Amid Sediment and Drift: Projecting a Post-Industrial Morro Bay

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Abstract
An ancient creek mouth and tidal estuary marsh proved a successful site for the Chumash for thousands of years in the shadow of the 573 foot tall volcanic dome and sacred shrine 'Morro Rock', rising from the Pacific. A harbor too difficult for the Spanish to maneuver, and a locale too far off of Coastal Range canyon passages for the El Camino Real kept Morro Bay a quiet place for generations. A small farming and fishing village was changed by early 20th century roads, oil fields, and WPA harbor improvements. The course of the town changed radically with the construction of an amphibious assault training base in 1940 which permanently changed hundreds of acres of dunes and former tidal flats at the north end of the bay. Following the War, the land was donated to the county and a massive power plant constructed on the reclaimed land. The post war era saw hundreds of motel rooms and vacation homes establishing tourism as a mainstay along with commercial fishing, oil, farming and ranching. Recently the owners of the power plant have applied for permits to build a new plant feeding energy starved California on the 100+ acre oceanfront site, rendering the former plant obsolete and assumed for demolition, and delivering seven acres of waterfront available for re-development.

The City of Morro Bay solicited volunteers for a North Embarcadero Waterfront Futures (NEW Futures) Task Force, to unconceal the myriad issues involved in the reconciliation of the indigenous, maritime, utility infrastructure, tourist, and dramatic but fragile ecological aspects within the opportunity. All agree that the future of the town is shaped heavily by the outcome. The paper examines the historic currents that have established the contemporary situation, and exposes the latent architectural qualities of the massive power plant, an historic vernacular structure in its own right, generally overlooked by the public in initial discussions.

The metaphor of sediment and drift are introduced as ways to suggest the past has not necessarily been lost, only covered by intervening layers of cultural activity and meanings, and that important aspects of time and place may still be revealed, and new ones initiated, by recognition of the multiple realities which contribute to place rather than marginalized through a single narrative.

Immediacy, Memory, and the Convenience of Forgetting

Morro Bay was always the stuff of which dreams were made. (Gates, 1)

There is a visceral reaction of the body at the edge of the sea that relaxes the cacophony of mental structures which ensnarl our day-to-day lives. The immediacy of waves, mists, the sand or rock at one’s feet, the sound of surf and sea birds, smell of decaying kelp and salt all conspire to violate the abstract remoteness that technological culture entwines one with. It is ‘making sense’ in its ontological definition. This clearing establishes a sensate base for memory and metaphor: ‘like a day at the beach’, ‘like the winter sunset at the sea’, ‘like the ebb and flow of the tides’.
This immediacy is itself elusive and cannot affix a certain moment or thing as objective. Additive individual reflections create a kind of fuzzy collective picture of what is; a sedimenting of immediacy over the past. The latest sediment builds upon the past- the past situation allows the present- but the present is most easily seen.

The dominant culture for the last centuries of American development prefers clear narratives and definition vs. the messy untidiness of factual, ecological, political, and/or moral ambiguity. When serving science or enterprise, an objectified, analytical, commodified worldview casts into shadow a qualitative one. History in service of a reductive narrative is a forgetting and disservice to the community; but it also may be placed in service another way to broaden the understanding of what is in relation with. Architecture has a similar role- by its nature a change or reinterpretation within the existing, at once bound to what is, but framing the possible what. Rather than creator of objects, architecture can be seen as a player in the processes of culture and ecology; but to do so however may require the stirring of the sediment of what was and introducing a lateral drift of what could be.

**Stirring the Sediments**

Within the shallow curvature of the Pacific coast called Estero Bay, and just south of the scenic Big Sur coast, the town of Morro Bay is today home for 10,000. It sits at the north end of similarly named bay and estuary, three hours drive from either San Francisco or Los Angeles. Among its residents are retirees, commercial fishermen, employees of a university, community college, and prison. It is also seasonal vacation spot for ecotourists, wine tasters, surfers, and California Central Valley residents escaping the 100 plus degree heat and agri-business smog 100 miles to the east.

When owners of the Morro Bay power plant began labyrinthine pursuit of application for a replacement power plant for their 1953 facility, City Council initiated a process for envisioning a new northern terminus of the harbor, forming the North Embarcadero Waterfront Futures (NEW Futures) Task Force of community volunteers. Their goal was to foster a community consensus that might help guide the City Council in coming years in reaction to three scenarios: no change to the property (permit denied and modest improvements made), replacement structure with the existing plant demolished (permit approved), or possible sale of the entire site for potential new uses (permit denied).

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above: Morro Bay from the northwest with Morro Rock at right; image: composite panorama by author from photos Copyright (C) 2002-2006 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org

**Ecophenomenal Sediment**

About thirty million years ago a fault allowed a series of massive volcanoes in a mere fifteen-mile stretch to appear. Coastal Mountain folds warped and paralleled the fault. Dormant thousand foot
cones wore down revealing their core domes. Glacial melt influenced a sea level rise of 300 feet and inland advance six miles, and final volcanic dome appeared to emerge from the sea. It would be named by the Spanish mariners Morro Rock. Local currents and geomorphology combined to create a massive seven-mile sand bar separating lagoons of Morro Bay from the ocean of Estero Bay. The power plant site is roughly the former mouth of Morro Creek, at the north end of the bay, and just a few hundred yards from the base of Morro Rock.

**Chocagoua Sediment:**
The public material record suggests the Stishni, as they Northern Chumash call themselves, were at the bay for at least 8500 years. They had at least one large settlement at the north end of the bay, on or near the site, noted by the Spanish as Chocagoua, with evidence of significant inhabitation 4500-1500BP.

To find out about location or sense of place in the Chumash world one must be granted privilege to confidential archeological studies meant to preserve the locales, or obtain the trust of the Chumash descendants who are denied state or federal Tribal recognition. The result is the dominant culture knows little of this traditional lifeworld, despite it being all around them.

Chumash burials were encountered in power plant construction activities in 1961. The archeological record of the site is only partial, having undergone previous intrusion. Known archeological sites within the power plant site boundary are acknowledged in the replacement application and are Cultural Use/Sacred Sites registered with the State. It is very possible any new construction will reveal additional subterranean findings.

**Sediments of Empire**
Pedro de Unamuno anchored in Morro Bay in 1587 but retreated after skirmishes with the Chumash (Krieger, 17). Had he decided to return, Morro Bay may have become the major Spanish seaport on the west coast. Gaspar de Portola moved north by land in 1769 to extend the Mission system from Mexico. The site chosen was twelve miles inland from the bay, closer to canyon passages enabling El Camino Real north. It was the Chumash acorn production camp of Tixlini. Chumash labor built what became Mission San Luis Obispo, although to what degree this was voluntary versus coerced is debated. Chumash population was decimated in the cultural transition (McCall, 6), and some Chumash today describe this as their Holocaust (Collins).

With Mexican independence in 1821, State support of the Church lessened, with complete secularization in 1833. Land holdings privatized as massive rancheros, despite laws that the Native Americans could return to their lands. The site was in a curious zone of ambiguous ownership – at the south edge of Rancho Morro y Cayucos, and Rancho San Bernardo to the east.

With the Gold Rush, land speculation was rampant and the American government aggressively repartitioned parcels that had ambiguity in title. Such a homestead was obtained by Franklin Riley on the east terrace overlooking Morro Bay in 1864, the center of the current town (Gates, 13). In 1872 Riley had the town of Morro street grid surveyed and recorded. (Wiemer, 20)

**Commodity Sediments**
Coastal terrain made 19th century commerce practical only by steamer. Riley constructed an embarcadero along the lower tidal strip and wharf in 1870s. During that era a Federal survey crew came through, suggesting the bay be dredged for ‘larger class vessels’. (Gates 16) Several ship wrecks and near wrecks due to the tidal conditions at the bay entry on each side of the Rock kept many shippers from using the port. (Krieger, 75)

Harbor access would change through accident and intent. An accidental sinking of a stone filled barge partially filled the north channel around the Rock in the 1890s. (Gates, 120) Sometime in the late 1910s a storm breeched the primary dune and cut a new mouth for Morro Creek, this time drawing its flow west to the ocean instead of the north head of the bay. (Castle). This in
effect ‘landed’ the site. In 1933 the WPA began efforts to improve harbor access with a permanent closure of the north harbor channel, bringing several feet of fill over the site.

In 1923 a new road from San Luis Obispo opened enabling the hundreds who made the journey from the heat of the Central Valley to camp on the beaches. Following World War II, many who had trained in the region would also return annually and make the town a burgeoning tourist stop clustered with motels.

**Sediments of War**

In 1941 the Navy built an Inshore Patrol Base for amphibious landing training on the site, changing it dramatically. Dredge spoils were placed at the flats of the former mouth of Morro Creek, raising the level of the site six to fourteen feet, widening the old embarcadero for access to new piers. (Sullivan) The site became drill fields, motor pool, dock, and fuel area with adjacent dune terrace set up as housing for the base. With the end of the war, the military abandoned the base and gave the lands to the county. The piers brought about a marked increase in commercial watermen calling the bay home port.

**Re-Membering the Power Plant**

*Southeasterly along the edges of the harbor is a stretch of solid earth and tidal flats consisting of about 800 acres that can be developed into the best class of harbor industrial lands...*  
-International Appraisal Association report, 1930 (Gates, 121)

Pacific Gas and Electric purchased the site and constructed a massive plant looming over the embarcadero, with power generation in 1955. The plant was a network of infrastructure: 150 foot tall turbine hall, a cooling system drawing massive amounts of water from the bay, a return outfall of heated water to the ocean, a fuel oil tank farm and switching yard sending cable across the coastal hills. Most notably, byproducts discharged through a 450 foot tall smoke stack, matching the height of the nearby Rock. The new smokestack was considered a tourist attraction and became a new landmark from sea. PG&E added two generators by 1963, tripling capacity, drawing additional bay water for cooling, and adding two smoke stacks. (Duke, 1a-2-28)

With deregulation of California utilities, PG&E sold a 107 acre parcel including the plant in 1998. New owner Duke Energy applied with the California Energy Commission in 2000 for a replacement plant sited on the oil tank farm. By agreement between the City and Duke, the existing plant and stacks would be demolished and site mitigated for hazardous materials, placing its seven acre waterfront location available for redevelopment. The application is still pending due to ambiguity on the environmental impact to local marine life of the new water intake system. The Energy Commission Staff Final Report included a striking architectural evaluation of the existing plant:

*The study recommends that the plant be found eligible for the California Register of Historic Resources … "It embodies the distinctive characteristics of a type, period, region, or method of construction… It is also recommended as eligible to the National Register of Historic Places for “…its engineering design and architectural merit”… because construction of the new power plant will be accompanied by destruction of the existing one. Demolition of a resource eligible for listing on either the NRHP or CRHR requires meaningful mitigation... [reviewers] recommend the following mitigation: “…complete a Historic American Building Survey/Historic American Engineering Record”.  

Plumes of smoke emanate from the stacks; an odd odor sometimes accompanies the process. The plant is fenced off, indicates little human activity in its surrounds, is virtually windowless and stark in appearance. In this immediacy, it is easy to see why the City requested demolition. Industrial process today is seen as contagion versus progress. The building symbolizes the process; yet, the existing structure holds latent opportunities in the re-creation of place. A series of ‘drifts’ – lateral thinking by exposure to other power plants- will be suggested for the NEW Futures process to reopen the possibilities of a scenario where the plant is reused. Three
examples include: recognition of the generating artifacts themselves (iconic drift), the recognition spaces within the plant shell (spatial drift), and ability of new interventions to draw site and building together (transformational drift).

**Iconic Drift: Emscher Park, Duisburg, Germany, 2000**

The Ruhr’s defunct factories were once regarded as gargantuan eyesores; now they’re seen as spectacular monumental architecture. We took something that no one wanted, that everyone said was useless, and turned it into something magnificent, into a tourist attraction. (Rybczynski)

The term ‘industrial monument’ captures the essence of the Emscher Landscape Park. (EPA) The 570-acre site is a former steelworks, and the design celebrates the area’s industrial past by integrating landscape and industry. (Duisburg 1) The landscape architect retained the mill buildings, gas tanks, coke bunkers, and traces of railroad track and made them part of the park. Sewage channels have been cleaned up and made into canals, and retention ponds planted with floating water lilies. One of the most important things in the design was path making- to allow people to discover these places where you couldn't go before because they were closed off. It respects historical value via an archaeological window into industry. The binary pairs of park:waste, process:product, and art:nature are inverted; waste becomes park, product becomes process, nature becomes art. (Duisburg 1)

The planning strategy contains the following elements: re-utilizing land to prevent additional exploitation of undeveloped land; re-use strategies for existing buildings to extend the life of buildings; ecologically-sound construction practices for both new buildings and adaptive reuse; transforming the region’s construction towards environmentally friendly methods. Another guiding principle was Baukultur- ‘the culture of architecture’ - the idea that building and site design are critical components of an environmental, social, and economic regeneration strategy. The aesthetics born out of this fusion are founded on engagement with a radical realness of the materials, buildings and spaces, reuse, recycling, and awareness of process, and aesthetics of sustainability.

**Spatial Drift: Tate Modern, London, 2000**

Our strategy was to accept the physical power of Bankside’s massive mountain-like building and to even enhance it rather than trying to diminish it. This is Aikido strategy… Instead of fighting it, you take all the energy and shape it in unexpected and new ways. - Jacques Herzog (Tate 2)

About 1990 the Tate Collection had outgrown the original Tate Gallery. The structure chosen for conversion was a former power station that had closed in 1982 on the south bank of the Thames
opposite the City of London. It offered all the space that was required and more. An international architectural competition was held, won by Herzog and De Meuron, a then little known Swiss firm. A key factor was their proposal retained much of the essential character of the building. One of the short listed architects had proposed demolishing the 325-foot chimney, a central feature of the building.

The power station consisted of a huge turbine hall, 115 feet high and 500 feet long, and boiler house. The turbine hall became a dramatic entrance; visitors enter at one end and descend down a long gradual ramp before being carried upwards on escalators to galleries above. Light-filled boxes attached to the sides of this huge space coincide with openings where visitors can look down on the turbine hall. Internally the architects emphasized the industrial character of the building through polished concrete, untreated wooden floors and light the walls contrasting with black girders. (Perrin)

Above the original roofline is a lightweight luminous roof. The design added a two-storey glass penthouse known as the Lightbeam, housing a restaurant and member's room with terraces on both sides. The chimney was capped by a feature known as the Swiss Light, fabricated from translucent panels, illuminating the stack terminus as a beacon. (Tate Online)

**Transformational Drift: Carlson-Reges House, Los Angeles, 1998**  
*The new building ‘grows out’ of the existing one, like progeny.* –Michael Rotondi (ROTO)

The Neoclassical pavilion, thirty-six feet tall, steel frame, concrete clad building was originally built in 1915 as an electric cabling/switching structure. (Giovannini) The design recognizes structure and the site in relation to the surrounding freeways, trains, and parking lots as foreground, and the mountains, and cityscape as background. Interior and exterior volumetric pieces were strategically located. A new external shield protects the kitchen from the sun, reflects noise from the train yard, and acts as a protective garden for an existing bamboo stand. The secluded ground level became a garden and gallery while a new extroverted level was created sixteen feet above grade with an elevated lap pool. A new upper level was created on the existing roof under a new roof supported independent of the existing shell. Drawing on the Mediterranean climate, the design establishes a state of ambiguity between inside and out, and the simplicity of the original structure and the non-Euclidean material interventions that further disclose realities of the site. (Giovannini)
New Futures via NEW Futures
The purpose of this paper was not to eliminate any of the initial scenarios from community consideration, but to establish the legitimacy of scenarios where the nature of the pre-historic, historic and industrial-historic reappear as equally valid realities and opportunities for influence on future development. The application dismisses, but in procedurally acceptable argument, almost all the above realities as tertiary matters able to be mitigated or in some cases neglected. In pursuit of tabula rasa this is a further sedimenting; in effect, concealment equates to loss.

Through an opportunity to engage dialogue over design alternatives for the existing plant, the inability of the community to envision the structure apart from generation process, the inability to experience views from the building heights, to experience interior volumes, to envision alternate cladding or volumes through selective demolition, or what these alternatives could be against the proposed replacement plant renderings may be answered.

Development within the existing footprint suggests containment of further destruction of cultural resources. Adjacent areas could be reclaimed as interpretive park or placed in limited access open space reserves or easements.

The internal volume dwarfs the scale of all imagined uses stated by the community, and could provide a unique mixed use opportunity for Pioneer, Seafarer, Chumash, Salinan, interpretive centers, visitor centers, hotel, aquarium, etc. and still have ability for more. The current ground level could be made safe from rising sea levels and accommodate parking and access.

The structures massive foundations may be valuable in themselves in an area subject to liquefaction in seismic activity. The existing steel frame given the large loading requirements of overhead cranes and maintenance may have capacity to take on additional loads of new internal floors, and may be made seismically satisfactory. Encapsulation via fire protective layers may mitigate need for some lead paint abatement.

Anecdotal inquiry by the author suggests the structure is more a part of the community image than some suggest. The stacks especially garner landmark status with their thin profile against the vista of sea horizon and/or mass of the Rock as one drives Route 1 from the north. Similarly in the Route 1 drive northwest from San Luis Obispo the stacks emerge from the ‘V’ form of the valley of Morros and Coastal Range.

Emerging ideas of use from an open dialogue, increasingly influential awareness about environmental sustainability, the examples such as noted in the drift passages by world-class designers, and unconcealing real opportunities at the site briefly outlined above suggest this path is worth the investment of time and effort. This is the task of architects, landscape architects and planners in engaging community, history and making.
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