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OPEN SPACE and ECOLOGY COMMITTEE

May 2016

COMMENTS ON LAND USE, BRISBANE BAYLANDS

These comments are intended to convey the views of Brisbane's Open Space and Ecology Committee (OSEC) on land use in the Brisbane Baylands to the Planning Commission and City Council. In writing these comments, we considered three overarching principles.

First, the city has adopted a Sustainability Framework for the Baylands based on a set of ten One Planet Principles. Given OSEC's charter and the commitment of the city to using these principles as guidance for Baylands development, we felt it appropriate to use this framework as the backdrop for our comments on the three plans (DSP, CSP, and AEP) considered in the EIR.

Secondly, in our view, considering land uses for the Baylands offers an opportunity to think about development and redevelopment for the entire city of Brisbane. Much of the discussion about development in the Baylands to date has considered this large chunk of property as a separate entity, albeit one that happens to be within Brisbane's city limits. Considering Brisbane-plus-Baylands in a "whole city" fashion, however, reveals possibilities that otherwise remain obscure—for instance, ways Brisbane might add some new housing without exposing Baylands residents to toxics, and while improving the quality of life in 'existing Brisbane' by reducing truck traffic and maintaining, even enhancing, the walkability of the city.

Thirdly, we have sought to add a regional dimension to consideration of land use possibilities in the Baylands—that is, to think about ways that the Baylands could improve the self-sufficiency of the Bay Area by providing renewable energy, recycled water, and other resources. Another way that the Baylands could serve regional sustainability is by providing a location for a multi-modal transit hub. Current intercity transport modes (largely auto and air) must be largely replaced by rail if carbon emissions-reduction goals are to be met, and the Baylands are a very likely location for a high-speed rail hub as well

as a repair site for other local rail. Moreover, because industrial land uses are rapidly being pushed out of the Bay Area, so are many jobs that pay decently and offer career opportunities for those without a college degree. We like to think that the land uses we have proposed for the Baylands would help to preserve diverse employment opportunities in our rapidly-gentrifying region.

### **Health and happiness: Encouraging active, sociable, meaningful lives to promote good health and well being.**

Parks, natural open space, views, recreational facilities, businesses that include health facilities within their walls (such as on-site gyms, climbing facilities etc.), access to the Bay, and development that maintains or enhances natural resources and ecosystems are ways in which the man-made environment enhances health and happiness. Within the built environment, access to natural light and air free of toxic VOCs are important basic requirements for health and happiness.

Of the three plans presented in the DEIR, it seems to us that the Alternative Energy Plan would be most supportive of health and happiness. More of the land is dedicated to open space. Lower building profiles will maintain existing view sheds and wind speeds in the Bay for activities such as windsurfing. There would be room for a constructed wetland that will enhance wildlife habitat and related recreational and educational opportunities. The AEP could accommodate the freight-forwarding and other businesses that now inhabit Crocker Industrial Park, reducing truck traffic, noise and exhaust in central Brisbane and thereby enhancing Brisbane residents' quality of life, and open some of Crocker Park for housing in close proximity to central Brisbane and its small-scale retail businesses.

Both the Developer Supported Plan (DSP) and developer sponsored Community Proposed Plan (CPP) feature high-density development. Their high densities, increased traffic and noise, and less abundant open space make the DSP and CPP less desirable options from a health and happiness standpoint (and would also, we feel, diminish the overall quality of the site as wildlife habitat; see below).

Moreover, we are not satisfied by the mitigations of legacy Baylands toxics offered in the DEIR/FEIR: too much is unknown about the toxic load in the Baylands and its potential

migration paths, including migration of toxics to the surface and consequent exposure risks to 24-hour/7-day residents, including children and other potentially vulnerable populations, who would inhabit the housing featured in the DSP. If the DSP is adopted, full-time residents of the Baylands would live in close proximity not only to a range of toxics, but to a bulk fuel storage facility, a major freeway, Caltrain and Recology. While proximity to these features might not pose serious problems to people who work on the site, as would be the case in all of the other plans, it seems **unlikely** to us that permanent 24/7 residents on the site would enjoy a high quality of life.

**Equity and local economy: creating bioregional economies that support equality and diverse local employment and international fair trade.**

The Bay Area's energy footprint extends far beyond its geographic footprint. Generation and storage of a substantial amount of renewable wind/solar energy on the Baylands would help to address this problem because it would "internalize" within the Bay Area some of the energy production upon which Brisbane, and our entire region, depend. The likely adoption of a Community Choice Aggregation program, known as Peninsula Clean Energy (PCE) in San Mateo County, promises to increase the demand for renewable energy. Surplus funds from PCE are proposed to be reinvested into local communities to develop local renewable energy projects and create local jobs. The Clean Energy and Pollution Reduction Act of 2015 requires California to meet 50% of the state's electricity demand with renewable sources by 2030. The large solar farm (and possible other renewables) featured in the AEP will help to supply this mandated increase in the demand for renewables. Building commercial-scale renewables on brownfield sites like the Baylands is environmentally preferable to building them in relatively undisturbed natural areas, which should be kept intact as much as possible.

Another appropriate use for the Baylands is facilities for reclaiming and selling materials, similar to Habitat for Humanity's ReStore or a box reseller. Water recycling and sewage treatment/methane recovery are important ways to close the resource/waste loop, and could be appropriately sited in the Baylands. A new venue for San Francisco's closing Flower Mart

or large warehouses for aquaponics; freight forwarding and large scale PV installations (as in the AEP) are other uses that could provide good jobs with lower impacts.

We believe that the jobs connected with these land uses would be well-paying, blue- (or green-) collar jobs that don't require college degrees and that would add to the diversity of the local economy and provide attractive local employment opportunities. Few such jobs are available in the northern Peninsula since manufacturing and related industries have long since departed from much of the Bay Area.

On the other hand, the DSP and CPP propose very conventional combinations of uses and other enterprises (i.e., offices and retail) similar to what is already present in the Bay Area. These uses, it seems to OSEC, would not make the best use of the Baylands' unique characteristics, nor would they add to the diversity of local employment.

**Culture and community: Respecting and reviving local identity, wisdom and culture; encouraging the involvement of people in shaping their community and creating a new culture of sustainability**

Brisbane has a long history of independent thinking and environmental responsibility. It has an industrial past in which railroads featured prominently. We feel that any plan must, while providing for economic development, also preserve space for the independent and alternative lifestyles enjoyed by some of Brisbane's population. A variety of housing must be provided for a good social and economic mix. Brisbane also has a distinctly suburban and sometimes even rural feeling. Preservation of the small ranch currently located on the north side of Ice House Hill, and a connection with our food and animals, both domestic and wild, are desirable. While some housing (in central Brisbane) should be high density to provide opportunities for lower income households, affordable single family homes are the keystone of Brisbane and help to give it its unique character within the Bay Area.

Middle class jobs are an important element of a strong community. In the past these jobs were provided by the shipyard and the rail yard. It is among the aspirations of the people of Brisbane that the Round House Historical Site be restored with a spur line and educational facilities. The educational facilities, in addition to preserving the history of

steam trains in the Bay Area, could also serve as the site for education about local ecology and sustainability.

**Land use and wildlife: Protecting and restoring biodiversity and creating new natural habitats through good land use and integration into the built environment.**

We strongly discourage a “minimalist” approach to habitat preservation (i.e., the Federal requirement that any destruction of wetlands be mitigated 1:1).<sup>\*</sup> Rather, we think that the city should require not only the preservation and enhancement of existing habitat, but the creation of new habitat, some of which may be wetlands designed to take up pollutants, such as metals, leaching from the landfill. Moreover, we urge the construction of bridges to connect habitat fragments within the Baylands with each other and to other habitats outside the Baylands, e.g., connecting uplands on San Bruno Mountain to Baylands wetlands. For all the Baylands development scenarios, as written in response to comments in the FEIR, for the portions of the Baylands between the drainage channel and Lagoon Rd., the City-authored Open Space Plan is intended to ensure that the land is maintained in a manner to maximize open space, and thus wildlife would have corridors that enable creatures to move about within the Baylands. We urge the city to consider further integration of structures with landscape via green walls and roofs and the softening of hardscape. Regardless of corridors, we believe that wildlife movement will be inhibited by the dense development envisioned in the variations of the DSP and CPP. We think that a development with fewer structures (as in the AEP), fewer workers onsite, less noise, litter, pollution and night lighting would provide more assurance of the preservation of both the variety of species found on the site and the populations of those species.<sup>\*\*</sup> The FEIR acknowledges that open space, which provides foraging and other opportunities for wildlife, would be considerably diminished under either the DSP or the CPP.

We would also like to express our support for the idea of bio-remediation in the form of wetlands constructed for this purpose. Bamboo and other plants can serve to remove toxins from the soil that have leached upward or laterally, and – depending upon the plants – could potentially serve as raw materials for building and other products. The BBCAG has

done some preliminary investigation of this approach as a way to remediate toxics and provide additional wildlife habitat, and we encourage further exploration and investigation.

\*In responses to comments on the DEIR (from, among others, the Brisbane Citizens' Committee), the consultants stated that the developer would restore wetlands based on the average wetlands area extant in several study years. OSEC feels that the best metric would be to restore the wetlands to their natural pre-industrial levels. However, we could also support using the wetlands maxima from the consultants' studies, rather than the average, as the baseline.

\*\*The Worldwide Fund for Nature (WWF) and the London Zoological Society's 2014 *Living Planet Report* announced 50% declines in the populations of 10,000 representative populations of mammals, birds, fish and other animals in only the last 40 years. In other words, half the animals on earth are gone. While a number of species are disappearing altogether, the population decline in once-common populations of animals demonstrates the vital importance of habitat preservation and expansion.

### **Sustainable water: Using water efficiently in buildings, farming and manufacturing. Designing to avoid local issues such as flooding, drought, and watercourse pollution.**

While we support the water mitigation measures listed in the FEIR and Baylands Sustainability plan, we have the following concerns. Water availability for large scale and dense development is a significant issue in view of California's growing population and the changing climate, which many scientists believe will make drought more of a chronic condition than an occasional one (all structures in any of the plans will have to meet or exceed state Title 24 water efficiency standards). As stated above, OSEC believes that Brisbane would be better served by the Alternative Energy Plan with lower-density development. But no matter which plan is chosen, we recommend that a water recycling facility be located on the Baylands. It is an appropriate use and could help to reduce Brisbane's ecological footprint. OSEC would like to see such a facility built sooner rather

than later: the DEIR indicates that the water recycling facility included in the DSP and CPP would not be constructed until build-out is completed.

In order to make a recycled water facility economically viable, businesses that could benefit from the availability of recycled water, such as solar panel washing, plant nurseries, certain recreational uses, car washes, and hotel linen service, should be considered for the Baylands. In 2014, California voters approved a large bond issue for water projects, including water recycling. The possibility of acquiring funding from this source for a Baylands facility should be investigated.

Flooding is a real possibility in the developed Baylands, given that permeable surfaces cannot be used, because of the risk of water percolating into the landfill. The impermeable surfaces that will cover a significant portion of the site, no matter which plan is chosen, will increase stormwater runoff. Moreover, large amounts of precipitation falling in a very short time are becoming more likely as climate change warms the atmosphere and increases the percentage of water vapor that it can hold. In such a case, we are concerned that stormwater could overwhelm the swales and other flood-control devices suggested as mitigations in the DEIR. We suggest creative approaches, such as large sunken concrete structures that could be used for skateboard parks, public plazas, flea/crafts market, parking garages, and/or a farmers' market under normal conditions, but which could be evacuated and used as temporary rainwater catchment basins in flood conditions (such structures are built and presently in use in the Netherlands). These would help to ensure that the stormwater is held until it can be safely released.

**Local and sustainable food: Supporting sustainable and humane farming, promoting access to healthy, low impact, local, seasonal and organic diets and reducing food waste.**

While we will largely leave the topic of food and farming alone due to the unsuitability of the Baylands brownfield site for large scale food production, some small efforts might be made to support and encourage access to healthy local food. An organic food distribution center, setting minimum standards for Baylands restaurants and businesses, expansion of

the farmer's market and businesses that focus on food waste prevention might make some noteworthy contributions to food sustainability on the Baylands.

The use of raised beds with imported soil could provide some small scale food production opportunities for employees and restaurants. While these may seem insignificant, the ecological footprint of our food is enormous and any small contribution can be valuable within the larger context.

Another possibility would be an aquaponics based business. These types of businesses generally operate with above ground tanks to hold the fish and plants grown hydroponically in containers.

**Sustainable materials: Using sustainable and healthy products, such as those with low embodied energy, sourced locally, made from renewable or waste resources.**

None of the plans address the sustainability of materials in any great depth and to do so will be rather difficult as the Baylands produces or contains very little in the way of material resources appropriate to building. Rammed earth, tires, glass bottles embedded in concrete, cob, and other alternative building methods are probably not suited to the Baylands on a large scale. The risk of liquefaction, earthquakes and flooding demands engineered solutions. If we look to the wider bioregion, our options increase; however, the bay area is not known for its local steel, timber or concrete industries. All are key components of standard buildings. It is likely that all materials will have to be imported from outside the region. However, it is our expectation that they would be sourced from within the US, preferably California, to maintain a minimum level of environmental standards and minimize the transportation footprint. We feel again that the preservation of the spur line is important because rail would help to lower the impact of building by providing a low carbon transportation method.

We find the AEP to be slightly superior to the DSP/CPD in this area due to the lower building heights and lower overall demand. Lower building heights may provide some opportunities for alternative building methods. One construction material that holds some promise is Rastra (and similar products). Rastra is a blend of waste Styrofoam and concrete



that makes a stable, insulating material that has less embodied energy than traditional concrete and takes advantage of a difficult-to-dispose-of waste stream. The utmost care would be called for, however, to prevent loose Styrofoam from entering waterways.

### **Sustainable transportation: Reduce the need to travel and encourage low and zero carbon modes of transport to reduce emissions.**

The ultimate goal of the One Planet Living System is to reduce transportation emissions to 0.282 CO<sub>2</sub>e/year per employee. This converts to an average work commute of about eight miles per round trip, or 30% of the "average commute" of 26 miles per day cited in the Baylands Sustainability Framework. It should be understood that none of the plans meet this goal at this time; all three plans, according to the FEIR, are unacceptable in terms of transportation impacts, and even worse when the cumulative impact of development plans for the Baylands, the Schlage Lock site, Candlestick Park and Hunters' Point are considered, as they certainly should be in any realistic assessment of the transportation future of this area. Consequently, we think that developing the Baylands into a transportation hub to enable and facilitate rail transportation of goods and people in the Bay Area and in California makes perfect sense. Specifically, we advocate the Baylands as the site for a railyard to serve the future High Speed Rail system, provided that a thorough environmental review demonstrates that noise and pollution impacts could be thoroughly mitigated—a use that could coexist with water recycling, solar energy generation, and the other uses we have recommended for the site. We also recommend incentivizing the relocation of the freight forwarding operations now located in central Brisbane to the Baylands, where they would be in closer proximity to Highway 101, and creating a functional extension of the rail line (rail is likely to be the freight transport mode of choice in a low-carbon future. Having a rail line in service during construction could lower the environmental impact of transporting construction materials to the site). And we fully support the extension of the Third Street light rail line to meet Caltrain at a rehabilitated Bayshore Station.

We think that the uses we have recommended would make a greater contribution to sustainability and the quality of life in Brisbane and on the northern Peninsula than would a mixed residential/commercial development in the Baylands. As OSEC stated in its comments on the DEIR, we believe that such a mixed-use development would result in less transportation reduction than is typically assumed. (Jarvis, Helen. *Dispelling the Myth that Preference makes Practice in Residential Location and Transport Behavior*. *Housing Studies* 18:4, 587-606).

### **Zero waste: Reducing waste, reusing where possible, and ultimately sending zero waste to landfill**

Pending a thorough environmental review, OSEC supports the Recology expansion and the possible addition of waste-to-resource commercial activities on the Baylands, again provided that any pollution, energy and water use impacts could be adequately mitigated

Our bioregion not only uses resources, but produces wastes. Given the presence of Recology on the Baylands, OSEC recommends encouraging waste-to-resource industries such as waste-to-energy (excluding the burning of trash, to which residents have expressed firm opposition and which would contribute to local air pollution in an air district already classified as having non-attainment status), compost-making, and possibly even the manufacture of recycled paper.

Of great importance is the fact that the Earth's population is using resources at approximately 1.6 times the rate at which they can be renewed. If everyone on earth lived like Americans, between five and six additional planets would be needed to maintain their lifestyle. The cradle to grave cycle, in which virgin raw materials are turned into products and waste, and products are discarded at the end of their useful lives, and in which large amounts of (fossil fuel) energy are required at all stages, is no longer viable. Ecosystems are already buckling under the strain of supplying raw materials and absorbing wastes of all kinds, and energy, even renewable energy, must be used much more frugally in the future than it is now. Scientists have made clear that the global economy must aim for almost

complete decarbonization in only a few decades. That means that salvaging items from the waste stream that can be repurposed and recycling the rest will become increasingly important.

## **Zero carbon: Making buildings energy efficient and delivering all energy with renewable technologies**

The primary focus should be on the construction of highly efficient buildings. This is partly because a kilowatt not used saves two; as much as 50% of energy in the grid is lost due to transmission and inefficiency. Moreover, energy efficiency reduces the need for new energy supplies, which is important because all energy sources, including renewables, produce environmental impacts. State building codes require new buildings to be Net Zero energy by year 2020 for residential and 2030 for commercial. This leaves one building code cycle between now (2016) and Net Zero for residential, and four code cycles between now and Net Zero for commercial buildings. Given the lengthy timeline for planning and approvals, it is possible that whatever is built on the Baylands will have to be Net Zero. However, if the Baylands planning process accelerates, and building permits are issued prior to 2030, OSEC proposes that all buildings be required to meet the Net Zero standard. We further recommend that Life Cycle Assessment be used throughout the planning process.

Even with energy-efficient building requirements, both the DSP and the CPP are net energy consumers. By contrast, the AEP would produce a 31,000MWh/year surplus of electricity, which would help to supply the energy used in the rest of the City of Brisbane from renewable sources, and also help to offset other inputs to the Baylands. The Baylands is also uniquely suited to energy generation because PG&E's Martin substation is adjacent to the site, meaning that a key component of the necessary infrastructure is already in place.

The Baylands FEIR sets a CO<sub>2</sub>e benchmark of 4.6 metric tons per person per year as proposed by BAAQMD. UC Berkeley's estimated target is 3 metric tons per person per year, and One Planet living sets a standard at 4 tons by 2020 and 1 metric ton by 2050 per person per year. While all these standards are confusing, the City of Brisbane has chosen to adopt the One Planet Living principles in part because of its clear Key Performance Indicators. San Mateo County's average carbon footprint is 16.5 metric tons per person,

leaving a sizeable gap between any of the benchmarks and current per capita carbon footprints. The fact that we must close such a large gap in a very short time should inform our decision making process, and preference should be shown for a land use plan that will move us closer to stringent CO2e goals.

We would also encourage the City Council to declare the Baylands a Zero Methane Emissions Zone—that is, to take steps to ensure that there is no uncontrolled or accidental release of methane into the atmosphere from either the landfill, buildings or other man-made sources, and to support the healthy functioning of the natural environment to minimize the natural release of methane into the atmosphere. Because methane is such a powerful greenhouse gas, we feel it deserves special attention, and we are very concerned about the intense pile driving that will take place under the CPP and DSP and the potential for disruption of distribution lines, and the release of landfill methane. Also, combining the current landfill methane emissions with Recology's biogas production should create a useable supply of methane and provide an alternative to uncontrolled release or flaring the gasses.

### **Conclusion**

OSEC recommends that the Council choose to develop a specific plan for the AEP as the best development plan for the Baylands. Its mix of commercial, recreational and light industrial activities is appropriate for the Baylands, as a heavily polluted brownfield site that will receive minimal remediation. It can provide renewable energy and energy storage, for which demand in the Bay Area and throughout the state is certain to increase. It leaves considerable open space for wildlife and wetlands, making it environmentally superior to dense development. We therefore feel that the AEP best supports the interests of Brisbane, the bioregion and the public at large.

Signed,



Kima Hayuk

OSEC Chair