In Sediments of Time: Locating a Post-Industrial Morro Bay

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Abstract
In the era following World War II along the central California coast, and adjacent to a seven mile long sand dune which formed a natural harbor, the Army Corp of Engineers began to blast rock from the ancient 573 foot tall coastal volcanic plug, which was an indigenous Chumash Indian shrine termed by the Spanish explorers Morro Rock. The effort was to reform the harbor mouth and put in a new jetty system that would protect the small commercial fishing fleet that called Morro Bay its home.

Soon afterward, a new oil fired power plant was constructed at the mouth of the harbor, and within a few years expanded to triple the original capacity with three smokestacks rising 450 feet. In the 1970s, with the help of scenic coastal roads, a strong upper middle class from both Los Angeles and San Francisco made the village of Morro Bay into a new vacation community of ten thousand. The power plant and three stacks stand today as landmarks along with Morro Rock against dunes, sea, and sky for visitors and travelers on California Route 1 from Big Sur to Santa Barbara. The plant also marks the terminus of one of the largest estuaries on the west coast.

Recently the owners of the power plant have applied for permits to build a new plant feeding energy starved California utilities on the 100+ acre oceanfront site, rendering the former plant obsolete and assumed for demolition, and potentially delivering a minimum six to ten acres of waterfront available for re-development.

The City of Morro Bay solicited for a North Embarcadero Waterfront Futures (NEW Futures) Task Force, and volunteers include Coastal Salinan Native American representatives, architects, planners, investment bankers, and local citizens to examine 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 sediments that have established the current conditions, 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- and the procedural structure put in place by the Task Force to envision this coming transformation and retelling of what is historic.

The metaphor of sediment is introduced as a way to suggest that the past has 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.

Memory, Immediacy and the Convenience of Forgetting
There is a visceral reaction of the body at the edge of the sea that relaxes the cacophony of mental structures which enframe and 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. This connection with re-establishes and unconceals a fundamental phenomenological basis for our joy and sense of the immediate apart from mechanical time. 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 state of wonder and openness however is quickly assigned to leisure, aestheticization, and being unique- apart from the day-to-day.

This immediacy is itself elusive and cannot fix a certain moment or thing as conclusive or comprehensive or necessarily objective. Especially here, what is experienced is in flux. The participant/observer is also in a state of change, however slight it may seem. The additive nature of these individual reflections creates a kind of fuzzy collective picture of what is; a sedimenting of immediacy over the past. What appears now seems so much more real that what had been. To extend the metaphor, the latest sediment builds upon the past- the past situation allows the present- but the present is most easily seen.

The possibilities of what could be also depend on a careful awareness of the past. Official culture for the last centuries of American development has tended to prefer clear narratives of explanation and definition vs. the messy untidiness of factual, political and moral ambiguity. Whether serving science or enterprise, an objectified, analytical worldview has cast into shadow a qualitative one.

The role of history is not to marginalize or edit, or dictate, but allow for more being brought forward for the benefit of current and future thinking and action. History is another way of broadening the understanding of what is in relation with. Opening history may bring forth so much it may be seen as obfuscation in understanding- an obscuring of what was/is clouded in contesting narratives and agendas. But, in a community planning process, the opening of history is especially important, as the community benefits from the voices of all in reaching consensus.

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 the creation of objects, architecture can be seen as a player in the processes of culture and ecology, and creation of tangible larger sense of place by engaging the natural and social. To do so however may require the stirring of the sediment.

**Stirring the Sediment**
Within the shallow curvature of a portion of the California coast called Estero Bay, just south of the world-renowned 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 the local university and community college, and regional ‘Men’s Colony’ (State 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. It is a Mediterranean climate characterized by almost continuous pleasant conditions with adjacent towns separated by thousand foot mountains, and the open space of year round farming and ranches. The
temperature does not dip to freezing and rarely gets above 80 degrees. Limited water resources make regional low/slow growth the only sustainable option.

To the credit of the Morro Bay City Council, when the Duke Power Company (ownership has subsequently passed onto LS Power) began pursuit of a permit for a replacement power plant for their coastal California facility of 1953, they realized that the community could begin a process of envisioning a new future for the northern terminus of the harbor, which includes a minimum of six acres where the current plant is slated to be demolished. In early 2006 the North Embarcadero Waterfront Futures (NEW Futures) Task Force was created of community volunteers consisting of local businesspersons, former investment bankers, planners, architects, and a Native American representative. Their goal was to foster a community consensus that might help guide the City Council in coming years as the choice between no change, lengthy replacement structure, viability of renovation, or possible sale of the site for potential new uses becomes clearer. As a small town, the power plant represents a significant revenue as well as electricity generator. The gas fired plant and its three smoke stacks are dominant structure for miles and across all of the extent of Estero Bay.

Ecophenomenal Sediment: Fault, Morro, Fold, and Sand Bar
While awe inspiring, the terrain surrounding Morro Bay remains to the eye static. The Sediment of this ecophenomenological joy needs stirred so that one is not lulled into thinking this landscape is in any way ‘done’.

Before the Seashell People came from the sea, and into today, this place was and continues to be a ground of action. From the terrace overlooking the sea a fracture allowing a series of massive volcanoes in a mere fifteen-mile stretch. Thousand foot coastal ranges folded up along the sides of the fault. Streams in valleys alongside the Morros met the sea six miles from the present Morro Bay community. The land calmed and the dormant thousand foot cones wore down through twenty-five million years of erosion revealing their core igneous dacite domes which the Spanish later terms ‘Morros’.

The ice age influenced the sea level and when the last major melt began, the ocean rose almost 300 feet and advanced inland such that the final volcanic dome then appeared to emerge from the sea. The gentle 30-mile curvature of the ocean against cliff and beach was termed Estero Bay. The valley creeks pushed against the sea, and local currents and geomorphology combined to create a massive seven-mile sand bar separating lagoons and a quiet Morro Bay apart from the oceans Estero Bay. The changing sea level, prevailing local winds, and climatic fluctuations in rain caused major movements inland of the sand bar, and reversals in the fresh and saline qualities of the bay. With the end of ice melt the streams began a process of pushing out sediment into the bay- almost sixteen feet of depth in one 400-year period alone. Three creeks fed this version of the bay, today termed Morro, Chorro and Los Osos Creeks. The site as seen today was initially the sedimentary mouth of Morro Creek and its tidal flat bank. It sat below an ancient dune near the tidal entry to the harbor.

The filling in of the bay by dune migration from the west and silt from the east continues to decrease the bay size today. Global warming may cause greater sea levels yet and expand the bay up the valleys, and increase salinity even further.

While the fault that allowed the Morros is thought inactive, the region shakes with up to thirty microquakes a week from seismic activity on other faults.
Species of small coastal oaks dotted north sides of hills and rivulets. Willows followed streambeds and flood plains to the marshes. Largely treeless grasslands took the winter thirteen inches of rain, almost the full annual rainfall, and carried the green hues through spring, mixing with the year round grey-green of coastal scrub of the hillsides. The increasingly dry conditions in summer and fall set the stage for periodic wildfires across the dry grassland and scrub, fed by canyon winds and sea breezes.

Whales, seals, and massive schools of fish migrated across Estero Bay, while the estuary became a stop on the migration fly path of birds and the Monarch Butterfly. Shellfish, terns, pelicans and black bears all became local residents. Their numbers would also fluctuate due to microecological sways of salinity and rain and several species such as the Kangaroo Rat, Shoulder Banded Snail and Snowy Plover eventually be driven near extinction due to the advance of those from south and east.

**Pre Holocaust Sediment: Chiqawi**

*I believe that the evidence collected in the past by Spanish, Mexican, French, Russian, and American observers of the Chumash is incomplete, fragmentary, culturally biased, seemingly contradictory, and therefore forever open to interpretation and dialogue. I therefore remain skeptical of claims made by a long line of white scholars, government officials, military officers, and Christian church leaders who state with certainty that all (meaningful, legal, significant) continuity with the old Chumash culture and religion has ended. (Anderson)*

There are many small histories of Morro Bay available by local authors. The largest, by Dorothy Gates and Jane Bailey, is almost 150 pages, yet only four are given over to the Chumash, the local indigenous population. Dan Krieger’s history of San Luis Obispo County gives the Chumash portions of pages 12-22. Artifactual evidence of Chumash habitation has moved from curiosity to burden to objects worth looting to secrecy. To find out about location or sense of place in the Chumash world one must sort through technical reports in archives from the early or mid part of the century, be granted privilege to confidential archeological study meant to preserve the locales, or obtain the trust of the Chumash descendents. The result is the local Anglo-American, Hispanic-American, Latino/a and Mexican/a populations know little of this traditional lifeworld, despite it being all around them, so this sediment needs stirred to keep the Chumash from being disconnected to the situation.

In the Chumash creation story, the Seashell People are allowed to come from their original island homes to the mainland across a rainbow. The People who fell from the rainbow became dolphins and would stay with their brothers as they became skilled at making their own boats of tar sealed tule or plank. The People prospered as fishermen and hunters and new bands left the present Santa Barbara area and eventually found the coastal terraces above the quiet bay about one hundred miles north.

The discovered material record of habitation suggests the Northern Chumash and their ancestors were here at the bay with varying success for at least 8500 years. Early permanent year-round villages were supported by a fish based diet. This lifeway gave way to seasonal encampments harvesting shellfish, acorns, and inland game as the ecology of the bay changed with it’s shallower depth, changing salinity and resultant loss of large marine life. The Northern Chumash lived throughout this area they called *Stishni*, but had at least one large settlement at the north end of the bay, *Chiqawi* (Chumash/Hokkan; phonetic chee’-kwa; Collins), and a second at the south end of the bay, noted by the Spanish as *Chotcagua*, with evidence of significant inhabitation 4500-1500BP. Chiqawi sat on or near the site.
The Playano Salinan People, Chumash neighbors that archeologists site to the north, also claim through oral culture sites around the bay, and especially Morro Rock as the prayer shrine called Le Sap Mo. The State and Federal Governments recognize both as having valid interests in the site, but have granted neither official Tribal recognition.

A minimum of 48 burials were encountered in power plant construction activities in the vicinity of Chotcagua in 1961. The archeological record of the site is partial, having undergone massive intrusion during excavation and fill operations during World War II when there was a low sensitivity to discovery of remains of Native Americans and little legal requirement for the recording of archeological sites. Archeological sites designated CA-SLO-16 (1973) and CA-SLO 239 (1962) within the power plant legal boundary are significant prehistoric cultural assets acknowledged in the Application for the replacement power plant, and are Salinan Cultural Use/Sacred Sites registered with the State. More recently during site investigation for the new plant CA-SLO-2124 (1999) was discovered through soil borings and is hypothesized as a sand dune encampment. It is also considered ‘significant’ in the archeological record but not listed as ‘sacred’.

**Sediments of Empire to Manifest Destiny:**
Pedro de Unamuno anchored in Morro Bay in 1587 but retreated after skirmishes inland with Chumash warriors (Krieger, 17). He was looking for a refuge from the rocky portion of the central coast where the Japan Current brought ships across the Pacific. Had he decided to return following a more peaceful reception, Morro Bay may have become the major Spanish seaport on the west coast.

English and Spanish explorers moved off the coast of Estero Bay for almost two hundred years before Gaspar de Portola and his massive entourage moved from Santa Barbara by land in 1769 to extend the Mission system northward. The local Mission site chosen in 1772 was twelve miles inland at the Chumash acorn production camp of Tixlini. The Spanish records indicate an approximate Chumash population at Chotcagua, on or near the study site, of sixty, thirty of whom soon relocated to the Mission and baptized. Regional Chumash labor built the Mission, although to what degree this was voluntary versus coerced is a heated debate. Anthropology and Chumash oral culture agree the Chumash population was decimated in the cultural transition and subject to diseases that affected all indigenous populations confronted by the Europeans (McCall, 6). Some Chumash of today describe this as their Holocaust (Collins).

With Mexican independence in 1821, the State support of the Church lessened and Mission life deteriorated, with complete secularization in 1833. Local land holdings came into private hands as massive rancheros despite official Mexican law that the Native Americans could return to their lands.

Major portions of present Morro Bay were considered wasteland by some due to the sand dune terraces, swampy lagoons near creek mouths, and difficult tidal passage from bay to ocean at Morro Rock (Weiman, 17). The site was in a curious zone of ambiguous ownership – at the south edge of Rancho Morro y Cayucos, with Rancho San Bernardo to the east and southeast, and Rancho Canada de Los Osos at the south end of the bay.

The coastal soils and constant sea wind made cattle ranching and dairy production the largest effect on the land, but some creek side farming was done (Gomez, 9). The Mexican-American War of 1846-1848 had little effect on Morro Bay, but the rancheros were intact for only a short period afterward due to the effects of the Gold Rush.
With the Gold Rush, California land speculation was rampant and the American government aggressively repartitioned former land grants which had any ambiguity in title. Such land was obtained by Franklin Riley and he homesteaded the east terrace overlooking Morro Bay in 1864, the center of the current town (Gates, 13). Areas to the north of Morro Creek remained farmland. By 1872 Riley had the town of Morro street grid surveyed and recorded. (Wiemer, 20)

**Commodity Sediments: Harbor, Stone, Fishing, Tourists, Oil**

Coastal terrain made most travel or commerce practical only by steamer. Riley constructed an embarcadero along the lower tidal strip along the bay in 1870, with an improved wharf in 1873, following a partnership with a steamship owner. That year a Federal survey crew came through the small village and caused speculation. Like the Spanish, they saw the need for a Central Coast port to aid development. Their report suggested the bay be dredged for 'larger class vessels' (Gates 16). Several ship wrecks and near wrecks kept many shippers from using the port, and it remained a modest village for many years. (Krieger, 75)

The first quarrying of stone from Morro Rock began about 1891, with materials sent over land and sea. By 1911 a trestle bridge was built across the north harbor mouth to allow easier transit of the materials. (Gates, 135) An accidental sinking of a stone filled barge partially filled more reliable north channel around the Rock. (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 also was the first in a series of events that continue to plague the issue of the bay entry. This also ended the fresh water siltation of the north end of the bay and limited the fresh water contribution to the bay to Choro and Los Osos creeks at the south end of the bay.

In 1933 the WPA began a series of efforts to establish improved harbor access. The choice was a permanent closure of the harbor channel north of the rock, due to the local reaction to the existing trestle and perceived benefits of the earlier rock accident in the aid of storm surges into the bay. Initially fill was used to close the entry and by 1936 a massive breakwater harbor edge completed the effort. This brought several feet of fill over the site, with some areas eventually merging into the beach dunes.

The improvements brought about an increase in commercial fishing, which would grow more dramatically with post-war improvements. The fishing is largely within a five-mile range from shore, and twenty to thirty miles up or down the coast. These productive waters became increasingly fished to the point that in August 2006 the State imposed a complete limitation on commercial fishing within three miles of shore. This followed closely private conservation groups purchasing many of commercial fishing licenses from watermen in Morro Bay. As of this writing the Morro Bay fishing community is in complete disarray.

In 1923 a new road from San Luis Obispo opened and within a few years the Morro Beach Inn was built just north of the site, later renamed the Cloisters, a name which is retained by a housing development at the same location. The Hotel signaled the addition of more affluent visitors, supplementing the hundreds who made the two and three day 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 return annually and make the town a burgeoning tourist stop clustered with motels, which continues to be a major city source of revenue. The tourism drives the nature of many local businesses, especially the bayside businesses of the improved embarcadero up to the site, which is the major tourist promenade.
Natural tar seeps had been used by the Chumash for sealing their canoes. The ‘discovery’ of oil fields under the Central Coast brought oil companies and their infrastructure of wells, pipelines, storage and shipping in the 1930s. While the harbor was improved, the big ships that undertook the task of oil transport needed deeper berth, and the private oil companies built piers out into Estero Bay north of Morro Bay. By the late 1930s the coastal tank farms accommodated over 1 million barrels of oil.

Sediments of War and Defense
The Navy had already begun a militarization of the site in fall 1941 when the attack on Pearl Harbor occurred. Concerns for the protection of regional oil facilities brought nighttime blackouts, beach patrols, and gun emplacements. Later in December, Japanese submarine only 20 miles up the coast sank a Union Oil tanker, the Montebello. Some families moved inland, local Japanese-Americans were forced to leave their farms and fishing for internment camps or volunteered for military service.

There had been much talk in the late 1930’s about a potential Navy base at Morro Bay, perhaps for submarines or seaplanes. What the Navy did build was an Inshore Patrol Base termed Camp Morro Bay. This eventually became a facility for training for amphibious landings, and its construction changed the nature of the site 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 and widening the old embarcadero. New improvements of the embarcadero included large ‘T’ and ‘L’ piers and rebuilding of the stone breakwater. The harbor entrance had breakwaters extended to 1800 feet, largely with stone blasted from Morro Rock (Sullivan). The flats became the base recreation and drill fields, motor pool, dock, and fuel area with adjacent terrace set up as housing for the base.

With the end of the war, the military abandoned Camp Morro Bay and gave the lands to the county. Immediately the piers provided new berths and invited expanded commercial fishing and pleasure boating.

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…ideally suited to accommodate every known kind of manufacture, refinery, and storage enterprise or industry._

-International Appraisal Association report on Potential Harbor Improvements for Morro Bay, 1930 (Gates, 121)

Pacific Gas and electric purchased the site from the county in 1951. Construction was begun in 1953 and power began generation in 1955. Though the structure seemed large in scale as a building, the site was actually an even larger network of infrastructure including many underground components. Two massive oil fired turbines produced almost 340 MW of power, utilizing a cooling system drawing massive amounts (84,000 gpm) of water from the bay, returning the heated water to the ocean at a new outfall just east of the Rock, and discharging combustion byproducts through a 450 foot tall smoke stack. In the post war era of progress being associated with industry, ‘the new smokestack was considered a tourist attraction.’ according to a July 7, 1955 article in the San Luis Obispo Telegram Tribune. The stack became a new landmark for fishermen and the tallest structure on the coast from Monterrey to Los Angeles. The oil tank farm for the plants fuel grew to the northwest and the distribution system for the power spread out from a switching yard to the northeast across the coastal hills.
PG&E added a third and fourth generator at the site beginning construction in 1961, which began supplying power in 1962 and 1963. Each generator was as large in capacity as the first two combined, and new pumps for bay water cooling (additional 280,000 gpm), two new tunnels to the ocean for heated effluent and two new smoke stacks, matching the existing, were constructed. (Duke, 1a-2-28) The structure now measured 500 feet long, 150 feet tall, and fed three 450-foot stacks.

Over the years the plant had numerous upgrades, the most significant for the site being a transition to being natural gas fired, rendering the oil tank farm obsolete. PG&E recognized needs of the city as it grew from a village of less than 500 after the war, to a small incorporated town in 1953, to a place of 9,000 by 1970. Perimeter portions of the site, largely undevelopable for the plant due to increasing environmental sensitivities and legislation about cultural and ecological resources, were leased or sold to the city for a public park, fisherman’s storage, and trailer park.

The deregulation of California utilities had PG&E sell the generating assets on a 107-acre portion of the site to Duke Energy in 1998. PG&E retained the twenty-four acre transformer/switching yard. Duke almost immediately set into motion studies for a major overhaul of the plant or replacement plant.

The decision to move forward with a replacement plant included numerous public meetings and a Memorandum of Understanding with the City of Morro Bay on project intent, scope and design. The revised Application to the California Energy Commission, the prime review entity for the project, was submitted in 2000. The proposed replacement plant was sited on the current tank farm, and would draw a smaller quantity of bay water for cooling, use natural gas, and continue to feed into the existing switchyard. The city required the existing plant and stacks be demolished and site mitigated for hazardous materials. This in effect placed as much as seven acres of waterfront property available for discussion as to its future.

The Application received many reviews but was placed on hold primarily pending the outcome of a permit from the State Water Resources Board due to conflicting commentary on the environmental impact of the new water intake system, controversial due to the death of numerous marine creatures via the intake process from the bay.

The Application included a striking architectural evaluation of the existing plant noted in the Energy Department Staff Final Report:

*The study recommended that the Morro Bay power plant be found eligible for the CRHR under criterion 3, which states “It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values,” due to its “distinctive characteristics representing its type as a steam generating plant during the postwar period” It is also recommended as eligible to the NRHP for “…its engineering design and architectural merit”. Staff concurs with this recommendation. The eligibility of the existing power plant to either the NRHP or CRHR is of considerable importance to the Applicant, 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. Due to the importance of the conclusions, staff requested a peer review … by …architectural historians. One reviewer recommended that the power plant be considered eligible under criteria a/1 and c/3 for the NRHP/CRHR. Two of the reviewers agreed that the conclusions were not supported well enough to make a determination of significance based on the information in the report…Rick Starzak, architectural historian hired by the Energy Commission, clarified some questions raised during peer review [and] agreed … that the plant would be eligible*
under criterion C for the NRHP and the CRHR under criterion 3… Mr. Starzak agreed with the Applicant’s consultant, finding that the power plant was architecturally exceptional. A conclusion that the plant is architecturally exceptional makes the power plant eligible to the NRHP or CRHR under criterion C or 3. To mitigate the impact below a level of significance, Dr. Rossell and Mr. Peterson recommend the following mitigation: “The owner should complete a Historic American Building Survey/Historic American Engineering Record (HAVS/HAER)”.

above: Morro Bay, the Power Plant, and Tank Farm 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.Californiacostline.org

It is easy to experience the plumes of smoke emanating from the power plant; to experience the odd odor that sometimes accompanies the process. The plant is fenced off, indicates little human activity in its surrounds, and is virtually windowless and stark in appearance. It is easy to see why the community and City requested demolition; unlike the 1955 era quote, many see any industrial process today as contagion versus progress. Yet, the existing structure holds latent and real architectural and experiential 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.

Artifactual Drift: Gasworks Park, Seattle, 1975
Gas Works Park is easily the strangest park in Seattle, and may rank among the strangest in the world. –Seattle Times (Wikipedia)
The 20 acre point on Lake Union, now surrounded by Seattle growth, was cleared in 1906 by Washington Natural Gas to construct a plant to manufacture gas from coal. Obsolete in the 1950’s, the city acquired the site in 1962, opening the unique park in 1975 following extensive environmental mitigation of the soils.(Gasworks 1)

While greatly edited/selectively demolished, the centerpiece became the retained five-story high cracking towers. (Gasworks 2) The boiler house was converted to a covered day space with tables, grills and an open area. The former exhauster-compressor building, became a children’s play area, retaining the machinery. The numerous equipment areas are largely open to public. But the ‘cracking towers’, the most fascinating devices, remain fenced apart. The grass open spaces at the perimeter and scale of the lake in the foreground are woven into the promenade of the park and the tangible steel structures contrast the grass lawns and water.

The idea of artifact is that something is noted for its material presence apart from the total context in which it was embedded. In this way something may be approached anew and salient features be appreciated as they are.
Experiential Drift: Emscher Park, Duisburg, Germany, 2000

The Ruhr's defunct factories were once regarded as gargantuan eyesores; now, lit up to advantage at night by fashionable theater-lighting designers, 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. Instead of creating a tabula rasa surface for development, 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. They didn't tear down the blast furnaces, they built walkways through them. One of the most important things in designing the park was the path making- to allow people to discover these places where you couldn't go before because they were closed off. It is a different version of the reverence that nineteenth-century nature enthusiasts had for the untouched wild: walking along the railway dikes, or through the smelting troughs, one is conscious of being in a place that was not intended for the public. (Rybczynski)

It respects historical value via an archaeological window into the industries. 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 park blurs and twists concepts like "natural," "artificial," "open space," and "conservation"- everything that underpins the traditional understanding of what a park is. The juxtapositions are both weird and wonderful.

The planning strategy contains the following elements: re-utilizing land to prevent additional exploitation of undeveloped land; modernization, and 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 is ‘Baukultur’- literally translated as ‘the culture of architecture’ - the idea that building and site design are critical components of an environmental, social, and economic regeneration strategy. "Architecture Organizing Urban Planning" rather than accept the haphazard, uncontrolled development that is typically considered urban sprawl, architecture offers the opportunity to direct urban planning. (EPA)

The aesthetics born out of this fusion are founded on engagement with a radical realness of the materials, buildings and spaces; an aesthetics of system building, reuse, recycling, and awareness of process-an aesthetics of sustainability. The project has won numerous awards, and was featured in the Museum of Modern Art’s Groundswell exhibit of breakthrough landscape recovery projects in 2003.


The Power Plant is a prime example of the conversion of a functionally obsolete building into a successful, modern project. David Takesuye, Urban Land Institute (Brodie)

In 1899 three streetcar companies merged to form United Railways. The power plant this ambitious new firm built at the waterfront to energize their expanding system was a massive brick veneer edifice. It included a large central boiler room flanked by a pair of smaller engine houses. The three interconnected steel frame buildings with brick façades were completed in phases between 1900 and 1909 on Pier 4 in Baltimore’s Inner Harbor. Barges brought in coal to feed its
roaring boilers. The iconic profile of four smokestacks, reaching up to 192 feet and thirteen feet in diameter was memorable.

In the 1920s the plant was sold and converted to making steam, which downtown buildings bought for heat. Its functional life ended in 1973. In 1977 the city was preparing the waterfront for tourist development. With hopes of finding a new use, the city bought the plant. A hotel was planned, but it soon fell through.

Six Flags Corporation leased the building in 1985 and pumped $40 million into its renovation. The developer chose to establish an interior oriented, Victorian themed park. The turbines were gone, as were the boilers, the coal bins, and the power converters, but the four signature smokestacks, remained. This continued for several years before proving a Victorian-themed amusement was essentially doomed. This initial renovation gutted much of the internal equipment of the old steam plant, but created several large and potentially dramatic spaces.

The Victorian image layer applied over the massive structure created a sense of falseness that was palpable to the author, who worked across the street at the time. The building renovation attempted a denial of what it was, ignoring structure, available space, exterior orientation and context of harbor. The new imposition of icon was no match for the power of the Power Plant.

From 1988-1990 a dance club/night club functioned, but that too closed, and signaled the success of the harbor had stalled. The overwhelming popularity of the neighboring National Aquarium meant that the Power Plant needed to succeed to keep the development momentum moving east along the harbor, literally stopped by the brick façade of the Power Plant.

A new developer took up the challenge and began filling the buildings 180,000 square feet with bigger name chains, including Hard Rock Café, ESPN Zone, Gold's Gym, and Barnes & Noble. This has proved successful since 1998. This iteration has applied a different set of icons across the structure- a Las Vegas kind of electric light and color fantasy complete with massive guitar attached to the smokestacks. The garish nature contrasts with the building, but its scale renders it more successful and appropriate.

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

*Our strategy was to accept the physical power of Bankside's massive mountain-like brick building and to even enhance it rather than breaking it or trying to dimnish it. This is a kind of Aikido strategy where you use your enemy's energy for your own purposes. Instead of fighting it, you take all the energy and shape it in unexpected and new ways. - Jacques Herzog (Tate 2)*

By about 1990 it was clear that the Tate Collection had hugely outgrown the original Tate Gallery. It was decided to create a new gallery in London to display the international modern component of the Tate Collection. For the first time London would have a dedicated museum of modern art.

As a result of extensive consultations, particularly with artists, it was decided to search for a building to convert. The structure chosen was a former power station that had closed in 1982. It offered all the space that was required and was in an amazing location on the south bank of the Thames opposite the City of London. Plans were formulated to build a footbridge to link the new gallery to the City. The original Tate also being on the Thames meant that the two could be linked by a riverboat service.

An international architectural competition was held, and the winner was Herzog and De Meuron, a then little known Swiss firm. A key factor in this choice was that their proposal retained much of the
The power station consisted of a huge turbine hall, 115 feet high and 500 feet long, and parallel to it, a boiler house. The turbine hall became a dramatic entrance area. Visitors enter at one end and descend down a long gradual ramp before being carried upwards on escalators to the auditorium, shop, café and three floors of 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 from the galleries above. The boiler house became the galleries. The galleries are disposed in separate but linked blocks, known as suites, on either side of the central escalators. Internally the architects emphasized the industrial character of the building through their use of polished concrete, untreated wooden floors and plain light paintwork on the walls contrasting with black girders. (Perrin) Total interior area was 371,350 square feet

Above the original roofline of the power station Herzog and De Meuron added a two-storey glass penthouse, known as the lightbeam. The top level of this houses a restaurant with views of the river and the City, and the lower a member’s room with terraces on both sides. The chimney was capped by a colored light feature known as the Swiss Light. The resulting creation is a lightweight luminous roof, fabricated from translucent panels, illuminating the chimney upper extent like a beacon. (Tate Online)

Standing at the cornerstone of historic preservation, urban renewal and sustainable development, adaptive reuse is the process of finding new life for old buildings.

The Tate Modern drew twice as many visitors in its first year than anticipated and has become one of London’s prime attractions. In a short time the Master Plan has needed to be reformulated, and in July of 2006 Herzog and De Meuron exhibited new plan, featuring a complex glass structure to the southwest of the current building, in sharp contrast to the reserved almost minimal brick exterior.

The master plan comprises these key elements: 250,000 additional square feet for Tate Modern, 75,000 square feet of space for another compatible cultural organization, new pedestrian routes in Bankside, new public spaces will be created around Tate to increase the opportunities for visitors, and new landscape strategy to integrate the public realm surrounding Tate (Tate Online)

‘You cannot always start from scratch,’ Herzog and de Meuron said. ‘We think this is the challenge of the Tate Modern as a hybrid of tradition, Art Deco and super modernism: it is a contemporary building, a building for everybody, a building of the 21st century.’ (Perrin)

**Transformational Drift: Carlson-Reges House, Los Angeles, 1998**

*The new building ‘grows out’ of the existing one, like progeny.* –Michael Rotondi (ROTO)

The residence is located in an old electric company cabling/switching structure north of downtown Los Angeles. The Neoclassical pavilion, thirty-six feet tall, steel frame, concrete clad building was originally built in 1915. (Giovannini)

Having developed the adjacent popular and massive ‘Brewery’ artists lofts (and brewery) the clients had lived there for a long time and amassed a considerable collection of building materials and industrial artifacts from renovation. The client acted as builder, enabling an exploration in construction typically not considered in most residential work. These means, along with the wife’s large collection of art required for display, pointed the focus of the design toward the volumetric
possibilities of the project. (Hill) The client wanted an urban industrial exterior with a domestic 'warm' interior. There are gardens at ground level with patios, decks, and plants at upper levels. This is a house, art gallery and show dog kennel. (ROTO)

The architect began by analyzing the existing sizes and spaces of the structure and the site in relation to the surrounding areas: freeways, trains, and parking lots as foreground, and the mountains, cityscape beyond. Volumetric pieces were created: a shield protects the kitchen from the strong southern sun, reflects noise from the train yard, and acts as a protective garden for an existing forty-foot tall bamboo stand. The ground floor became a garden and gallery; while a new exterior ground plane was created sixteen feet above grade, level with an elevated lap pool. These and other spaces shaped through this part of the design process are unified by a volume created through a geometric analysis of existing structural conditions, layered with other information. The solution created a roof supported by a wave-like truss system structurally independent of the existing shell.

The design establishes a state of ambiguity between the Euclidean simplicity of the original structure and the non-Euclidean operations that imply and wrap spaces and further disclose the realities of the site. The existing structure’s walls are intact with only existing windows and doorways being removed for passage, spatial extension, or structure. (Giovannini) This further blurs the sense of closure allowing room to interact with exterior and light in successful ways.

**New Futures via NEW Futures**

The initial three scenarios that were envisioned as actionable for community input in fall 2006 North Embarcadero Waterfront (NEW) Futures Task Force activities included:
- Application denied, no action taken, in effect, no major changes to the plant at this time,
- Application approved, construction proceeds, and the Memorandum requirement to demolish the power plant proceeds, and a six to ten acre ‘empty’ site becomes available,
- Application denied, the Owner looks to sell portions or all of 100 + acres.

The purpose of this paper was not to eliminate any of the above from consideration, but to establish the legitimacy of a fourth scenario where the nature of the pre-historic, historic and industrial-historic reappear as equally valid realities of influence on future development. The Owner’s Application dismisses (in admittedly procedurally acceptable fashion) almost all the above as tertiary matters able to be mitigated or in some cases neglected. This in effect is a further sedimenting, in effect concealment or even loss.

The record suggests that key points in the sites history have been informed by accident, expediency, or lack of information. Much of what makes Morro Bay today have been acts of will, or uncanny accidents, and hardly inevitable. The inability of the community to envision a power process-less structure (contagion = plat), the inability to experience views from the building heights, to experience the structures interior volumes, to envision alternate cladding or volumes through selective demolition, or what these alternatives could be against the proposed replacement plant renderings can only be answered by an opportunity to engage dialogue over an offering of design alternatives for the existing plant.

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, and 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, and their thin profile against the vista of sea horizon and/or mass of the Rock as one drives Route 1 from the north suggests a visually compatible set. Similarly in the Route 1 drive northwest the valley from San Luis Obispo the stacks emerge from the ‘V’ form of the valley.

Emerging ideas and increasingly influential ideals about environmental sustainability, the examples noted in the drift passages by world-class developers and designers, and 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 history and making.

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above: the power plant from the west/ tourist rimmed Embarcadero
image by the author