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Analysis of Newport Banning Ranch Coastal Development Permit

Undertaken by *Wild Heritage Planners – Carl Welty Architects – Blake Whittington*
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EXECUTIVE SUMMARY

Following is an analysis conducted by Jack Eidt, Carl Welty, and Blake Whittington on the future of the Banning Ranch site and the suitability of a massive mixed-use development project there proposed by Newport Banning Ranch (NBR) development consortium under review by the California Coastal Commission.

First we analyzed the site, then the development proposed, and finally suggest a series of planning and design guidelines that could shape a project that would meet the needs of the community and the development consortium, while protecting and regenerating the significant ecologic role of this irreplaceable coastal public resource.

Santa Ana River Delta Revitalization. First of all, we see the need to consider the planning and development of this site as integral to the restoration and revitalization of the hydrologic cycle of the Santa Ana River, a vital component of providing water sustainability and security for Southern California. The plan as proposed compromises a significant portion of the upland habitat as well as drainage areas, which would foreclose opportunities to restore the function of the river delta/estuary that has been lost through channelization and human modification of the river. Using the example of the \$1.3 billion ongoing restoration of the Los Angeles River and the further studies of its entire 51-mile course, we foreclose this opportunity of a 400-acre piece of vital habitat at our peril. See Pages 5-9 for a fuller discussion.

Summary of Impacts. Next, we list the most pressing significant and unavoidable adverse impacts to the environment that this latest proposal, even reduced from its October 2015 level, still present for Central Orange County communities of Newport Beach, Costa Mesa, and Huntington Beach, and the beaches, tidelands, marshes, wetlands, and riparian areas of the

mouth of the Santa Ana River leading into the Pacific Ocean. Some of the significant impacts that cannot be mitigated include:

- Destruction of Environmentally Sensitive Habitat Areas (ESHA) and removal of endangered and threatened wildlife species habitat from grading and oil and gas impact land remediation,
- Impacts to water quality and hydrology from storm water runoff,
- Increases in greenhouse gases and violations of the tenets of SB 375 (Sustainable Communities and Climate Protection Act) and AB 32 (Global Warming Solutions Act),
- Impacts to cultural resources,
- Violations of the Coastal Act for the above issues which should be a basis for the rejection of this development alternative.

We look at Environmental/Social/Cultural/Design Impacts of the NBR Plan on Pages 10-11.

Alternatives Analysis. Banning Ranch presents an opportunity to demonstrate that human development can work with nature to enhance and restore sensitive native habitat if designed with a deep understanding of the site's energy and water cycles. This is the concept of Regenerative Design.

The term "regenerative" describes processes that restore, renew or revitalize their own sources of energy and materials, creating sustainable closed-loop systems that integrate the needs of society with the integrity of nature. The present NBR proposal does not approach this level of design sophistication. In a world of impending environmental collapse from global warming-induced climate change and a future facing water and energy resource challenges, we must do better.

In order to avoid impacts to surrounding communities and ESHA while preserving options for river revitalization, we drew up a baseline plan to establish a development pattern that adheres to the existing site topography and respects the intrinsic environmental quality of the site (page 3 and 12-18).

We propose a rethinking of the proposed plan, building in the fundamentals of ecological planning, pioneered with historical projects such as the Sea Ranch (Sonoma County, CA) and Village Homes (Davis, CA), and expanded to consider Regenerative Design with Sustainable Sites criteria that goes well beyond the LEED (Leadership in Energy and Environmental Design) criteria touted by NBR.

See: Benefits of Regenerative Design (Page 12), Design Alternatives for Banning Ranch (Pages 12-18), Alternative Development Models (Page 19-24), Eco-Developments (Page 25-28). and Sustainable Sites Design Criteria (Pages 28-32).



Conclusion. Based on the reality that this proposal violates the California Coastal Act and presents numerous significant and unavoidable adverse impacts to the environment and community, this project should be rejected for a Coastal Development Permit by the California Coastal Commission. We do agree with members of the Commission as well as Commission staff, that a development project that could satisfy the needs and interests of the project applicant, while not only preserving, but regenerating the coastal environmental resources, could be achieved with a more sensitive and comprehensive approach. We use this document to start the discussion.

Wild Heritage Planners collaborates with government, industry, and stakeholders as urban planners, transportation advocates, and environmental sustainability advisors. Jack Eidt, co-founder and Director, is an Urban Planner, Environmental Designer, and Journalist. He advocates a collaborative design process that embodies principles from nature to achieve maximum efficiency, creates a sense of public place, connecting elements of the wild with the urban, while employing a minimum resource footprint.

Carl Welty has over 35 years of experience in the field of architecture. He is a proponent of Regenerative Design, the idea that we can create buildings and communities that generate more resources (energy, water, and building materials, to name a few), and at the same time restore native habitat. Carl is principal of his own firm, Carl Welty Architects, based out of Los Angeles.

Blake Whittington, trained as a landscape architect, has worked in watershed-wide solutions to regional environmental concerns. His projects range from developing funds for and managing Arundo cleanup projects, to advising San Gabriel River recreation enhancement and cleanup programs, to developing multi-purpose projects for storm water cleanup.

Regional Significance of Banning Ranch Site for Comprehensive Santa Ana River Revitalization

Banning Ranch, situated at the Pacific Ocean terminus of the Santa Ana River, has recently been recognized by SB 1390 as a statewide resource through the formation of the Santa Ana River Conservancy. Through concerted action by the State's Coastal Commission and Coastal Conservancy along with all other parties of interest including the 17 agency Southern California Wetlands Recovery Project, the Banning Ranch in its entirety should be valued as the one remaining opportunity for a coastal public resource.

There are very few areas along the southern California coastline with the kind of diverse topography and habitat for wildlife found at this site. Furthermore, the site has unique potential due to its preeminent hydrologic, biologic and ecosystemic role as river delta to a system that meanders 110-miles, draining a watershed encompassing about 3,200 square miles of San Bernardino, Riverside and Orange counties, populated by some 5 million people.

A delta is a body of sediment deposited at the mouth of a river or stream where it enters the ocean. A river creates a delta by laying down sediment or rock debris, called alluvium, made up of gravel, sand, silt, and clay picked up and carried along its course. Rivers can also enter into the sea in the form of an estuary, a partly-enclosed coastal body of brackish water with a free connection to the open sea. Because of the flood control channelization of the Santa Ana River, this natural formation of a delta/estuary has been obliterated.

The site should be preserved without significant development for the following reasons:

- Banning Ranch is the only remaining large unprotected coastal open space in Southern California. If it is developed, it is gone forever.
- The lowland wetland/riparian areas at Banning Ranch present an unprecedented opportunity to revitalize and restore the river delta of the 110-mile Santa Ana River. We must not foreclose opportunities to integrate lessons from exemplary river and wetland revival projects on the Los Angeles River, the Guadalupe River in San Jose, California, the Sacramento and San Joaquin River Delta, and the San Diego River.
- Restored waterways, where significant hydrologic and habitat restoration is combined with public open space and recreation, yield commercial, social and ecosystem benefits for the region and state.
- Banning Ranch's diverse topography of upland mesas drained by arroyos, with numerous vernal pools with rare biotic life, proximate to the sizeable lowland wetlands, creates a remarkable abundance of wildlife. These areas are biologically interdependent. Through significant development of these mesas, the ecologically synergistic effect of topography diversity would be lost forever.

BANNING RANCH AS SITE FOR SANTA ANA RIVER DELTA REVITALIZATION

Banning Ranch could be the site of significant restoration of a functional wetland/watershed complex ecosystem for the mouth and delta of the Santa Ana River. The goals would include:

- Increase education, recreation, open space, and conservation opportunities
- Restore lost aquatic, riparian and freshwater marsh habitat.
- Improve and restore dynamic ecological processes, including the “staircase” between the diverse environments including beach, dunes, surf zone, marsh, intertidal river, vernal pools, riparian, willow forest and grassland scrub
- Restore substrate
- Improve habitat connectivity
- Improve sedimentation processes
- Improve infiltration and recharge
- Rectify the problem of saltwater intrusion into freshwater aquifers
- Become the crown jewel of the Orange Coast River Park Master Plan
- Maximize involvement of OCRP ownership stakeholders, including US Army Corps of Engineers, State of California, OC Parks, OC Flood, the Cities of Newport Beach, Costa Mesa, and Huntington Beach, and Newport Banning Ranch LLC

The environmental imperative:

- Creating habitat in the Pacific Flyway, an important destination for many avian species on the international migratory treaty path
- Stemming and reversing biodiversity loss in the California Floristic Province, one of the top 25 global biodiversity loss hotspots

A number of examples of river revitalizations have been happening around California and beyond include:

The Los Angeles River Revitalization Master Plan

Twenty-nine years ago, L.A. civic leaders, led by poet Lewis MacAdams, founded Friends of the Los Angeles River (FoLAR) as a continuing work of art (and public education as well as politics) to bring the Los Angeles River back to life. After a long process of educating city residents and the political establishment, in 2007 the [LA River Revitalization Master Plan](#) stipulated twenty major opportunity areas, promising to restore habitat, treat urban storm runoff, improve water quality, creating a network of parks and a continuous River Greenway, which will spark economic growth to newly-greened neighborhoods along the 51-mile river.



After eight years of study, the Army Corps of Engineers released its proposal to restore 11 miles of the LA River between Griffith Park and Downtown. The report considered four options, each with the goal of getting the river flowing again, “reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributaries,” while maintaining the river’s role in flood control and providing recreational opportunities. Overleaf is a rendering of a restored Taylor Yard from City of Los Angeles.

The plan (detail shown overleaf at Taylor Yard, a former railroad storage site in the Elysian Valley of L.A.) intends to remove concrete and restore a soft-bottom where possible to establish a connected riparian corridor. Neighborhoods would be integrated with the river through a network of greened streets, sidewalks, and pathways. Compromises between ecology and flood control could be implemented through collaboration between the City and County of Los Angeles, the Army Corps of Engineers and numerous regional and local non-profit organizations and public stakeholders in the area.

First San Diego River Improvement Project, San Diego, CA

The first phase of the "First San Diego River Improvement Project" or "FISDRIP" sets a good example for Banning Ranch to follow. In place of a planned concrete channel as envisioned by the Army Corps of Engineers, the project was a successful collaboration by Public Agencies, Engineers, Biologists and Landscape Architects in designing a highly sustainable and functional flood control system that respected and preserved the natural habitat. Originally completed in the late 1980's, this project represents an

excellent example of restorative design within an urban context, testimony to nature's ability to heal itself, survive within a busy transportation corridor and provide human connections to the natural environment.



The first phase of the San Diego River Improvement Project has earned the Landmark Award from the American Society of Landscape Architects and the National Trust for Historic Preservation. Designed by San Diego's Wimmer Yamada and Caughey, the project features created wetland habitats, wildlife preserves, picnic areas, bikeways and pedestrian paths. The project reduced and controlled the seasonal flooding that previously plagued the Mission Valley area each year.

By approving such an intense development project on a sizeable portion of the Banning Ranch, we would lose significant opportunities to restore the environmental service of a biologically-rich keystone ecosystem in deposition of 110-miles of upriver sedimentation flow toward the coast, the delta of the Santa Ana River, will be significantly foreclosed.

Morro Bay National Estuary Program, Morro Bay, California

Morro Bay on the Central California Coast provides an excellent example of a community that worked to protect its coastline through joining the EPA's National Estuary Program. This program could provide necessary funding and political impetus to move a comprehensive Santa Ana River Estuary/Delta revitalization forward, advancing the master plan goals of the Orange Coast River Park while broadening the scope and bringing together the myriad of interests that are advocating for coastal watershed sustainability in Orange, Riverside and San Bernardino Counties.

The rate of sedimentation in Morro Bay was as much as ten times the natural rate, due largely to changes caused by people. The estuary could lose all of its open-water and inter-tidal habitat within 300 to 400 years. The area was designated as a State Estuary in 1994, and the Morro Bay National Estuary Program was established in 1995 after many years of hard work by the community, in particular, the Bay Foundation of Morro Bay and the Friends of the Estuary. The individuals who served in these organizations never quit until they reached their goal of National Estuary designation.

There is also a similar program for restoration of the Santa Monica Bay through the Bay Foundation, as well as 26 other estuaries along the Pacific, Atlantic, Gulf, and Puerto Rican coasts, sponsored by the National Estuary Program.



Summary of Impacts: Newport Banning Ranch Proposal

The sheer extent of the proposal, the intensity of combining a major hotel property with varying types of residential uses, mixed with visitor- and neighborhood-serving commercial uses, goes against the intent of the Newport Beach General Plan, approved by the voters in 2006, to protect the entirety of the site for future generations. It seems premature to consider a Coastal Development Permit before the State Supreme Court has weighed in on the case of the inappropriate nature of this proposal.

Nevertheless, this proposal, despite being recently amended and downsized, continues to violate the thresholds of significance in the areas of land use, aesthetic/visual quality, transportation/traffic, air quality, greenhouse gas creation, and noise impacts, as stated in the environmental documents completed in 2011 by the City of Newport Beach.

From a planning and design perspective, the project as currently proposed should be rejected for a Coastal Development Proposal on the basis of the following issues:

- The most recent plan ignores existing topography and proposes 2.8 million cubic yards of soil would be excavated and stockpiled to prepare the land for development, destroying a unique coastal environment. NBR's plan to dig up over a football stadium full of oil-contaminated dirt from the project site means that toxic, oily runoff from this excavation during big or frequent storms will also be diverted to the ESHA wetlands, Santa Ana River, and the receiving waters of the Pacific Ocean.
- Although some urban runoff currently flows to Banning Ranch's wetlands, NBR's proposal will increase impervious surfaces significantly and hence, increase polluted water draining into the Santa Ana River and Pacific Ocean. While provision of rain barrels and impervious area runoff dispersion connected to harvest and reuse cisterns in developed areas are good mitigation measures for impacts, these engineered solutions versus more holistic solutions, make the area less resilient and open the possibility to polluting the wetland area, the river, and the ocean. During significant or frequent precipitation events, NBR's major water quality Best Management Practice (BMP) is a proposed multi-acre Diffuser Basin in the ESHA wetlands habitat area. It would use this rare habitat area as an effective flood control detention basin, without proper removal of pollution. Hence, failure to use infiltration basins in the upland area would pose large water quality risks for the ESHA wetlands, Santa Ana River, and nearby beaches.
- Low Impact Development suggested by NBR's engineers addresses storm water runoff, yet their latest proposal ignores the economic potential to reduce energy consumption and produce energy on site by orienting streets and buildings to the sun.
- Community design that depends on importing energy from offsite sources via the energy grid increases greenhouse gas emissions, increases the development's carbon footprint, and needlessly increases costs for energy. Just by orienting communities to the sun reduces energy consumption by 30 to 40% without increasing construction cost. With even more innovation and creative design, energy savings can go well above 50%. Now is the time that California must demonstrate to the world how to build climate appropriate resilient communities, and this proposal falls far short.

- Banning Ranch is part of the several thousand-year-old Native American village Genga, an important historic and cultural site for both the local Juaneño (Acjachemen) and the Gabrielino (Tongva) Nations. The “Banning Ranch Cultural Properties and Landscape” was added to the state Sacred Lands file, maintained by the California Native American Heritage Commission at the request of local tribal leaders, and meets the criteria to be considered a Tribal Cultural Resource under the California Environmental Quality Act as recently amended by AB 52.
- Additionally, eight Native American archeological sites have been documented on the property, with at least three of these eligible for listing on the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). The entire area is also likely eligible for listing on the National Register as a Traditional Cultural Property.
- Although the cultural resources and archaeological sites on Banning Ranch have been adversely impacted as a result of oil operations on site, previous disturbances do not compare to the damage that could result from the proposed project. Massive grading proposed would most certainly result in the unearthing of Tongva and Acjachemen cultural items of great significance to both tribal communities. Additionally, creating a massive new housing development would impact the integrity of the site as a traditional cultural property and would impair the ability of contemporary tribal citizens to utilize the area for traditional cultural practices today.
- Considering that over 90% of known Native American traditional cultural properties and archaeological sites in Orange County have been destroyed because of this type of development, the Acjachemen and Tongva evidence on Banning Ranch must be left in place.
- The Coastal Commission must be cognizant of the California Supreme Court’s decision on November 30th on the Newhall Ranch mega development north of Los Angeles. The decision requires public officials to determine whether new development projects will interfere with the state’s climate goals stated in A.B. 32. The decision also protected endangered fish and other wildlife by disallowing capture and relocation as mitigation for impacts to endangered species. The court further required more consideration to the issues regarding cultural resources and native peoples.
- For a project that creates substantial levels of greenhouse gases, has significant and unavoidable impacts to federally listed threatened and endangered wildlife, and destroys a Native American Traditional Cultural Property, the Newhall Ranch example carries a salient lesson in pushing forward a project at Banning Ranch that so burdens our state’s resources.

On the basis of the above series of comments, Wild Heritage Planners and our consultants urge the California Coastal Commission to deny this CDP for the Newport Banning Ranch proposal.

BANNING RANCH ALTERNATIVES: BENEFITS OF REGENERATIVE DESIGN

Banning Ranch presents an opportunity to demonstrate that human development can work with nature to enhance and restore sensitive native habitat if designed with a deep understanding of the site's energy and water cycles.

Humans are at a turning point in our history and if we continue to develop cities without taking into account the larger natural systems of which we are a part, we will put future generations at risk of more extreme weather events and failures in our energy, water, and food delivery networks. Humanity is at a point where using fewer resources is not enough to reverse the lack of balance between human development and nature's closed loop energy cycle.

By the 1970s many scientists began describing the potential impact of human development on earth's atmosphere and the risk of continuing to consume resources without concern for the balance between consuming and restoring resources. At that time, a few design professionals began to listen to the warnings of scientists and responded with well-reasoned practical solutions to building human communities in partnership with nature. Regenerative Design, a process-oriented systems theory championed by John Lyle at Cal Poly Pomona, is a comprehensive approach to that goes beyond sustainable design that provides insights on how to build resilient communities that will allow other species to thrive in the near future and enable the cities we build today to thrive in the predicted uncertain climate future.

The Banning Ranch is an opportunity to not only preserve a portion of coastal California landscape but to demonstrate how to build cities that work in partnership with nature to allow humans and other species to thrive.

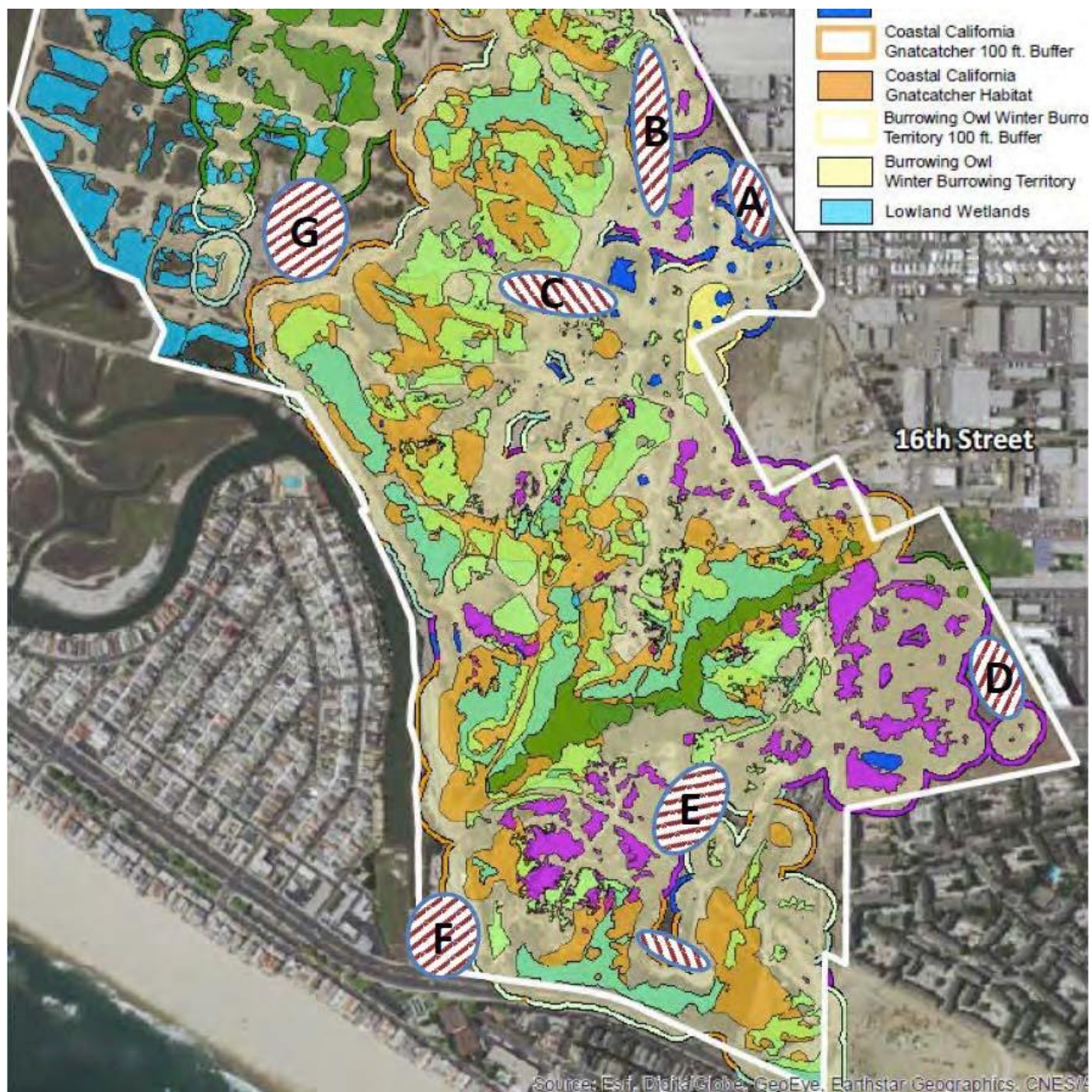
Regenerative Design:

- Restore native habitat to support the continuing use by future generations
- Build communities that enhance the local closed energy cycle
- Build communities that generate energy consumed on site – orienting development to absorb energy directly from the sun with passive designed buildings is one simple cost effective first step to building cities in partnership with sites closed energy loop.

Regenerative design provides for all human systems to function as a closed ecological/economic system. Ecosystems and regenerative designed systems are holistic frameworks for restoring balance between humans and other plant and animal species and best practices for building resilient communities. The act of destroying massive amounts of ESHA by grading and re-creating the site topography, as proposed by NBR, is the opposite of regenerative design. We suggest a foundational rethink, beginning with development pattern illustrated below.

DESIGN ALTERNATIVES FOR BANNING RANCH

Wild Heritage Planners examined an alternative development pattern generated from the Coastal Commission Staff Environmentally Sensitive Habitat Area (ESHA) maps that stipulated seven possible areas for development.



We focused primarily on three of those areas because several sites were either engaged in active oil and gas uses or would present significant and unavoidable impacts to mapped areas of ESHA. Near the terminus of 17th Street, two sites identified as A and B, and near the terminus of 15th

Street is the area identified as D. All three areas total 6.5 acres of developable area, protecting ESHA and most of the buffer areas recommended, except where it could be reduced slightly.

We have recommended a medium-density residential development type for all three areas. We are looking at a prototype that is generally 16 to 18 dwelling units per acre. This would produce three- to four-story buildings with parking one-half-story underground. By going with a higher density prototype, we can maximize number of units, hence revenue margins for the developer, while opening up further areas around the buildings for ecosystem regeneration and open space for residents.

This might be counterintuitive, lower density is often associated with lower environmental impact. But from a habitat standpoint, medium density scenarios allow for protection of a maximum acreage of native habitat and opens up possibilities to restore more native habitat on the development site.

See the breakdown to date. See below for drawings, including higher-density illustrated concepts for Areas A, B, and D.

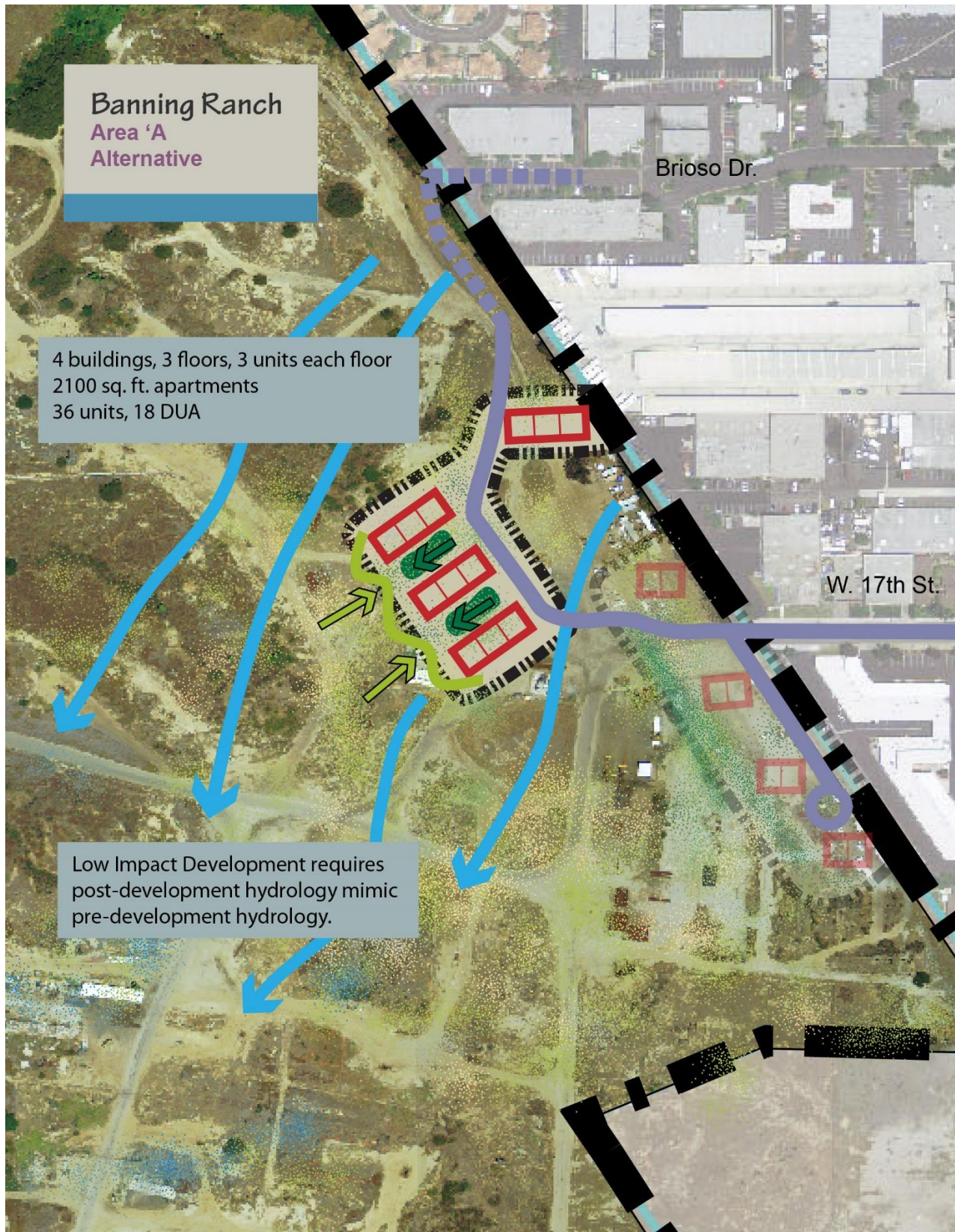
Development Area	Acreage	Density	Unit Square footage	Total Number of Units
A	2	18 DU/AC	2,100	36
B	1.5	16 DU/AC	1,900	24
D	3	16 DU/AC	2,500	48
			TOTAL MEDIUM DENSITY	108

Communal underground parking increases the cost of units somewhat, and requires a certain amount of critical density, but it dispenses with driveways, garages and excess pavement associated with lower density developments. We found the reduced density option would require 42 percent more paving from added streets required to access smaller homes.

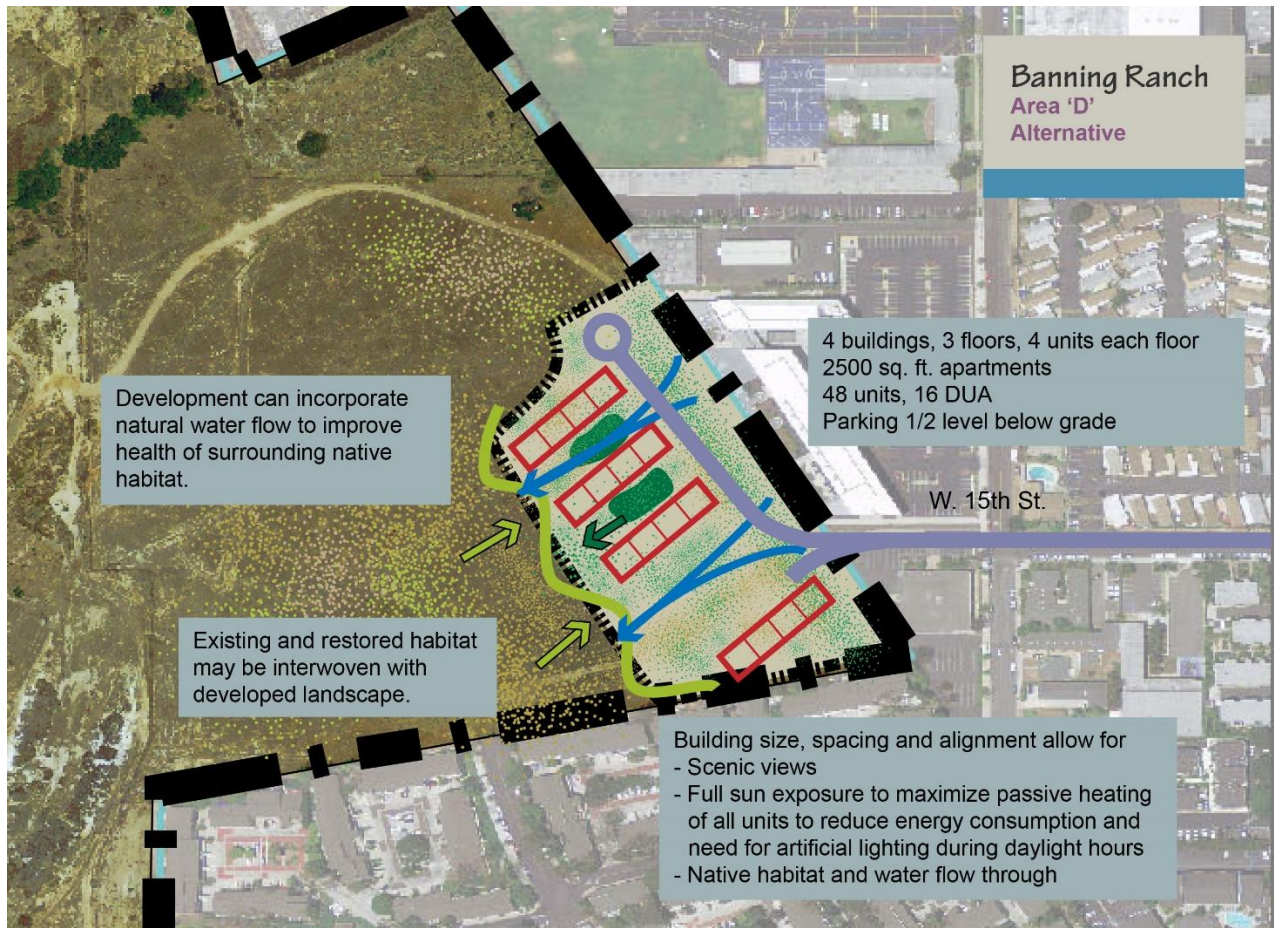
This pattern would support the larger vision of protecting native habitat, create connecting open space, and perhaps even restoring (regenerating) habitat in certain areas. Low-impact design requirements to integrate drainage swales can also be incorporated into this scenario to clean runoff before it flows into sensitive vernal pools. At this density, each of the units can maximize their passive solar orientation as well.

The following maps illustrate the lowest-impact development scenario, separated into areas A, B, and D in the context of the entire site.





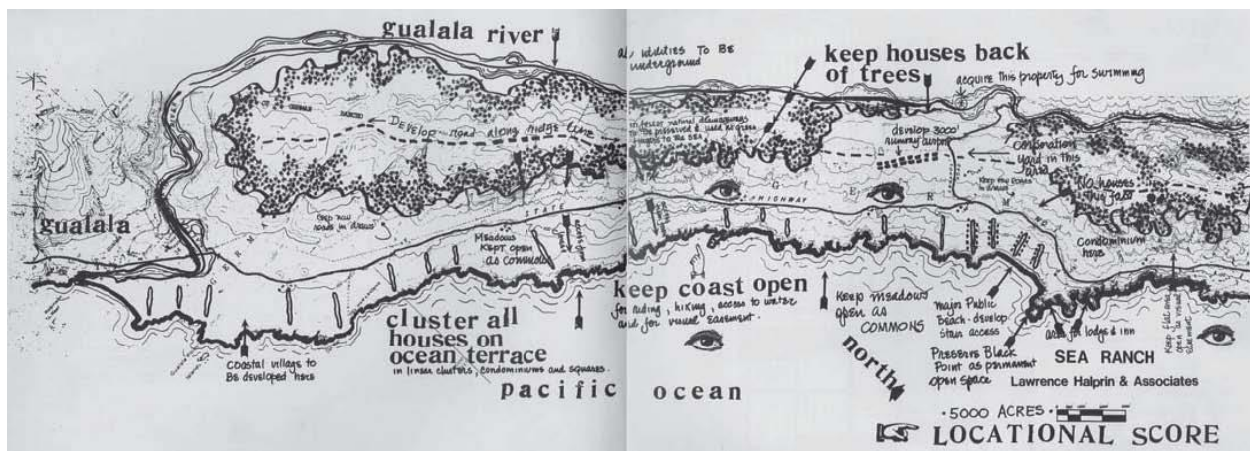




ALTERNATIVE DEVELOPMENT MODELS: The Sea Ranch in Sonoma County, Utopia by the Sea, 1960s to Present

Many correlations were made between Banning Ranch and the Sea Ranch proposal in the 1960s. Set on a mystical 10-mile stretch of California coast, Sea Ranch assimilates with the elements rather than confronting them, based on a plan that codified a covenant with nature. Sea Ranch is a community drawn together by a unique shared vision and respect for its concept, an early example of ecological planning that should not be lost on planners for Banning Ranch. The founding ideal, shaped by the all-star cast of architects, was that the land should be shared rather than subdivided, a dynamic form of conservation or "living lightly on the land."

Landscape Architect Lawrence Halprin designed the master plan based on his experiences on a kibbutz, of open land held in common and houses designed in deference to nature. The battles over land and sea access, part of what spawned the California Coastal Commission, ensured that 10 miles of rugged bluffs and sandy beaches were something to be accessed publicly, rather than privatized for the wealthy and privileged.



Architect Charles Moore called Sea Ranch his "Mother Earth." The designer of Condominium One, a complex inspired by weathered timber-framed barns, now is listed on the National Register of Historic Places, and remains one of the most influential buildings of the 1960s.



The early architecture was communal and modest, with houses clustered perpendicular to the ocean so that everyone would have a view, leaving the meadows open and held in common. Houses were sited to settle into the landscape, like quail nesting.

Obie Bowman designed the Walk-in Cabins, a remote gathering of 15 Hobbit-like dwellings in a kingdom of redwoods in the hills above Highway 1, where no cars are allowed. They are left about a quarter-mile down a dirt road.

Arguably, Sea Ranch's most hallowed ground are the Hedgerow Houses, a group of genteel rustic shacks, some as small as 1,000 square feet, that designer Joseph Esherick tucked inconspicuously into a row of wind-blown cypress trees not far from Black Point Beach.

Unfortunately, many of these concepts have been lost in subsequent planning and sacrifices to the real estate and political interests. By the late 1990s, the area has become suburbanized, but still retains the general outline of the original plan.

ALTERNATIVE DEVELOPMENT MODELS: Village Homes, Davis California, 1960s to 1980s

Village Homes is a planned community in Davis, California, Yolo County, designed to be ecologically sustainable by harnessing the energies and natural resources that exist in the landscape, especially storm water and solar energy.



Photo Above: Grass lined swale collects rainwater, which then slowly percolates into the soil where it is protected from runoff and evaporation.

Village Homes demonstrates simple principles of how to build in partnership with nature. The basic principles of regenerative design are demonstrated here are well tested by time, yet these profoundly simple principles are rarely incorporated as thoroughly as they were in Davis nearly a half a century ago. These ideas are well documented and proven to reduce the local demand for imported energy, the only thing new is the predicted impact of climate change is apparent all over the world and yet we only nibble at that edges of real solutions.



California now has at least four times the number of dwelling units that existed in 1960, yet the number of developments similar to Village Homes that offer real solutions for restoring balance with nature and examples of regenerative resilient communities are too few – less than a dozen.

The principal designer of Village Homes was architect Mike Corbett who began planning in the 1960s, with construction continuing from south to north from the 1970s through the 1980s. Village Homes was completed in 1982, and has attracted international attention from its inception as an early model of an environmentally friendly housing development, including a visit from then-French President François Mitterrand.

The 225 homes and 20 apartment units that now constitute the Village Homes community utilize solar panels for heating, and are oriented around common areas at the rear of the buildings, rather

than around the street at the front. All streets are oriented east-west, with all lots positioned north-south. This feature has become standard practice in Davis and elsewhere, since it enables homes with passive solar designs to make full use of the sun's energy throughout the year. The development also uses natural drainage, called bioswales, to collect water to irrigate the common areas and support the cultivation of edible foods, such as nut and fruit trees and vegetables for consumption by residents, without incurring the cost of using treated municipal water.

More Examples: Passive Net-Zero Buildings appropriate for the Banning Ranch Development

Climate appropriate design from the California's Energy Commission: "Here's a news flash...the sun rises in the east and sets in the west. Here's another... the sun is higher in the summer sky and lower in the winter sky. So what does that have to do with a passive-design house? This simple lesson of nature literally sets the foundation for a well-designed solar home."

"The optimum position for maximum solar benefits is true south but you can vary the orientation within 20 degrees of that direction with minimal effect. In most parts of the U.S., however, just making the building the right shape, properly placing its windows and pointing it in the right direction can cut the building's total energy use by 30 percent- 40 percent at no extra cost."

Our alternative proposal for the Banning Ranch property orients the buildings to optimize passive heat gain for passive winter heating and minimize heat gain during summer months. There are very few examples of passive designed multi-story multi-family residential buildings; California has been an international leader on energy conservation and protecting the environment. A high profile project like the Banning Ranch Development is an opportunity to demonstrate to the world how to build energy efficient resilient communities.

Energy efficient green buildings are good for business

Owners of green buildings reported that their ROI improved by 19.2% on average for existing building green projects and 9.9% on average for new projects. Examples include:

- One major hotel project spent an estimated \$184,000 for building energy efficiency improvements and has realized a yearly savings of \$58,035, yielding a 3.17-year break-even point.
- A new CoStar report indicated that while traditional (non-LEED or non-ENERGY STAR certified) Los Angeles buildings command an average of \$2.16/ft², tenants were willing to pay \$2.69/ft² for ENERGY STAR certified buildings and \$2.91/ft² for LEED certified

spaces. The increased cost of rent appeared to have little effect on vacancy rates, which remained relatively constant with the general market over the 5-year evaluation period.

Alternative scheme for Banning Ranch: LEED Certified buildings generally consume less energy than non-LEED Certified buildings, but not always. Orienting buildings to optimize passive heating and cooling will increase the benefits of energy efficient technologies incorporated into LEED and Energy Star buildings. By combining passive design strategy of orienting buildings south and LEED Energy Standards Banning Ranch will establish a new standard in energy efficient resilient communities for California and the world.



Photo Above: First multi-unit residential building certified to Passive House Plus-- Housing complex in Innsbruck, Austria, combines energy efficiency and renewable energy.

California is considering requiring all residential buildings achieve Net-Zero Energy by 2020. Orienting buildings to the sun is the most cost effective strategy to achieve Net-Zero Energy standards.

BANNING RANCH ALTERNATIVES: ECO-DEVELOPMENTS

The geometry of the proposed NBR resort, imposed through grading and habitat destruction on to the landscape will create the most generic of guest experiences. The design appears like a resort or hotel that could be in “anywhere USA.” By designing to the unique and diverse local topography and vegetation in a holistic way, a one-of-a-kind guest experience could be achieved that could be tailored to all income levels of coastal, visitor-serving accommodation. The Southern California coast is a special place, and this being one of the last significant parcels left, effort should be taken to create within the context of the site to preserve ESHA and wildlife areas. Resorts and communities that have a unique quality often have greater economic returns.

Furthermore, the NBR plan has roads and parking areas that will further destroy the integrity of the wild landscape. NBR should consider a medium-density Eco-Resort prototype where parking would be offsite at the eastern edge of the property, with shuttles that would bring people into the resort. Within that scenario, low-impact, low-cost visitor-serving accommodations could also be provided on-site.

The following eco-developments could be used as models for a sustainable re-design of NBR’s environmentally heedless and generically-designed plan.



Southern Ocean Lodge in Australia is an example of human development designed to respect sensitive native coastal landscape habitat. This luxury hotel demonstrates that Eco Design can be upscale.

The Southern Ocean Lodge is a resort, but this sensitive approach to building in harmony with native landscape is adaptable for larger multi-family residential developments.



The Fogo Island Inn, on Fogo Island, Newfoundland, Canada is another example of design that is mindful of sensitive costal landscape.





Fogo Island Inn see: <http://www.fogoislandinn.ca/fii/>

Other development options for low impact resorts provide examples that low impact “Eco Resorts” can provide anywhere from luxurious amenities to basic backcountry rustic, while preserving sensitive native habitat.



SUSTAINABLE SITES DESIGN CRITERIA

Development in such a sensitive ecosystem requires the utmost attention toward preservation of natural resources that we do not see employed by Newport Banning Ranch. There is mention of using the LEED (Leadership in Energy and Environmental Design) criteria for green building. What this lacks are standards for landscape development that would include areas with or

without buildings, including those created by the Sustainable Sites Initiative (SITES, <http://www.sustainablesites.org/>)¹.

One example is the Seagrove project in New Zealand (pictured below).



¹ Most of this text is extracted or paraphrased from “the Sustainable Sites Handbook” by Meg Calkins, John Wiley & Sons, Inc., Hoboken NJ, 2012

SITES defines sustainable design as “design, construction, operations and maintenance practices that meet the needs of the present without compromising the ability of future generations to meet their own needs.” Sustainable site design emphasizes design of whole, complex functioning systems; a widened scale of analysis and design consideration; highly site-specific (as opposed to universal) design responses; and continued monitoring, management, and adaption to ensure healthy, functioning systems for the life of the landscape.

SITES focuses on the benefits humans obtain from ecosystems, otherwise known as ecosystem services. The term ecosystem services describes how the living elements of ecosystems, such as vegetation and soil organism, interact with the nonliving elements, such as water, air and bedrock, in ecosystem processes to produce goods and services that offer direct or indirect benefits to humans. Such processes include water purification, urban heat island reduction, pollination, waste decomposition, erosion control, air cleaning, biodiversity and recreation.





Sites can be developed sustainably when ecosystem services are protected, enhanced or created. For example, structures can be built with green roofs to replace native flora, manage water flows and decrease heat island effect. Natural hydrologic features (e.g. vernal pools and connecting swales) can be incorporated into the developed landscape instead of being overrun. The developed landscape can be an organic extension of the surrounding native landscape rather than an imposed, unnatural and thoughtless design.

Within the scoring system for SITES conserving habitats for threatened and endangered species is a prerequisite before any points are assigned. Points in the Soils and Vegetation section are given for such items as conserving special status vegetation; conserving and restoring native plant communities; and conserving healthy soils. SITES designates levels of accomplishments for developments depending on how many points the project earns.

Another development approach less defined than SITES is conservation development.

Conservation development is a controlled-growth land use development that adopts the principle for allowing limited sustainable development while protecting the area's natural environmental features in perpetuity, including preserving open space landscape and vista, protecting farmland or natural habitats for wildlife, and maintaining the character of rural communities.² The

² Arendt, Randall G. (1996). *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*. Washington: Island Press. [ISBN 978-1-55963-489-2](https://www.islandpress.com/books/9781559634892).

management and ownership of the land are often formed by the partnership between private land owners, land-use conservation organizations and local government. It is a growing trend in many parts of the country, particularly in the western United States.³

Conclusion

For the reasons stated above, approval of the Coastal Development Permit for the latest development plan by NBR should be denied. The plan violates the California Coastal Act and the California Environmental Quality Act, and the merits of the plan do not give sufficient basis for overriding considerations where the project benefits would override the stated and documented impacts to the environment.

Instead of planning and designing to celebrate the environmental uniqueness of this site, the developer claims it has minimal wildlife, negligible ESHA, and can easily mitigate issues on- or off-site.

We hope to collaborate with the applicant on a design that would employ the concept of a “dynamic conservation,” as witnessed at Sea Ranch, using the patterns and principles of design that are Regenerative, Sustainable and Climate-Appropriate. Until this work is carried out, No Project is the only way forward.

³ https://en.wikipedia.org/wiki/Conservation_development