which were causing damage to the heiau and have built a podium-like glass display case at the base of the heiau with an interpretive description of the heiau. This was done in order to achieve recognition and respect of the heiau. I am personally maintaining this heiau and protecting it from damage from all sources in order to keep it in its original configuration and for its intended use.

Joseph N. Castelli

CE 8/27



KEAUHOU KONA RESORT COMPANY

September 17, 1993
Page 1 of 2

Virginia Goldstein, Director
Hawaii County Planning Dept.
25 Aupuni Street
Hilo, Hawaii 96720

Subject: Shoreline Setback Variance/Environmental
Assessment for Keauhou-Kona Surf &
Racquet Club. North Kona HI
TMK (3) 7:-8-13 por 03

Dear Ms. Goldstein:

The directors of the Keauhou-Kona Surf and Racquet Club Association have asked me as a professional civil engineer to comment on what effect the proposed wave dissipator barrier will have upon adjacent areas. With special concern for the surfers at Kahaluu Beach Park, and boaters at Kahaluu Bay.

I comment not only as an engineer, but as an engineer and manager of a marine construction contracting company in Hawaii for more than five years, and as the RME for Keauhou Kona Resort Company for the last 10 years; KKRC's work has included construction of the Laupahoehoe Breakwater, as well as miscellaneous Marine Improvements at Honokohau Harbor, Kailua Pier and Keauhou Bay. In addition, I have been an active surfer in Hawaiian waters for more than 40 years. The last 10 years of which has been in Kona, surfing innumerable times at Kahaluu Bay. I am also an active canoe paddler with the Keauhou Canoe Club which trains regularly in Keauhou Bay and in waters fronting the Surf & Racquet Club.

For the past six years I have lived in a beach front home at Keauhou Bay where I have experienced and witnessed most of the unusual wave and wind conditions - including the effect of Hurricane Iniki. I have also witnessed the effect of high northwest swells which are of particular concern to the Surf & Racquet Club. Out of professional interest and curiosity I have seen the effect of high surf on the Surf & Racquet Club buildings both during and after storms. The power of the surf and the damage it has caused are truly awesome. Left unchecked I would venture to guess that there will be similar if not greater wave damage to existing buildings within the next ten years.

*Keauhou-Kona Resort Company Is An Equal Opportunity Employer
A Partnership of Keauhou Land Corporation and Kamehameha Investment Corporation
P.O. Box 5685 • Kailua-Kona, Hawaii 96745-5685 • Telephone (808) 322-2708 • Fax (808) 322-9497*

The construction of the dissipator barriers should mitigate (but not eliminate) future problems. But what effect, will these barriers have on adjacent marine facilities; especially Kahaluu Bay and Keauhou Bay? The answer is NONE.

Why? First the location of the site is roughly midway between Kahaluu Bay and Keauhou Bay; each being approximately 1/2 mile away. The only time these barriers will have any effect on ocean conditions is when surf heights exceed 10 feet; the height necessary to top the existing sea cliffs at the proposed barrier location.

When wave heights exceed six to eight feet, the Kahaluu Bay surf spot "closes out". That means the surf crashes in one wall along the reef making surfing impossible. When surf heights reach ten feet and beyond nobody bothers attempting to surf at Kahaluu. So if there were any effect of deflected waves, due to the proposed barriers, there wouldn't be any surfers to bother.

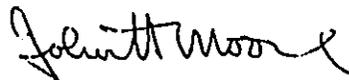
What would the effect be on Keauhou Bay? Again, Keauhou Bay is more than 1/2 mile from the proposed site. Between the Surf & Racquet Club and Keauhou Bay lies about 3/8 of a mile of 10 feet high cliff shoreline; which in conditions of large surf waves deflect primarily back to sea. I expect similar wave deflection for any action caused by the proposed barriers. Surf off the points immediately north and south of Keauhou Bay; as well as, surf potentially closing out across the bay are the only real concerns of boaters using the bay in times of high waves. The effect of any backwash off a cliff or barrier over 1/2 mile away could not possibly be a factor.

To summarize, my considered opinion is the proposed barriers would have no effect on waters at both Kahaluu or Keauhou Bays.

To emphasize the point, I would say the effect would not be negligible, it would be non-existent.

If you have any questions on this please feel free to call me at either 322-0078 or 322-6145.

Sincerely yours,



John Moore
Registered Professional
Engineer H. Lic. C-3197

PUBLIC COMMENTS AND APPLICANT'S RESPONSES



SIERRA CLUB, HAWAII CHAPTER

The Arcade Building, Room 201
212 Merchant Street, Honolulu, Hawaii 96813
P.O. Box 2577, Honolulu, Hawaii 96803
(808) 538-6616

Virginia Goldstein, Director
Hawaii County Planning Dept.
25 Aupuni St.
Hilo, Hawaii 96720

June 5, 1993

Dear Director Goldstein:

Subject: Shoreline Setback Variance/Environmental
Assessment for Keahou-Kona Surf and Racquet Club, Kailua-Kona

We have the following comments on the request from Joseph Castelli of the Homeowners Association of the K-K Surf and Racquet Club.

1. The fact that a variance is being applied for points out a glaring weakness in Rule 8 requirements. The Club should never have been permitted to build residential units in an area subject to wave damage by storms that recur as often as every two to three years. This is clear illustration how how invariable 40 foot setbacks from a poorly delineated shoreline is often insufficient to guarantee safe use of a property. We suspect also that the shoreline may have been improperly surveyed. Any competent analysis of the shoreline deposits should have produce D.E. evidence that the "shoreline" should have determined to be several dozen feet back from the cliff's edge. Why did the State Survey Office fail to perform this elementary analysis? Because of this, we citizens are being asked to allow unsightly piles of riprap to be placed on the natural shoreline - one more in the growing series of structures rapidly creating an ugly artificial shoreline along our beautiful natural coast.

2. The so-called environmental assessment (ea) submitted along with the setback application is extremely deficient. It is obviously a very biased promotion of the project has little objective information that might be valuable in assessing the impact of the proposed project. This is a serious misunderstanding of the purpose and procedures of the State Environmental Protection Act (Chapter 343, HRS) , and must be remedied before any further action is taken on this proposal.

3. We feel the following issues need consideration and revision:

- * A project description needs to be included.

- * Objective evidence must be supplied to justify the statement that "no wave deflection will occur." Please supply an engineer's professional explanation and assessment. Comments from the US Army Corps of Engineers also seems applicable here. This concern is relevant because of the proximity of adjacent homes, a boat harbor and a surf spot. All of these may be adversely affected by reflected waves.
- * The statement "area is completely devoid of floral and faunal life" deserves challenge. No mollusks, algae, or crustaceans? Nothing?
- * An assessment of the impacts to scenic resources is required. Will the ten riprap barriers, each thirty feet long by seven feet high, be visible from the ocean and adjacent properties? Boaters, surfers, kayakers, swimmers and snorkelers frequent the area. What effects will the proposed project have on onshore views?
- * On the positive side, we are gratified to see concern expressed for maintaining access along and to the shoreline. We trust that the County will require signs to be posted along the highway indicating the public access points. On the drawings supplied we are unable to locate the public access to the shoreline.

We urge that the Hawaii County Planning Dept. require the applicant to conduct a competent Environmental Assessment. In order to bring our analysis to the attention of the organizations that may have overlooked this application, we are sending copies of this letter to the parties listed below.

Sincerely,

Nelson Ho
Nelson Ho
for the Chapter Conservation Committee
Sierra Club, Hawaii Chapter

cc: US Army Corp of Engineers
DLNR
Jerry Rothstein
OEQC
Joseph Castelli

✓

TO: Virginia Goldstein, Planning Director, County of Hawaii

FROM: Joseph N. Castelli, President, Homeowners Association
Keauhou-Kona Surf and Racquet Club

DATE: August 26, 1993

SUBJECT: Response to June 5, 1993 letter from Nelson Ho of the Hawaii Chapter of the Sierra Club to Virginia Goldstein, Director, Hawaii County Planning Department

This letter is in response to a number of comments and requests by the Sierra Club regarding the Keauhou-Kona Surf and Racquet Club's application to protect its residents and property from infrequent, unusual, severe ocean storms. Following are responses to these concerns.

Sierra Club: "The Club never should have been permitted to build residences in the subject area"

Response: The Club did not construct these residential buildings. They were built by contractor Don Kraemer in 1978-1979 with all proper permits. These units were sold to innocent buyers who formed an association of homeowners along with other Surf & Racquet Club owners.

Sierra Club: "We suspect also that the shoreline may have been improperly surveyed. Any competent analysis of the shoreline deposits should have produced D.E. evidence that the 'shoreline' should have determined to be several dozen feet back from the cliff's edge. Why did the State Survey office fail to perform this elementary analysis? Because of this, we citizens are being asked to allow unsightly piles of riprap to be placed on the natural shoreline"

Response: On Thursday, June 18, 1992 at 10 AM an on-site meeting was held to determine if the shoreline as surveyed by Wes Thomas & Associates, Inc. was proper. Among those present at this meeting were Paul Nuha, State Land Surveyor (Honolulu office); Andrew Hirata RLS, State Survey Office (Hilo); Chrystal Thomas Yamasaki RLS of Wes Thomas & Associates, Inc.; two DLNR representatives and Jerry Rothstein, PASH representative. Discussed at this meeting was the fact that the elevation of the pali fronting the work area is 16 to 18 feet above sea level. Only ocean waves of greater than 16 to 18 feet in height can wash over the pali. This is not normal winter surf. Also observed was that there was absolutely no trace of any shoreline deposits or ocean debris anywhere on top of the pali in the proposed work area. Based on Hawaii State Land Surveyor Paul Nuha's inputs, the shoreline as surveyed by Wes Thomas & Associates, Inc. was deemed correct and was certified.

Notification of this certification was sent in a letter dated August 3, 1992 from William Paty, Chairman of the DLNR, to Wes Thomas & Associates, Inc.

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The state's criteria for the establishment of a shoreline is the point of high wash of normal winter surf as evidenced by a vegetation or other ocean debris line. Based on this criteria, our shoreline as certified is proper. normal winter or storm surf NEVER rises above the pali.

The state was not negligent in the analysis of shoreline deposits as absolutely none existed - not even one straw or single piece of seaweed. Ocean debris was conspicuously absent and provided the proof that the shoreline as surveyed was correct. At the on-site certification meeting the Honolulu State Surveyor Paul Nuha stated that he saw no evidence that normal winter surf ever breaks over the top of the lava ledge in the proposed work area.

The wave energy dissipators will not create an ugly artificial shoreline. Being in close view of many of our units, it is important to us that these wave energy dissipators are as natural looking as possible. Large pahoehoe rocks will be cemented together with lamp black-darkened cement creating an appearance of rippled lava. No one is more concerned with the appearance of the Surf and Racquet than we are.

Sierra Club: "The so-called environmental assessment submitted along with the setback application is extremely deficient"

Response: Because this area is a black lava ledge devoid of all life, the environmental impact portion of the 40' setback application consists of only one and one-half typewritten pages. This is all that can be written about nothing. I will contact your office to determine what else is required by the State.

Sierra Club: "A project description needs to be included"

Response: A full typewritten page of description was included in the 40' setback application. I will contact your office as to what the State's requirement is for a description of the proposed project and what, if any, additional inputs are required.

Sierra Club: "....'no wave deflection will occur.' Please supply an engineer's professional explanation and assessment. Comments from the US Army Corps of Engineers also seems applicable here. This concern is relevant because of the proximity of adjacent homes, a boat harbor and a surf spot."

Response: We will hire a professional marine engineer to address their concerns. I would like to hereby state however that the wave energy dissipators are not wave deflectors. They were designed by a professional engineer who has expertise in marine design.

No wave deflection can occur because normal winter surf or normal winter storm waves will ever reach these dissipators. Only waves from infrequent unusual severe storms can rise above the 16 to 18 foot high pali and reach these dissipators. This might occur possibly three times in a ten year period. The wave dissipators are not designed to block or to deflect these infrequent waves but to break up the waves as they pass over this washboard-like configuration. Dissipator spacing is such that the dissipated waves will drain back into the ocean. No deflection will occur!!!

The boat harbor of concern to the Sierra Club is 3/4 of a mile south with a peninsula of land northside of the harbor which protects it (Haikuua Point). The nearest surfing area of concern to the Sierra Club is that area in front of the Ku'umanu Surfers' Heiau which is 3/4 of a mile north of the proposed work area. There is no way that waves hitting the wave energy dissipators can cause any difference in waves at this surfing area. Also there should be no surfers in the ocean during infrequent, unusual severe ocean storms.

Other than those of the Surf and Racquet Club there are no homes within 3/4 mile north or 3/4 mile south of the proposed work area.

Attached is an opinion of the Army Corps of Engineers as requested by the Sierra Club.

Sierra Club: "The statement 'area is completely devoid of floral and faunal life' deserves challenge."

Response: This statement is true. The area is solid black pahoehoe lava ledge 16 to 20 feet above sea level, exposed to the hot sun all day, which is not conducive to any form of life. There is absolutely no single blade of grass or any signs of animal life in this area. No mollusks, algae or crustaceans. Nothing. I would like anyone who challenges this statement to come see for themselves with a magnifying glass and a microscope. It is possible that an occasional 'Ama crab may cross this area to shed its shell. It is also possible that there may be microscopic life in some of the crevices but this is highly unlikely due to the intense heat from daytime sun.

There is a form of life adjacent to this area, however, whose existence is endangered; the innocent people living in the buildings we are attempting to protect. Already two have been injured when a wave overturned a bed in which they were sleeping. Unless we provide protection soon there could be some loss of life with certain liability to those who prevent or do nothing to protect them.

Response to Sierra Club letter
August 26, 1993

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Sierra Club: "An assessment of the impacts to scenic resources is required.....
What effects will the proposed project have on onshore views?"

Response: This is a legitimate concern. During the design of the wave energy dissipators, special consideration was incorporated into the design to ensure that the on-shore view was not affected by the protection devices.

Refer to the Final Site Plan of the Proposed Work Area dated March 10, 1993 prepared by Triad Engineering. This drawing shows the base pad of the buildings to be at 23.5 foot elevation while the top elevation of the dissipators fronting the buildings are at 23-25 feet; thus in the worst case 1½ feet of view of the bottom of the buildings will be blocked.

In the opening between Buildings 4 and 5, the Inikiwai Heiau encompasses the entire area. The pad elevation of Building 4 is at a 25 foot elevation while the base of the Inikiwai Heiau is 2 feet higher, or 27 feet. The maximum elevation of the dissipator fronting this area is designed to be at the same elevation as the base of the Inikiwai Heiau, or 27 feet. The top of the heiau is at an elevation level of 35 feet with the top of the Ku'ula stone at an elevation of 37½ feet. Since the base of this heiau is at the same elevation as the elevation of the highest dissipator, blockage of the heiau or on-shore view in this area will not occur.

I would like to state in closing that we are not developers, promoters or contractors. We are working without pay or compensation and without profit motive of any kind. Our only concern is to save lives and protect the buildings which already exist.

Joseph N. Castelli

cc: Harry Kim, Civil Defense Agency
US Army Corps of Engineers
DLNR
OEQC
Jerry Rothstein
Sierra Club