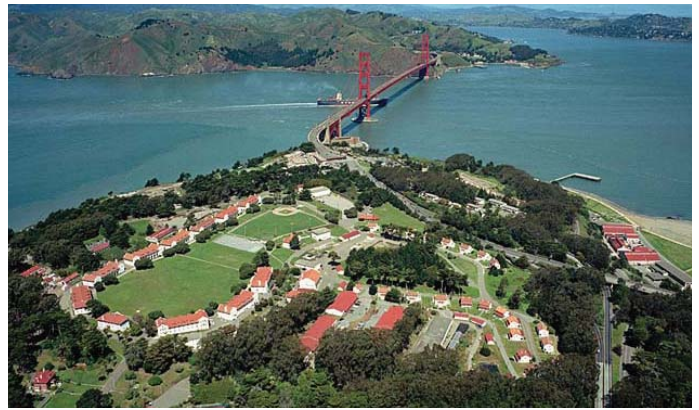


# Sustainable Infill Projects- Presidio, San Francisco and Battery Park, NYC

by Sara Ruzomberka



Large metropolitan cities are, with varied success, beginning to focus on sustainability through sustainable infill. Developing existing urban sites is important because of the implications of building on Greenfield sites and recent trends in development: they impair our quality of life and environment. Inefficient land use patterns begin to create places that no one wants to be, they blur the lines of what is the definition of a place and begin to create spaces that are in essentially “no place.” “We can no longer afford to continue building communities in an inefficient manner when there is a viable alternative... there is room to grow within existing city boundaries while maintaining historic population levels” (Bragado, Corbett, & Sprowls, 2001). Vacant land in

cities accounts for over 15% of the land, and that number increases in larger cities. Yet in large part while population is increasing, the trend in most cities is to continue to ‘grow out’ rather than focusing on building up the density inward (Greenstein & Sungu-Eryilmaz, 2004). Fortunately, there has been a push among designers and planners to begin to look to sustainable infill as a solution to sustainable development. However, the challenges of how to manage to different inherent aspects of development continue to vary.



The development of how to plan communities rather than buildings is a topic that has been written about with much agreement for what people want within a city. The Ahwahnee Principles gives a very detailed view of what a city should be by stating, “By drawing upon the best from the past and present, we can plan communities that will more successfully serve the needs of those who live and work within them” (Calthorpe, Corbett, Duany, Moule, Plater-Zyberk, & Polyzoides, 1991). These ideas range from transportation to walkability; from ecological to urban density; from community to global by calling upon many dichotomies that in the past have not been considered as interconnected networks within the make-up of a community. They call to blur the lines of the different ecotones, here referring to the way one approaches a transition between different zones within these communities to make idealistic communities realistic.

“Proponents of sustainable development point out that communities can grow in ways that respect the natural environment, while at the same time creating economically and socially viable human settlements.” (Porter, Blakely, & Kalamaros, 2003) The problem with presenting a conundrum like this is that the approaches on how a given city might arrive to such results vary significantly. Some approaches focus on the government controlling change. Others believe that the community should be the catalyst for change and still others think that business organizations might be the best approach. When approaching sustainable infill, the city already has existing zoning restrictions and building requirements in addition to the concerns of what will fund the development. As a result, development organizations already are implied by default and then it is up to that group to begin to blur the ecotones of that area.

Though ecotone can vary among many aspects of sustainable infill and community development, in this case habitat, the local community and tourism will be considered. The Presidio National Park in San Francisco and Battery Park in New York City are both sustainable infill projects that have been

developed in recent years, each with successes and failures. These projects attempt to create communities within a city and work with the different ecotones; habitat, community, and tourism to create precedent communities that can translate into future development. The goal for each of these projects is the same, and both in line with that of the Ahwahnee Principles and other sustainable infill ideas, but the outcomes are strikingly different. Blurring the lines of these different ecotones have both positive and negative effects on all three aspects. It is important how the planning for the communities came to fruition because it plays an important role in what successes and failures each project has.

The Presidio is currently is a National Park located in San Francisco, CA that is the entry point to the tourist destination, the golden gate bridge. The history of the Presidio can be divided by two separate points in time: the history as a military post and history as a part of San Francisco. Located on a 1480 acre site on the northern tip of San Francisco's water front, historical geography makes the Presidio an ideal place for a military base (Porter, Blakely, & Kalamaros, 2003). "The complicated local, ethnic history set atop the military fabric provided one way for redesigning the way interpretation reached many publics...the Presidio was spectacular urban recreational space filled with valuable cultural resources as well as prime territory for commercial and high end residential development" (Rothman, 2004).

Through a process of development that used the motto "Parks for the people, where the people are" the transition process from military base to park was from 1989 to 1997. Initially the planning effort was a combined effort between the Presidio National Trust and the Golden Gate National Park Association (GGNPA). Both parties were in agreement on "greening the city" but the specific plan on the approach was debated. In the end, the Presidio National Trust, a republican sponsored organization took control of the plan meaning that the park would be developed with less government and more local control. "The Presidio's Grand Vision, however idealistic, represents an attempt to reconcile people and the environment, nature and culture, cities and (national) parks" (Benton, 1998). The influence of the GGNPA, in addition to the feelings of the people of San Francisco, lingered however in the planning and the proposal for the community development of the Presidio was influenced largely by the ecological impacts.

Construction for the Presidio was to be restricted to only the areas that had been previously developed. It promised to conserve space and restore natural habitats (Kirkwood, 2001). According to the specific planning guidelines, "The character and scale of the Presidio's open space will be preserved and wherever feasible enhanced" (Benton, 1998). The park space was divided up into specific zones, one being a natural resources zone, which was set to begin to define where the lines were clear between the different resources the park was intended to be used for and eliminate the question of development in certain natural habitats. Additionally, an endangered species management program, a natural resources management plan and a vegetation management plan was set up for the protection of the natural environment of the area. "The wooded areas from Golden Gate Bridge to the south were slated for protection and the dunes and the rest of the ocean environment were to be restored wherever possible" (Benton, 1998). The Presidio's environmental protection community is trying to protect and enhance Mountain Lake, the only natural lake at the Presidio. This project includes educating the general public, and especially school children, in lake and riparian area ecology, hydrology, biology, and management (Lachman, Santa Monica).

Historic preservation was another set goal of the planning of the Presidio, "Historic structures will be put to use while preserving their basic exterior and/or interior features" (Benton, 1998). The onsite existing buildings are mainly that from the old army post and are located between the center of San Francisco and the Golden Gate Bridge. The Thoreau Center for Sustainability was developed as

environmentally sensitive center and is a great example of the historical preservation of the buildings with respect to the environment. The architects evaluated the historically significant aspects of the buildings and the retained them as new features were selectively added. (Park, 1993) The building also serves educational purposes by having selected a wide array of materials, all from renewable resources, recycled resources or the sources are biodegradable. This building sets new standards for the future of historic preservation and sets up the framework for the other structures on the Presidio site that are the built framework of the community.

Having no existing community in the area other than the historical references to the military and its infrastructure, the Presidio plan offers no obvious plan for the type of community it wishes to adopt. The plan is to develop a sense of community for workers, residents, neighbors, visitors, recreational users, and interested members of the general public within the existing structures and natural features. "The community efforts to protect the Presidio can be seen as an act of social justice because this increased public access as a National Park to a much greater degree than a residential development would have, while costing more money than it might have generated as a commercial development" (Benton, 1998). This community does include private businesses that have begun to fill in the built infrastructure, such as a Burger King and small businesses. The community lacks a strong identity; however current residents consist of golf course managers, NPS personnel, and military personnel and families who still live at the park. Other community members include NGOs that are tenants on the Presidio, such as the Tides Foundation, and those who have a special interest in it, such as local Sierra Club members. There is now a designated community center where regular meetings are held (Lachman, Santa Monica).

The nearby golden gate bridge and its association with the park allows tourism to also be an intimate part of the Presidio. The planning guidelines specify that, "The presidio will continue to be open to the public and public uses will be encouraged" (Benton, 1998). Even in planning what the properties might become, tourists were taken into account with the building of hostels and a focus on transportation. A large part of this was the emphasis on preserving the environment and recognition that the Golden Gate Bridge is a huge tourist attraction, and the problem presented was how to allow the two to exist together. "Transportation became a crucial issue in shaping the Presidio... the Park service devoted much of its planning initiative to finding out what the public sought both in terms of access and for transportation within the park" (Rothman, 2004). The park also takes opportunities to address the public to the concerns of sustainability and transportation. Team's projects included acquiring electric transit vehicles, improving bike and pedestrian trails, and establishing information kiosks with educational exhibits (Lachman, Santa Monica).

With a strong focus on the environment, the public/private development relationship had a clear influence and stand in the creation of the presidio as a community and a public park. The guidelines for development were set clearly and stuck to. Where the final outcome of the development is still to be determined, it is obvious that there are positive and negative implications to approaching a sustainable infill project in this manner. Other approaches have similar responses with both positive and negative outcomes on the environment, community and tourism.

Battery Park City is a 92 acre site located in New York City created from landfill from the World Trade Center. In the mid 1970's, Battery Park city was a visible symbol of the struggling economy in New York City (Stern, Fishman, & Tilove, 2006). The project was nearly not built, but the existing 92 acres of un-built landfill was the driving force behind the development for an area that should have been prime building space with a location on the waterfront. As the government controlled the land, the economic viability was a priority and there were concerns of the projects financial stability coupled with bad planning. However, when large changes occurred in the attitudes of planners, by



creating traditional building concepts rather than large mega structures, the attitudes surrounding the construction of Battery Park shifted as well.

Though Cesar Pelli's World Financial Center was the initial catalyst for the beginning of Battery Park City, it is located on the edge of the development, and the public and community resources are located in the center of the development creating a small "city" rather than a glorified business park. The idea for the waterfront was no longer centered around that of a business park, but rather that of a "city within a city," that water's edge should be used for homes and offices rather than shipping (Gordon, 1997).

The urban plan for the new development was that "Battery Park City should reproduce and improve upon what is best about New York's neighborhoods" (Stern, Fishman, & Tilove, 2006). This is a clear connection to the Ahwahnee Principles, which speaks to, "forming complete and integrated communities containing housing, shops, work places, schools, parks and civic facilities essential to the daily life of the residents" (Calthorpe, Corbett, Duany, Moule, Plater-Zyberk, & Polyzoides, 1991). About 1/3 of the site is devoted to park systems and the natural environment, and the remaining 2/3 is for housing for 9,000 residents, 6.5 million square feet of office space, 300,000 square feet of retail space, two schools, a museum, and a hotel (Porter, Blakely, & Kalamaros, 2003). The government and local agencies added performance standards to promote green building on whole of the site, regulating the environmental impact the new community development had on the existing environment. Livable neighborhood and recreation destinations were developed for many Manhattan residents and tourists alike, further integrating the new community to the existing city and beyond.

Battery Park City was created on a site that utilized land reclamation that was used in many foreign cultures, such as China, that literally have no more room in their cities for their people. While this was not the case in New York, the use of a landfill to create new development oriented land-use has its own strong environmental impact, the primary being habitat destruction. As there was no pre-existing natural habitat to protect, the new development did nothing to harm a natural habitat because the land that it sits on caused existing damage. The urban plan called for 1/3 of the space to be allocated as open park space. This was an improvement to the natural environment and sat comfortably within the principles for sustainable design, but no part of the major guidelines that Battery Park City was developed on make a direct connection to the environment. The government, however, placed sustainable building guidelines on any new buildings.

20 River Terrace, the Solaire, was noted as the most environmentally correct high rise in Battery Park. It was the first residential high-rise in the US to integrate green features in a comprehensive way. Based on the guidelines developed by the Battery Park City Authority it addressed; Enhanced indoor air quality, water conservation and purification, energy efficiency, recycling construction waste, and commissioning (Ali & Armstrong, 2008). The Solaire consumes 35 percent less energy, uses 65 percent less electricity, and requires 50 percent less water than a conventional residential high rise. This is an extreme example, but none the less, a precedent for the other buildings in Battery Park City that by using new ideas and technologies projects can have a global impact.

The city was planned with the current wisdom about mixed-uses and diversity and contained mixed uses such as retail establishments, restaurants, offices, housing, cultural institutions, a hotel, an indoor Winter Garden, and parks within close proximity. The guiding principles for the plan state that, "Battery Park City's commercial center should become the central focus of the project... Land use and development control should be sufficiently flexible to allow adjustment to future market requirements" (Gordon, 1997). Streets were designed to be active, and were geared toward being understandable and integrated. The creation of new buildings, even given different designers and

good intentions, is still at its core geared toward those that will spend money to make it a viable space. The office towers house the typical polarized employment mix of financial firms, high-end professionals and managers on one hand, and low-paid cleaners and clerks on the other. The housing plan for the community was meant to be varied, ranging from high end to low income; however the city of New York insisted that the money allocated for low income housing be spent elsewhere. In an interview with the Battery City Park president, he stated, "Some people argue that there is a moral obligation to include affordable housing on the site, but every community does not need to be economically integrated" (Gordon, 1997). The community was a thriving area, but had essentially created spaces for rich white people, policed by security guards.

The Parks shops and eating facilities drew both tourists and Manhattan residents to the site. The planning principles state that, "Battery Park City should not be a self-contained new-town-in-town, but a part of lower Manhattan" (Gordon, 1997). By attempting to develop extraordinary public spaces and buildings, the idea was to invite anyone and everyone to the site. The waterfront walkway was a continuous extension stemming from the existing waterfront in Manhattan, bringing New York City residents into the new development. The project was geared toward being high profile, which meant that tourists would be inherently drawn to the area. "The neatly manicured parks and Winter Garden are open to anyone, even though their location means that the preponderance of (but by no means all) users are drawn from among the office workers and the affluent residents of the neighboring apartment buildings within BPC and Tribeca" (Fainstein, 2005).

"Battery Park City is simply a clean, safe and attractive downtown neighborhood, with waterfront views which calm the human spirit and perhaps enrich the soul" (Gordon, 1997). Though this was not exactly the perception of the area that the planners had in mind, the creation of a place that people want to be is an accomplishment. Perhaps the 'city within a city' ideal should be redefined as a 'neighborhood within a city' and in that, Battery Park is incredibly successful. The driving force behind the development of Battery Park City was economic, with a strong emphasis on the community and tourist aspects of sustainable design. As with the Presidio, the guidelines were clear and the approach was very apparent which had positive and negative impacts on the community.

The Presidio and Battery Park City took strikingly different approaches to design and urban sustainable infill. Where the Presidio spearheaded an approach in preservation and ecology, Battery Park concerned itself with how to develop a community that was lively and prosperous. This was perhaps the result of who was leading the design and development and their goals for what would be the catalyst that would encourage a viable community. In the Presidio, the influence of the GGNPA and the San Francisco community decided to put the environment and Preservation first, and the result is a very sustainable place that had no real community identity. Conversely, Battery Park was funded and the goals set out by the government with a focus on how to build a community and place that people wanted to live and be. The outcome in this case was a place where people are, but lacked in many aspects of sustainable development, ranging in everything from preserving the environment to the lack of diversity among the residents and visitors of Battery Park.

Even the most sustainable buildings have purposes that were geared toward the main focus of the development, in Battery Park it was with a community focus and in the Presidio, it was an environmental center. Both had strong ideas as to how to build green, neither utilized prominent architects to show off the community, but rather the buildings were meant to be a backdrop to the community and development. The sustainable building in the Presidio was well marketed, and it was apparent that preservation comes before what an imagined community might look like. The problem here was that the community is reminiscent of an old military town. In Battery Park, the buildings use new technology to build "green" but the label is used more as a marketing tool than as an actual

standard to be set.

While the creation of green space within Battery Park City was ecologically better than not, more might have been done to respond to how the land the city was built on was claimed. As the creation of Battery Park City was a response to the existing land reclamation and not the other way around, the way the land was utilized makes a good deal of sense from an economic perspective. Ultimately, the city should have recognized that this land came at a cost to the environment and could have spent more of their investment in restoring destroyed habitats.

The community in the Presidio may have benefitted from waving a bit on the preservation of the buildings and the emphasis that it placed on being environmentally friendly. People are not eager to live in a community that is reminiscent of a military base, and the community holds are not vibrant. "The legacy of the nature/culture in the national parks and the marginalization of recreation areas maybe have subtly influenced the struggle [of the community] in the Presidio" (Benton, 1998). Human impact on land is inevitable and therefore if a community is to take place in the Presidio, it should be one that is conscious of what people are looking for in a community. Though there are people living there who work on the ecological restoration of the site and some of the residents are students and visitors, the Presidio has not found a true identity. The other oddity is that the Presidio is located in the city proper, yet has a 'suburban feel'. It needs to decide the type of community that it wants to be in the future and whether or not to leave the military presence in the past. Perhaps the creation of a bit more density and a few new buildings would be a catalyst to prompt people to want to live there. If new building is not an option, then maybe creating a more relevant connection to San Francisco would be an appropriate alternative that would begin a thriving community.

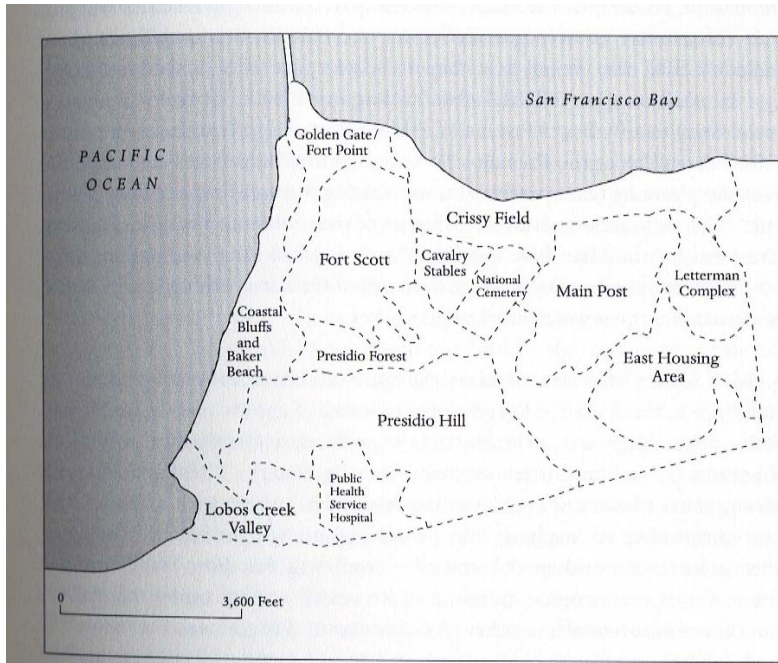
On the other hand, Battery Park City's community is in existence, but the type of community that it set out to maintain is far from where it expected to be. There seems to be a problem with a designed community that despite every intention of holding diversity a priority, a new development attracts certain types of people, in the case of Battery Park city, wealthy white people. Although it was developed over thirty years, it is still a relatively new part of New York with fantastic views, directly on the water. It may be impossible to create a true "city within a city" feel with the diversity of a city in a particular area. There is a reason that diverse cities are so large, and often enough, if they are smaller they tend to lack diversity. It did not help Battery Park City to have the city of New York directing the types of structures that they were able to build; perhaps if they were able to put the low income projects into the area, the development would have been more diverse. Conversely, perhaps the creation of those projects would have detracted the wealthier community members with money to be there, causing the community to fail.

In both cases the tourism ecotone seems to work well. It was clearly recognized when each project was planned that in order for a development to exist there needs to be a revenue element in place. In the Presidio, the Golden Gate Bridge is an obvious tourist attraction and the planners took into account the concern for the environment by providing public transportation around the park to alleviate some of the ecological problems with having people constantly roaming around the park. They provided amenities for tourists and open park space for the local community as well as tourists. In Battery Park, the Winter Garden acts as a large tourist venue providing amenities that are specific to that location therefore making it a place people need to come to. The other elements provided are for the community in New York City, for example the park spaces, and the extension of the waterfront park from the existing through Battery Park City.

Each development successfully pair together two of the three ecotones, directly linked to the conditions under which the developments were created. The questions of what is nature, community



and tourism do have concrete implications, and where the attempts to seamlessly weave them together are worthwhile, the reality is that there is always a driving agenda when development occurs. The ideas of a sustainable community are great on a theoretical level, but unless change occurs in the way people think about what it means to be a sustainable within a city, projects like these will continue to occur with both positive and negative outcomes.



**Figure 6.2**  
**The Thirteen Planning Areas of the Presidio.** Source: Map by author, adapted from National Park Service, *Creating a Park for the 21st Century: From Military Post to National Park. Draft General Management Plan Amendment, Presidio of San Francisco, NPS D-148 (San Francisco: GGNRA, October 1993).*

Top Right: (Stern, Fishman, & Tilove, 2006)

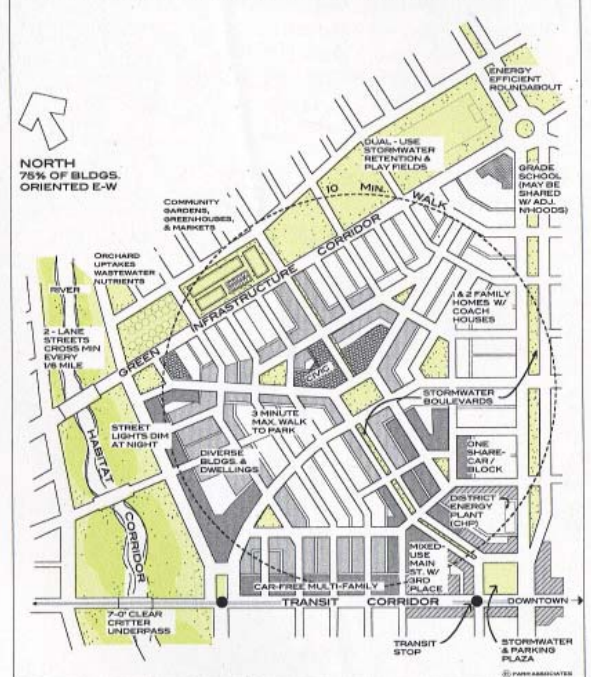
Left: (Benton, 1998)

Bottom Right: : (Farr, Douglas. Sustainable Urbanism: Urban Design with Nature)



Battery Park City, landfill in the Hudson River, Battery Park to Chambers Street. Alexander Cooper Associates, 1979. Design principles diagram from 1979 Master Plan. CRP

AREA: PREFERABLY 160 ACRES, MIN. 40, MAX. 200  
 POPULATION: TO SUPPORT CRITICAL MASS OF WALK-TO DESTINATIONS.



## Bibliography

Ali, M. M., & Armstrong, P. J. (2008). *Overview of Sustainable Design Factors in High-Rise Buildings*. Champaign: University of Illinois at Urbana-Champaign.

Benton, L. M. (1998). *The Presidio: From Army Post to National Park*. Holliston: NorthEastern.

Bragado, N., Corbett, J., & Sprowls, S. (2001). *Building Livable Communities: A Policymaker's Guide to Infill Development*. US Environmental Protection Agency.

Calthorpe, P., Corbett, M., Duany, A., Moule, E., Plater-Zyberk, E., & Polyzoides, S. (1991). *The Ahwahnee Principles: Toward More Livable Communities*. Retrieved February 10, 2011, from *The Original Ahwahnee Principles*: <http://www.lgc.org/ahwahnee/principles.html>

Fainstein, S. S. (2005, September 1). *Cities and Diversity: Should We Want It? Can we Plan for It?* *Urban Affairs Review* , pp. 3-19.

Gordon, D. L. (1997). *Battery Park City: Politics and Planning on the New York Waterfront*. Amsterdam: Spon Press.

Greenstein, R., & Sungu-Eryilmaz, Y. (2004). *Recycling the City: The Use and Reuse of Urban Land*. Cambridge: Lincoln Institute of Land Policy.

Kirkwood, N. (2001). *Manufactured Sites: The post-Industrial Landscape*. London: Spon Press.

Lachman, B. E. (Santa Monica). *Linking Sustainable Community Activities to Pollution Prevention*. 1997: Rand.

Park, S. C. (1993). *Sustainable Design and Historic Preservation. Guiding Principles for Sustainable Design* , 13-16.

Porter, D. R., Blakely, E. J., & Kalamaros, A. E. (2003). *Sustainable Infill*. *Urban Land* , 60-69.

Rothman, H. K. (2004). *The New Urban Park: Golden Gate National Recreation Area and Civic Environmentalism*. Lawrence: University Press of Kansas.

Stern, R. A., Fishman, D., & Tilove, J. (2006). *New York 2000: Architecture and Urbanism Between the Bicentennial and the Millennium*. New York City: Monacelli Press, Inc.